# **SLAKEY BROTHERS, INC. POLICY AND PROCEDURE**

TITLE: SAFETY DATA SHEETS			
POLICY #: SB – HM 01	APPROVED	BY:	
POLICY ISSUED: 6/1/92	PAGE:	1	OF 1
POLICY REVISED: 06/01/16	DISTRIBUT	ION:	MANUAL
DOCUMENT AUTHORITY: COO	AUTHOR:	DEL	MCCANN
RESPONSIBLE PARTY (IES): LOGISTICS MANAGER			

- 1.0 POLICY: SDS Guidelines
- **2.0 OBJECTIVE:** To comply with federal regulations.
- 3.0 RELATED DOCUMENTS:
- 4.0 ATTACHMENTS:
- 5.0 **PROCEDURE**:
  - 5.1 Effective 06/01/16, all MSDS sheets were revised and are now called SDS sheets. We went through our product list and obtained new SDS sheets for all products. New binders are to replace the MSDS sheets that were previously located at each branch. Please see the bullet points below and contact the Logistics Manager if there are any questions.
    - Every branch is receiving the SDS sheets for all hazardous items even if they don't carry them. This is just in case an item is special ordered and sent to a branch.
    - These SDS sheets are to be located near where the product is stored and in the shipping office. Since most branches don't have a shipping office the branch office will suffice, but it must never be in a locked office. Everyone must have access to the SDS binder at all times.
    - The binder has a tab for each product regardless of size. Ex. There is a tab for IPG P-68, but it doesn't reference 1/2PT, 1/4PT, GAL, etc.
    - When an update is sent out the manager or designee is required to update every copy immediately. This could require an addition for a new item or the replacement of an outdated SDS sheet.
    - If hazardous items are stored in multiple locations a separate SDS binder needs to be located in each "work area". This means if some product is at the will call counter and some is located in the warehouse a separate SDS binder is needed for each work area along with a third located in the office.
    - This is Federal law and is required at all branches.
    - If another binder is needed please contact General Services at ext. 10817.



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# **COPPERS**

## **SECTION 1: IDENTIFICATION**

## Product Identifiers: Coppers

UNS Alloy Numbers C10100; C10200; C10300; C10400; C10700; C11000; C11400; C11500; C11600; C12200; C14420 and Revere Classic Copper<sup>™</sup> and Revere Continental Bronze<sup>™</sup>

Intended Use of the Product: Manufacture of copper/copper alloy products for, but not limited to, architecture, automotive, building, consumer; electrical.

Name, Address, and Telephone of the Manufacturer: Revere Copper Products, One Revere Park, Rome, NY 13440

Emergency Telephone Number: 800-448-1776 or 315-338-2022

## SECTION 2: HAZARDS IDENTIFICATION

Solid copper and copper alloys, in massive form (rod, plate, sheet, strip, bar), are not hazardous.

GHS-US Classification: Not classified

GHS-US Labeling: No labeling applicable

## Hazards Not Otherwise Classified:

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact.

- Fine particles or dust dispersed in the air may present a fire/explosion hazard.
- Exposure to fumes or dust may aggravate existing respiratory disease or dermatitis.
- This product contains components that are environmentally hazardous and small chips, turnings and dust from processing may be toxic to aquatic life.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### Product Form: Mixture

Note: For exact composition of each UNS Alloy refer to alloy specifications

Chemical Name	CAS Number	% by Weight	Ingredient Classification (GHS-US)
Copper	7440-50-8	99.5 - 99.99	Aquatic Acute 1, H400
			Aquatic Chronic 2, H411
Tin	7440-31-5	< 0.15	Comb. Dust
Silver	7440-22-4	< 0.1	Comb. Dust
			STOT SE 3, H335
			Aquatic Acute 1, H400
			Aquatic Chronic 1, H410
Tellurium	13494-80-9	<0.05	Comb. Dust
			Acute Tox. 3 (Oral), H301
		1	Acute Tox. 4 (Inhalation:dust,mist), H332
			Skin Sens. 1B, H317
			STOT SE 3, H335
			Aquatic Chronic 4, H413
Phosphorus elemental	7723-14-0	< 0.04	Not classified

## SECTION 4: FIRST AID MEASURES

Solid copper and copper alloys in massive form (rod, plate, sheet, strip, bar), do not present inhalation, ingestion, eye contact or skin contact hazards. The information below relates to the dust, fines, fumes or mists generated by subsequent processing.

**Description of First Aid Measures:** 

General: Never give anything by mouth to an unconscious person. If medical advice is needed, have this SDS at hand.

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Inhalation:	attention.	t in a position comfortable for breathing.	
Skin Contact:	affected area. Contact with hot or n	ap and water. Promptly treat cuts or abra nolten metal will cause thermal burns, co	ol rapidly and seek medical attention.
Eye Contact:	and the second		
Ingestion:	Rinse mouth. Drink water to dilute.	Seek medical attention if symptoms deve	elop or you feel ill.
Most Important	Symptoms and Effects both Acute a	nd Delayed:	
Inhalation:	Exposure to metal fumes can produ include chills, muscle aches, nausea	ist may produce irritation of the mucous ice an acute allergic condition known as " I, fever, dry throat, cough, weakness, and recovery generally occurs without interve	metal fume fever". Symptoms may lassitude. The onset of symptoms
Skin Contact:	Contact with fumes or metal powde Injury from flying particles is possib	er may irritate skin. Contact with hot, mol le.	ten metal will cause thermal burns.
Eye Contact:	Short term exposure to fumes or du	usts may cause eye irritation. Mechanical	injury can result from particulate.
Ingestion:		, vomiting, abdominal pain, metallic taste stine ulceration, jaundice and kidney or liv	

Indication of Any Immediate Medical Attention or Special Treatment Needed:

If you feel unwell, seek medical advice. Have this SDS available.

SECTION 5: FIRE-FIGHTING MEASUR	RES
Suitable Extinguishing Media:	Solid products are not flammable or explosive, use extinguishing media appropriate for surrounding fire. Use Class D extinguishing agents or dry sand on fires involving dust or fines.
Unsuitable Extinguishing Media:	Do NOT use water on molten material, will react violently due to steam explosions. Do NOT use water or halogenated extinguishing agents on fires involving dust or fines.
Specific Hazards Arising From Material:	Dusts or fines may burn if they are ignited. Fumes may contain oxides of copper and other ingredients. Fine particles or dust dispersed in the air may present a fire/explosion hazard. Use of water on molten material will cause steam explosions.
Special Protective Equipment and Precautions for Firefighters:	Do not breathe fumes from fires or vapors from decomposition, wear self-contained NIOSH approved breathing apparatus. Wear full protective clothing.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Not applicable to copper and copper alloys in the massive form. The information below relates to the dust or fines generated by processing.

Personal Precautions, Protective Equipment and Emergency Procedures:	Avoid generation of airborne dust. Ensure adequate ventilation. Protect clean-up personnel from inhalation of dusts or fumes, or contact with eyes and skin.
Environmental Precautions:	Do not flush dust or fines to surface waters, soil or sanitary sewer system.
Methods / Material for Containment and Clean Up:	Dust and fines should be cleaned up avoiding generation of airborne particulates. Wash down with water if in contact with acids.
Reference to Other Sections :	See Sec 8 and Sec 13.

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SECTION 7: HANDLING AND	STORAGE
Precautions for Safe Handling:	As sold in the massive form, copper and copper alloys pose no chemical handling hazard. Avoid contact with sharp edges, where proper gloves when handling. Dust, fines, fume or mist generated by processing may pose a hazard through inhalation, ingestion and eye or by skin contact. Avoid breathing metal fumes and/or dust. Practice good housekeeping. Practice good hygiene. Avoid generating dusts. Eating, drinking or smoking should not be allowed in areas where these alloys are processed.
Conditions for Safe Storage:	Other than incompatibles, no special storage conditions for copper in the massive form.
Incompatible Materials:	Strong acids. Strong bases. Strong oxidizers. Halogens. Mercury.
SECTION 8: EXPOSURE CONT	ROLS/PERSONAL PROTECTION
Appropriate Engineering Controls	chemical treatment, milling, grinding, welding, melting, sawing, brazing, burning or other similar processes. Provide emergency eye wash fountains and safety showers in the immediate vicinity of any
	potential exposure.
Personal Protective Equipment:	Highly dependent upon process being performed. User must review every process individually to evaluate appropriate PPE. Do not eat, drink or smoke during processing operations.
<b>Respiratory Protection:</b>	As appropriate for process and engineering controls in place.
Eye Protection:	Safety glasses, chemical goggles or face shield as appropriate to process.
Hand Protection:	Cut resistant gloves whenever handling. Chemically resistant gloves or thermally resistant gloves as appropriate to process.
Skin and Body Protection:	Wear suitable protective clothing. With molten material wear thermally protective clothing.
Hygiene Measures:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

## **Control Parameters**

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Copper (7440-50-8)			
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)	
		1 mg/m³ (dust and mist)	
Mexico	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (fume)	
		2 mg/m³ (dust and mist)	
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)	
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume)	
		1 mg/m³ (dust and mist)	
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (dust and mist)	
		0.1 mg/m³ (fume)	
USA IDLH	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (dust, fume and mist)	
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)	
		1 mg/m³ (dust and mist)	
British Columbia	sh Columbia OEL TWA (mg/m <sup>3</sup> ) 1 mg/m <sup>3</sup> (dust and mist)		
		0.2 mg/m <sup>3</sup> (fume)	
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)	
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)	
		1 mg/m <sup>3</sup> (dust and mist)	

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Newfoundland & Labrador	OEL TWA (mg/m³)	0.2 mg/m <sup>3</sup> (fume)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Nunavut	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (fume)
		2 mg/m <sup>3</sup> (dust and mist)
Nunavut	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
		1 mg/m <sup>3</sup> (dust and mist)
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (fume)
		2 mg/m <sup>3</sup> (dust and mist)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
		1 mg/m <sup>3</sup> (dust and mist)
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
		1 mg/m <sup>3</sup> (dust and mist)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
Québec	VEMP (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
		1 mg/m <sup>3</sup> (dust and mist)
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (fume)
		3 mg/m <sup>3</sup> (dust and mist)
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
		1 mg/m <sup>3</sup> (dust and mist)
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
		2 mg/m³ (dust and mist)
Yukon	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
		1 mg/m <sup>3</sup> (dust and mist)
Tin (7440-31-5)		
Mexico	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Mexico	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> .
Alberta	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Newfoundland &	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Labrador		
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Fellürlüm (13494-80-9)		
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
JSA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
JSA IDLH	US IDLH (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Alberta British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Shush Columbia	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup>
Vlànitoba		
	OEL TWA (mg/m <sup>3</sup> ) OEL TWA (mg/m <sup>3</sup> ) OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup>

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Neur Castia	$OEI TM(A (mg/m^3))$	$0.1 \text{ mg/m}^3$
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Nunavut Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> 0.3 mg/m <sup>3</sup>
······································	OEL STEL (mg/m <sup>3</sup> ) OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Northwest Territories		
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> ) OEL STEL (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Yukon		0.1 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m³)	
Silver (7440-22-4)		ne se kal ange se
Mexico	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup>
USA ACGIH	ACGIH_TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
USA OSHA	OSHA PEL (TWA) (mg/m³)	0.01 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup> (dust)
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m³ (dust)
Alberta	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup>
British Columbia	OEL STEL (mg/m <sup>3</sup> )	0.03 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m³)	0.01 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup> (dust and fume)
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Newfoundland &	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup> (dust and fume)
Labrador		
Nova Scotia	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup> (dust and fume)
Nunavut	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup> (dust and fume)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
Québec	VEMP (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Saskatchewan	OEL TWA_(mg/m³)	0.1 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.03 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m³)	0.01 mg/m <sup>3</sup>
Phosphorus (7723-14-0)	an a	
Alberta	OEL TWA (mg/m³)	0.1 mg/m³ (yellow)
New Brunswick	OEL TWA (mg/m³)	0.1 mg/m <sup>3</sup> (yellow)
New Brunswick	OEL TWA (ppm)	0.02 ppm (yellow)
Québec	VEMP (mg/m <sup>3</sup> )	0.1 mg/m³ (yellow)

# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: U.u	Solid	Appearance:	Reddish to dark brown
Odor:	Odorless	Odor Threshold:	Not applicable
pH:	Not applicable	Evaporation Rate:	Not applicable
Melting Point:	1083 °C (1981 °F)	(Freezing Point:	1065 °C (1950 °F)
Boiling Point:	Not available	Boiling Point Range:	Not available
FlashPoint	Not applicable	Auto-ignition Temperature:	Not applicable
Flammability (solid; gas): 14	Not flammable	Decomposition Temperature:	Not applicable
Upper Flammable Limit - 19	Not applicable	Lower Flammable Limit:	Not applicable
Vapor Pressure:	Not applicable	Vapor Density at 20 . C. 1	Not applicable

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Relative Density:	8.89 - 8.94 g/cm <sup>3</sup> @ 20 °C	(Specific Gravity:	
	Negligible in water	Viscosity: 14 Viscosity	Not applicable
	Not expected to present an	Explosion Data Sensitivity to	Not expected to present an
to Mechanical Impact: 171.	explosion hazard due to	Static Discharge:	explosion hazard due to static
	mechanical impact	The second s	discharge
Partition Coefficients (N=	Not applicable		
Octanol/Water Press and A			

## SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable at under normal conditions.
Chemical Stability:	Stable under normal conditions of use and under recommended handling and storage conditions. (Section 7).
Possibility of Hazardous Reactions:	Hazardous polymerization cannot occur.
Conditions to Avoid:	Avoid creating or spreading dust. Incompatible materials.
Incompatible Materials:	Strong acids. Strong bases. Strong oxidizers. Halogens. Mercury. Water (when in molten form)
Hazardous Decomposition Products:	When heated to decomposition, may produce metal oxides and fumes. Contact with strong acids will release hydrogen gas.

## SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Solid copper and copper alloys in massive form (rod, plate, sheet, strip, bar), do not present inhalation, ingestion, eye or skin contact hazards.

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact. Most likely exposure routes: For dust: ingestion, inhalation, skin and eye contact. For fume: inhalation and eye contact.

Symptoms/Injuries After Inhalation:	Metal fumes or dust may irritate the mucous membranes and respiratory tract (shortness of breath, wheezing, coughing) Metal fumes or dust can produce an acute allergic condition known as "metal fume fever". Symptoms of metal fume fever may include chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude. The onset of symptoms may be delayed several hours and recovery generally occurs without intervention within 24 to 48 hours.
Symptoms/Injuries After Skin Contact:	Dust or fines may irritate skin. Hot or molten metal will cause thermal burns. Mechanical injury from via flying particles and chipped slag is possible.
Symptoms/Injuries After Eye Contact:	Dust, fines or fumes may cause eye irritation. Hot or molten metal will cause thermal burns. Mechanical damage via flying particles and chipped slag is possible.
Symptoms/Injuries After Ingestion:	Ingestion of dusts or fines from processing can occur due to poor hygiene and may produce irritation of the gastrointestinal tract (nausea, vomiting, and diarrhea)

## Chronic Symptoms:

Copper:	Overexposure to fumes may cause metal fume fever. Tissue damage of mucous membranes may follow chronic
	dust exposure.
Tin:	Has been shown to increase incidence of sarcoma in animal tests.
	Chronic exposure to tin dusts and fume may result in "stannosis", a mild form of pneumoconiosis.
Silver:	Chronic skin contact or ingestion of silver dust, salts or fume can result in a condition known as Argyria, a condition
	with bluish pigmentation of the skin and eyes.
Lead:	Chronic exposure to fumes and/or dust or ingestion of dust can cause kidney damage, anemia, reproductive
	effects, developmental effects and permanent nervous system damage. Other reported symptoms include

polyneuritis, diminished vision and peripheral neuropathy, such as tingling or loss of feeling in fingers, arms & legs, gingival lead line; hypertension.

## Information on Toxicological Effects - Product in Massive Form

Acute Toxicity:	Not available 🦟	Germ Cell Mutagenicity:	Not classified	
LD50 and LC50 Data:	Not classified	Teratogenicity:	Not classified	_
Skin Corrosion/Irritation:	Not applicable	Carcinogenicity:	Not classified	1
Serious Eye Damage/Irritation:	Not classified	Specific Target Organ Toxicity (Repeated Exposure):	Not classified	1
pH:	Not applicable	Reproductive Toxicity:	Not classified	
Respiratory or Skin Sensitization:	Not classified	Specific Target Organ Toxicity (Single Exposure):	Not classified	
Aspiration Hazard:	Not classified			1

## Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

LD50 Oral Rat	83 mg/kg	
LC50 Inhalation Rat	> 2420 mg/m <sup>3</sup> (Exposure time: 4 h)	
ATE US (dust, mist)	1.50 mg/l/4h	
Silver (7440-22-4)		
LD50 Oral Rat	> 2000 mg/kg	
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Phosphorus elemental (7723-14-0)		
Phosphorus elemental (7723-14-0)	3.03 mg/kg	

## SECTION 12: ECOLOGICAL INFORMATION

## 12.1. Toxicity No additional information available

Copper (7440-50-8)		
LC50 Fish 1	<= 0.0068 (0.0068 - 0.0156) mg/l (Exposure time: 96 h - Species: Pimephales promelas)	
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])	
EC50 Other Aquatic Organisms 1	0.0426 (0.0426 - 0.0535) mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])	
LC 50 Fish 2	0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])	
EC50 Other Aquatic Organisms 2	0.031 (0.031 - 0.054) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])	
Silver (7440-22-4)	HALLER AND	
LC50 Fish 1	0.00155 (0.00155 - 0.00293) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])	
EC50 Daphnia 1	0.00024 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])	
LC 50 Fish 2	0.0062 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])	

12.2. Persistence and Degradability Not readily biodegradable.

- **12.3.** Bioaccumulative Potential Not available
- **12.4.** Mobility in Soil Not available
- 12.5. Other Adverse Effects Not available

## SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Methods:

Recycle all solid copper and copper alloy scrap. Dust, fines or powders should also be recycled or classified by an environmental professional and disposed of in accordance with all local, regional, national, provincial, territorial and international regulations.

e

Do not dispose of dust, fines and powders to surface waters or sanitary sewers

Packaging Disposal:

Dispose of in accordance with all local, regional, national, provincial, territorial and international regulations.

## SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT:Not regulated for transportIn Accordance with IMDG:Not regulated for transportIn Accordance with IATA:Not regulated for transportIn Accordance with TDG:Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

## 15.1. US Federal Regulations

Copper (7440-50-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313 SARA Section 313 - Emission Reporting

1.0 %

, Tin (7440-31-5) Tere Listed on the United States TSCA (Toxic Substances Control Act) inventory

Tellurium (13494:80-9): 200 Internet States TSCA (Toxic Substances Control Act) inventory

Silver (7440-22-4) Control States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

RQ (Reportable Quantity, Section 304 of EPA's List of Lists):1000 lb < 100 um</th>CERCLA/SARA RQ CHANGE TITLESARA Section 313 - Emission Reporting1.0 %

Phosphorus elemental (7723-14-0).

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the United States SARA Section 302

Listed on United States SARA Section 313

SARA Section 302 Threshold Planning Quantity (TPQ)	100 (This material is a reactive solid. The TPQ does not default to 10000 pounds for non-powder, non-molten, non-solution form)
SARA Section 313 - Emission Reporting	1.0 % (yellow or white)

## 15.2. US State Regulations

Copper (7440-50-8)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

# Tin (7440-31-5)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

# Tellurium (13494-80-9)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

# Silver (7440-22-4)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

Phosphorus elemental (7723-14-0)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S California - Proposition 65 - Reproductive Toxicity - Female	WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm.
U.S California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.
Nickel (7440-02-0)	
U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

#### 15.3. **Canadian Regulations**

Copper and Copper Alloys	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Conner (7440-50-8)	
Listed on the Canadian DSI	
Listed on the Canadian DSL	(Domestic Substances List)
Listed on the Canadian IDL ( IDL Concentration 1 %	ingredient Disclosure List)
WHMIS Classification	
	Uncontrolled product according to WHMIS classification criteria
Tin (7440-31-5)	
Listed on the Canadian DSL	(Domestic Substances List)
Listed on the Canadian IDL (	Ingredient Disclosure List)
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
- Tellurium (13494-80-9) 🗱	
Listed on the Canadian DSL (	Domestic Substances List)
Listed on the Canadian IDL (I	ngredient Disclosure List)
IDL Concentration 1 %	
WHMIS Classification	Class, D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects
	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Silver (7440-22-4)	
Listed on the Canadian DSL (I	Domestic Substances List)
Listed on the Canadian IDL (I	ngredient Disclosure List)
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Phosphorus elemental (7723	-14-0)
Listed on the Canadian DSL (D	Domestic Substances List)
Listed on the Canadian IDL (Ir	ngredient Disclosure List)

IDL Concentration 1 %	
WHMIS Classification	Class B Division 4 - Flammable Solid Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

# SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

GHS Full Text Phrases:		
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3	
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4	
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1	
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1	
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2	
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4	
Comb. Dust	Combustible Dust	
Skin Sens. 1B	Skin sensitization Category 1B	
STOT SE 3	Specific target organ toxicity (single exposure) Category 3	
	May form combustible dust concentrations in air	
H301	Toxic if swallowed	
H317	May cause an allergic skin reaction	
H332	Harmful if inhaled	
H335	May cause respiratory irritation	
H400	Very toxic to aquatic life	
H410	Very toxic to aquatic life with long lasting effects	
H411	Toxic to aquatic life with long lasting effects	
H413	May cause long lasting harmful effects to aquatic life	

Party Responsible for the Preparation of This Document Revere Copper Products, Inc One Revere Park Rome, NY T: 800-448-1776 or 315-338-2022

## Revision Date: 5/31/2015

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Revere Copper Products, Inc. based on our current knowledge, believes the information contained herein to be accurate and reliable. However, the information is provided without any representation or warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product. Final determination of occupational safety and health and environmental compliance and suitability of this material is the sole responsibility of the user.

13 Rainbuster 12 pgs.



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## 1. Identification

Product identifier used on the label

## **RainBuster 900 Stone**

**Recommended use of the chemical and restriction on use** Recommended use\*: for industrial and professional users

\* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

## Details of the supplier of the safety data sheet

Company: Top Industrial, Inc. 15010 Keswick St. Van Nuys, CA 91405

Telephone: 1-818-901-1313

#### **Emergency telephone number**

CHEMTREC: 1-800-424-9300

Other means of identification Chemical family: sealant

## 2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### **Classification of the product**

Acute Tox.	4 (Inhalation - vapour)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Resp. Sens.	· 1	Respiratory sensitization
Skin Sens.	1	Skin sensitization
Carc.	2	Carcinogenicity
STOT RE .	1	Specific target organ toxicity — repeated
		exposure

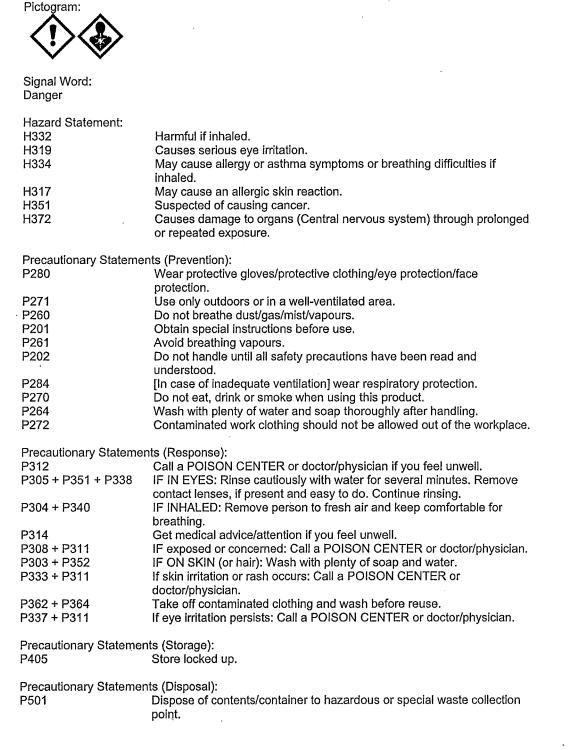
Label elements

# Safety Data Sheet

# RainBuster 900 Stone

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Hazards not otherwise classified

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If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

#### Labeling of special preparations (GHS):

SENSITIZATION CAN OCCUR IN SOME INDIVIDUALS, LEADING TO ASTHMA-LIKE SPASMS OF THE BRONCHIAL TUBES AND DIFFICULTY BREATHING. INDIVIDUALS WITH A HISTORY OF RESPIRATORY ILLNESS, ASTHMATIC CONDITIONS, EYE DAMAGE OR TDI SENSITIZATION SHOULD NOT BE EXPOSED TO THIS PRODUCT. TDI IS INCLUDED IN THE NTP ANNUAL REPORT ON CARCINOGENS. RESULTS FROM A TDI HEALTH STUDY INDICATE THAT OVEREXPOSURE TO A RESPIRATORY IRRITANT, RESULTING IN LOWER RESPIRATORY TRACT SYMPTOMS COULD INCREASE THE RISKS OF DEVELOPING ASTHMA-LIKE REACTIONS FROM SUBSEQUENT TDI EXPOSURE. ANIMAL TESTS AND OTHER RESEARCH INDICATE THAT SKIN CONTACT WITH MDI MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

#### According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### **Emergency overview**

#### WARNING:

SENSITIZATION CAN OCCUR IN SOME INDIVIDUALS, LEADING TO ASTHMA-LIKE SPASMS OF THE BRONCHIAL TUBES AND DIFFICULTY BREATHING. INDIVIDUALS WITH A HISTORY OF RESPIRATORY ILLNESS, ASTHMATIC CONDITIONS, EYE DAMAGE OR TDI SENSITIZATION SHOULD NOT BE EXPOSED TO THIS PRODUCT. TDI IS INCLUDED IN THE NTP ANNUAL REPORT ON CARCINOGENS. RESULTS FROM A TDI HEALTH STUDY INDICATE THAT OVEREXPOSURE TO A RESPIRATORY IRRITANT, RESULTING IN LOWER RESPIRATORY TRACT SYMPTOMS COULD INCREASE THE RISKS OF DEVELOPING ASTHMA-LIKE REACTIONS FROM SUBSEQUENT TDI EXPOSURE. Irritating to eyes, respiratory system and skin.

CONTAINS MATERIAL WHICH MAY CAUSE CANCER. Avoid contact with the skin, eyes and clothing.

## 3. Composition / Information on Ingredients

#### According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number 1317-65-3 13463-67-7 14807-96-6 1305-78-8 8052-41-3 91-08-7 2530-83-8	Content (W/W) >= 15.0 - < 20.0 % >= 3.0 - < 5.0 % >= 1.0 - < 3.0 % >= 1.0 - < 3.0 % >= 0.3 - < 1.0 %	Chemical name Limestone Titanium dioxide talc calcium oxide Stoddard solvent toluene-2,6-diisocyanate trimethoxy(3-(oxiranylmethoxy)propyl)silane
2530-83-8	>= 0.3 - < 1.0 %	trimethoxy(3-(oxiranylmethoxy)propyl)silane
584-84-9	>= 0.03 - < 0.04 %	toluene-2,4-diisocyanate

## According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u> 1317-65-3	<u>Content (W/W)</u> >= 15.0 - < 20.0 %	<u>Chemical name</u> Limestone
13463-67-7	>= 3.0 - < 5.0 %	Titanium dioxide
14807-96-6	>= 3.0 - < 5.0 %	talc
1305-78-8	>= 1.0 - < 3.0 %	calcium oxide
8052-41-3	>= 1.0 - < 3.0 %	Stoddard solvent
91-08-7	>= 0.3 - < 1.0 %	toluene-2,6-diisocyanate
2530-83-8	>= 0.3 - < 1.0 %	trimethoxy(3-(oxiranylmethoxy)propyl)silane
584-84-9	>= 0.037 - < 0.04 %	toluene-2,4-diisocyanate

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## 4. First-Aid Measures

## **Description of first aid measures**

## General advice:

First aid personnel should pay attention to their own safety. Remove contaminated clothing.

If inhaled: No applicable information available.

#### If on skin:

Wash thoroughly with soap and water. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

#### If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

#### If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting unless told to by a poison control center or doctor.

## Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Hazards: No applicable information available.

## Indication of any immediate medical attention and special treatment needed

#### Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

## 5. Fire-Fighting Measures

#### Extinguishing media

Suitable extinguishing media: foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons: water jet

## Special hazards arising from the substance or mixture

Hazards during fire-fighting: carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

#### Advice for fire-fighters

Protective equipment for fire-fighting: Wear a self-contained breathing apparatus.

## Rainbuster 900 Stone

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#### **Further information:**

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

#### **Environmental precautions**

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

## Methods and material for containment and cleaning up

For small amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations. For large amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

## 7. Handling and Storage

## Precautions for safe handling

Avoid contact with the skin, eyes and clothing.

Protection against fire and explosion:

Keep away from sources of ignition - No smoking. The relevant fire protection measures should be noted.

#### **Conditions for safe storage, including any incompatibilities** No applicable information available.

Further information on storage conditions: Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight. Store protected against freezing.

## 8. Exposure Controls/Personal Protection

#### Components with occupational exposure limits

toluene-2,6-diisocyanate	ACGIH TLV	TWA value 0.005 ppm;STEL value 0.02 ppm ;
toluene-2,4-diisocyanate	OSHA PEL	CLV 0.02 ppm 0.14 mg/m3 ; TWA value 0.005 ppm 0.04 mg/m3 ; STEL value 0.02 ppm 0.15 mg/m3 ;
	ACGIH TLV	TWA value 0.005 ppm;STEL value 0.02 ppm;
calcium oxide	OSHA PEL ACGIH TLV	PEL 5 mg/m3;TWA value 5 mg/m3; TWA value 2 mg/m3;

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Limestone	OSHA PEL	PEL 5 mg/m3 Respirable fraction ; PEL 15 mg/m3 Total dust ; TWA value 15 mg/m3 Total dust ; TWA value 5 mg/m3 Respirable fraction ;
Titanium dioxide	OSHA PEL	PEL 15 mg/m3 Total dust ; TWA value 10 mg/m3 Total dust ;
	ACGIH TLV	TWA value 10 mg/m3;
talc	OSHA PEL	<ul> <li>TWA value 20 millions of particles per cubic foot of air ; TWA value 2.4 millions of particles per cubic foot of air Respirable ;</li> <li>The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 0.1 mg/m3 Respirable ;</li> <li>The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 0.3 mg/m3 Total dust ;</li> <li>The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 0.3 mg/m3 Total dust ;</li> <li>The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 2 mg/m3 Respirable dust ; TWA value 0.3 mg/m3 Total dust ;</li> <li>The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 0.1 mg/m3 Respirable from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 0.1 mg/m3 Respirable ;</li> <li>The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 2.4 millions of particles per cubic foot of air Respirable ;</li> <li>The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> <li>TWA value 2.4 millions of particles per cubic foot of air Respirable ;</li> <li>The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits.</li> </ul>
Stoddard solvent	OSHA PEL ACGIH TLV	PEL 500 ppm 2,900 mg/m3; TWA value 100 ppm;

Advice on system design: Provide local exhaust ventilation to control vapours/mists.

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## Personal protective equipment

#### Respiratory protection:

No applicable information available.

## Hand protection:

Chemical resistant protective gloves

#### Eye protection: Safety glasses with side-shields.

#### Body protection:

Body protection must be chosen based on level of activity and exposure.

#### General safety and hygiene measures:

Avoid contact with the skin, eyes and clothing. No special measures necessary if stored and handled correctly. Handle in accordance with good building materials hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

## 9. Physical and Chemical Properties

Form: Odour: Odour threshold: Colour: pH value: Melting point: Boiling point: Boiling point: Sublimation point: Flash point: Flash point: Flammability: Lower explosion limit: Upper explosion limit: Upper explosion limit: Autoignition: Vapour pressure: Density: Relative density: Vapour density: Partitioning coefficient n- octanol/water (log Pow): Thermal decomposition: Viscosity, dynamic: Viscosity, kinematic: Solubility in water: Miscibility with water: Solubility (qualitative): Solubility (qualitative): Evaporation rate: Other Information:	prescribed/indicated	No applicable information available. No applicable information available. ( 15 °C) insoluble ( 15 °C) not (e.g. <10%) No applicable information available. ation available. No applicable information available. ation on other physical and chemical
	parameters is indica	

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## 10. Stability and Reactivity

#### Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

## Chemical stability

The product is stable if stored and handled as prescribed/indicated.

#### Possibility of hazardous reactions

The product is stable if stored and handled as prescribed/indicated.

#### Conditions to avoid

See MSDS section 7 - Handling and storage.

#### Incompatible materials

strong acids, strong bases, strong oxidizing agents, strong reducing agents

## Hazardous decomposition products

Decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

## **11.** Toxicological information

## Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

#### **Acute Toxicity/Effects**

Acute toxicity

Assessment of acute toxicity: Of very high toxicity after short-term inhalation. Of low toxicity after single ingestion.

<u>Oral</u> Type of value: ATE Value: > 5,000 mg/kg

Inhalation Type of value: ATE Value: 14.8 mg/l Determined for vapor

<u>Dermal</u> Type of value: ATE Value: > 5,000 mg/kg

<u>Assessment other acute effects</u> No applicable information available.

Irritation / corrosion

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Assessment of irritating effects: The product has not been tested. The statement has been derived from the properties of the individual components.

#### Sensitization

Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract.

## **Chronic Toxicity/Effects**

#### Repeated dose toxicity

Assessment of repeated dose toxicity: Prolonged exposure may cause chronic effects.

#### Genetic toxicity

Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, a mutagenic effect could not be confirmed in mammalian cell culture.

#### Carcinogenicity

Assessment of carcinogenicity: Contains a compound classified as IARC Group 2B (possibly carcinogenic to humans).

#### Information on: Titanium dioxide

Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). In long-term studies in rats in which the substance was given by inhalation, a carcinogenic effect was observed. Tumors were only observed in rats after chronic inhalative exposure to high concentrations which caused sustained lung inflammation. In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. Dermal exposure is not expected to be carcinogenic.

#### Information on: toluene-2,6-diisocyanate

Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

#### Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

#### Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

#### Other Information

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

#### Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

#### **12. Ecological Information**

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Toxicity

Aquatic toxicity

Assessment of aquatic toxicity: Acutely harmful for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

## Persistence and degradability

<u>Assessment biodegradation and elimination (H2O)</u> Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

## Assessment biodegradation and elimination (H2O)

#### Information on: TDI

Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

------

#### Mobility in soil

Assessment transport between environmental compartments Adsorption to solid soil phase is not expected.

#### Additional information

Other ecotoxicological advice:

Acutely harmful for aquatic organisms. Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

## 13. Disposal considerations

## Waste disposal of substance:

Dispose of in accordance with local authority regulations. Do not discharge into drains/surface waters/groundwater.

## 14. Transport Information

#### Land transport USDOT

Not classified as a dangerous good under transport regulations

Sea transport

Not classified as a dangerous good under transport regulations

Air transport

Not classified as a dangerous good under transport regulations

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# Safety Data Sheet

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## 1. Identification

Product identifier used on the label

## **RainBuster 900 Stone**

**Recommended use of the chemical and restriction on use** Recommended use\*: for industrial and professional users

\* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

## Details of the supplier of the safety data sheet

Company: Top Industrial, Inc. 15010 Keswick St. Van Nuys, CA 91405

Telephone: 1-818-901-1313

## **Emergency telephone number**

CHEMTREC: 1-800-424-9300

Other means of identification

Chemical family: sealant

#### 2. Hazards Identification

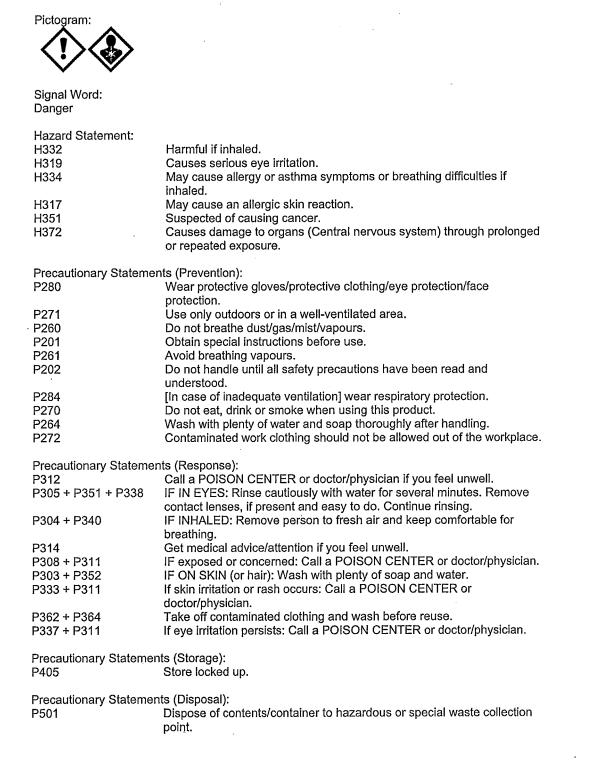
According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### **Classification of the product**

Acute Tox.	4 (Inhalation - vapour)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Resp. Sens.	1	Respiratory sensitization
Skin Sens.	1	Skin sensitization
Carc.	2	Carcinogenicity
STOT RE	1 <sup>.</sup>	Specific target organ toxicity repeated
		exposure

Label elements

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Hazards not otherwise classified

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If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

## Labeling of special preparations (GHS):

SENSITIZATION CAN OCCUR IN SOME INDIVIDUALS, LEADING TO ASTHMA-LIKE SPASMS OF THE BRONCHIAL TUBES AND DIFFICULTY BREATHING. INDIVIDUALS WITH A HISTORY OF RESPIRATORY ILLNESS, ASTHMATIC CONDITIONS, EYE DAMAGE OR TDI SENSITIZATION SHOULD NOT BE EXPOSED TO THIS PRODUCT. TDI IS INCLUDED IN THE NTP ANNUAL REPORT ON CARCINOGENS. RESULTS FROM A TDI HEALTH STUDY INDICATE THAT OVEREXPOSURE TO A RESPIRATORY IRRITANT, RESULTING IN LOWER RESPIRATORY TRACT SYMPTOMS COULD INCREASE THE RISKS OF DEVELOPING ASTHMA-LIKE REACTIONS FROM SUBSEQUENT TDI EXPOSURE. ANIMAL TESTS AND OTHER RESEARCH INDICATE THAT SKIN CONTACT WITH MDI MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

## According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### **Emergency overview**

#### WARNING:

SENSITIZATION CAN OCCUR IN SOME INDIVIDUALS, LEADING TO ASTHMA-LIKE SPASMS OF THE BRONCHIAL TUBES AND DIFFICULTY BREATHING. INDIVIDUALS WITH A HISTORY OF RESPIRATORY ILLNESS, ASTHMATIC CONDITIONS, EYE DAMAGE OR TDI SENSITIZATION SHOULD NOT BE EXPOSED TO THIS PRODUCT. TDI IS INCLUDED IN THE NTP ANNUAL REPORT ON CARCINOGENS. RESULTS FROM A TDI HEALTH STUDY INDICATE THAT OVEREXPOSURE TO A RESPIRATORY IRRITANT, RESULTING IN LOWER RESPIRATORY TRACT SYMPTOMS COULD INCREASE THE RISKS OF DEVELOPING ASTHMA-LIKE REACTIONS FROM SUBSEQUENT TDI EXPOSURE. Irritating to eyes, respiratory system and skin. CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

Avoid contact with the skin, eyes and clothing.

## 3. Composition / Information on Ingredients

## According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Content (W/W)	Chemical name
1317-65-3	>= 15.0 - < 20.0 %	Limestone
13463-67-7	>= 3.0 - < 5.0 %	Titanium dioxide
14807-96-6	>= 3.0 - < 5.0 %	talc
1305-78-8	>= 1.0 - < 3.0 %	calcium oxide
8052-41-3	>= 1.0 - < 3.0 %	Stoddard solvent
91-08-7	>= 0.3 - < 1.0 %	toluene-2,6-diisocyanate
2530-83-8	>= 0.3 - < 1.0 %	trimethoxy(3-(oxiranylmethoxy)propyl)silane
584-84-9	>= 0.03 - < 0.04 %	toluene-2,4-diisocyanate

## According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Content (W/W)	Chemical name
1317-65-3	>= 15.0 - < 20.0 %	Limestone
13463-67-7	>= 3.0 - < 5.0 %	Titanium dioxide
14807-96-6	>= 3.0 - < 5.0 %	talc
1305-78-8	>= 1.0 - < 3.0 %	calcium oxide
8052-41-3	>= 1.0 - < 3.0 %	Stoddard solvent
91-08-7	>= 0.3 - < 1.0 %	toluene-2,6-diisocyanate
2530-83-8	>= 0.3 - < 1.0 %	trimethoxy(3-(oxiranylmethoxy)propyl)silane
584-84-9	>= 0.037 - < 0.04 %	toluene-2,4-diisocyanate

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#### 4. First-Aid Measures

## **Description of first aid measures**

#### **General advice:**

First aid personnel should pay attention to their own safety. Remove contaminated clothing.

#### If inhaled:

No applicable information available.

#### If on skin:

Wash thoroughly with soap and water. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

#### If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

#### If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting unless told to by a poison control center or doctor.

#### Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Hazards: No applicable information available.

## Indication of any immediate medical attention and special treatment needed

#### Note to physician Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

## 5. Fire-Fighting Measures

#### Extinguishing media

Suitable extinguishing media: foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons: water jet

#### Special hazards arising from the substance or mixture

Hazards during fire-fighting: carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

## Advice for fire-fighters

Protective equipment for fire-fighting: Wear a self-contained breathing apparatus.

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#### **Further information:**

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

## **Environmental precautions**

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

#### Methods and material for containment and cleaning up

For small amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations. For large amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

## 7. Handling and Storage

~ ~ ....

#### Precautions for safe handling

Avoid contact with the skin, eyes and clothing.

Protection against fire and explosion:

Keep away from sources of ignition - No smoking. The relevant fire protection measures should be noted.

**Conditions for safe storage, including any incompatibilities** No applicable information available.

Further information on storage conditions: Keep only in the original container in a cool, wellventilated place. Protect from direct sunlight. Store protected against freezing.

## 8. Exposure Controls/Personal Protection

## **Components with occupational exposure limits**

toluene-2,6-diisocyanate	ACGIH TLV	TWA value 0.005 ppm;STEL value 0.02 ppm;
toluene-2,4-diisocyanate	OSHA PEL	CLV 0.02 ppm 0.14 mg/m3 ; TWA value 0.005 ppm 0.04 mg/m3 ; STEL value 0.02 ppm 0.15 mg/m3 ;
	ACGIH TLV	TWA value  0.005 ppm  ; STEL value  0.02 ppm ;
calcium oxide	OSHA PEL ACGIH TLV	PEL 5 mg/m3;TWA value 5 mg/m3; TWA value 2 mg/m3;

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Limestone	OSHA PEL	PEL 5 mg/m3 Respirable fraction ; PEL 15 mg/m3 Total dust ; TWA value 15 mg/m3 Total dust ; TWA value 5 mg/m3 Respirable fraction ;
Titanium dioxide	OSHA PEL	PEL 15 mg/m3 Total dust ; TWA value 10
,	ACGIH TLV	mg/m3 Total dust; TWA value 10 mg/m3;
talc	OSHA PEL	TWA value 20 millions of particles per cubic foot of air ; TWA value 2.4 millions of particles per cubic foot of air Respirable ; The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.1 mg/m3 Respirable ; The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.3 mg/m3 Total dust ; The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 2 mg/m3 Respirable dust ; TWA value 0.3 mg/m3 Total dust ; The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 2 mg/m3 Respirable dust ; TWA value 0.3 mg/m3 Total dust ; The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.1 mg/m3 Respirable ; The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 2.4 millions of particles per cubic foot of air Respirable ; The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 20 millions of particles per cubic foot of air ; TWA value 20 millions of particles per cubic foot of air ; TWA value 20 millions of particles per cubic foot of air ; TWA value 20 millions of particles per cubic foot of air ; TWA value 20 millions of particles per cubic foot of air ; TWA value 2 mg/m3 Respirable fraction ; The value is for particulate matter containing no
Stoddard solvent	OSHA PEL ACGIH TLV	asbestos and <1% crystalline silica. PEL 500 ppm 2,900 mg/m3 ; TWA value 100 ppm ;

Advice on system design: Provide local exhaust ventilation to control vapours/mists.

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# Personal protective equipment

## **Respiratory protection:** No applicable information available.

## Hand protection:

Chemical resistant protective gloves

**Eye protection:** Safety glasses with side-shields.

#### Body protection:

Body protection must be chosen based on level of activity and exposure.

## General safety and hygiene measures:

Avoid contact with the skin, eyes and clothing. No special measures necessary if stored and handled correctly. Handle in accordance with good building materials hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

## 9. Physical and Chemical Properties

Form: Odour: Odour threshold: Colour: pH value: Melting point: Boiling point: Sublimation point: Flash point: Flammability: Lower explosion limit: Upper explosion limit: Autoignition: Vapour pressure: Density: Relative density: Vapour density: Partitioning coefficient n- octanol/water (log Pow): Thermal decomposition: Viscosity, dynamic: Viscosity, kinematic: Solubility in water: Miscibility with water: Solubility (quantitative):	prescribed/indicated.	No applicable information available. No applicable information available. ( 15 °C) insoluble ( 15 °C) not (e.g. <10%) No applicable information available.
	No applicable inform	No applicable information available.
Other Information:	If necessary, informa parameters is indica	ation on other physical and chemical

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## 10. Stability and Reactivity

#### Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

#### Chemical stability

The product is stable if stored and handled as prescribed/indicated.

#### Possibility of hazardous reactions

The product is stable if stored and handled as prescribed/indicated.

## Conditions to avoid

See MSDS section 7 - Handling and storage.

## Incompatible materials

strong acids, strong bases, strong oxidizing agents, strong reducing agents

## Hazardous decomposition products

Decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

## 11. Toxicological information

#### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

#### Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of very high toxicity after short-term inhalation. Of low toxicity after single ingestion.

<u>Oral</u> Type of value: ATE Value: > 5,000 mg/kg

Inhalation Type of value: ATE Value: 14.8 mg/l Determined for vapor

<u>Dermal</u> Type of value: ATE Value: > 5,000 mg/kg

Assessment other acute effects No applicable information available.

Irritation / corrosion

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Assessment of irritating effects: The product has not been tested. The statement has been derived from the properties of the individual components.

#### Sensitization

Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract.

## **Chronic Toxicity/Effects**

#### Repeated dose toxicity

Assessment of repeated dose toxicity: Prolonged exposure may cause chronic effects.

#### Genetic toxicity

Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, a mutagenic effect could not be confirmed in mammalian cell culture.

#### Carcinogenicity

Assessment of carcinogenicity: Contains a compound classified as IARC Group 2B (possibly carcinogenic to humans).

#### Information on: Titanium dioxide

Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). In long-term studies in rats in which the substance was given by inhalation, a carcinogenic effect was observed. Tumors were only observed in rats after chronic inhalative exposure to high concentrations which caused sustained lung inflammation. In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. Dermal exposure is not expected to be carcinogenic.

#### Information on: toluene-2,6-diisocyanate

Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

#### Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

#### Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

#### Other Information

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

#### Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

#### 12. Ecological Information

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#### Toxicity

Aquatic toxicity

Assessment of aquatic toxicity: Acutely harmful for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

#### Persistence and degradability

<u>Assessment biodegradation and elimination (H2O)</u> Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

## Assessment biodegradation and elimination (H2O)

Information on: TDI

Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

#### Mobility in soil

Assessment transport between environmental compartments Adsorption to solid soil phase is not expected.

#### Additional information

Other ecotoxicological advice:

Acutely harmful for aquatic organisms. Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

## 13. Disposal considerations

#### Waste disposal of substance:

Dispose of in accordance with local authority regulations. Do not discharge into drains/surface waters/groundwater.

## 14. Transport Information

Land transport USDOT

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transport

Not classified as a dangerous good under transport regulations

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## 15. Regulatory Information

## Federal Regulations

Registration status: Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Chronic

EPCRA 313: CAS Number

91-08-7

Chemical name toluene-2,6-diisocyanate

<u>CERCLA RQ</u> 5000 LBS 1000 LBS 100 LBS CAS NumberChemical name7664-38-2phosphoric acid108-88-3Toluene108-90-7; 584-84-chlorobenzene; toluene-2,4-diisocyanate; toluene-2,6-9; 91-08-7diisocyanate

## State regulations

<u>State RTK</u> MA, NJ, PA CAS Number 1317-65-3 13463-67-7 14807-96-6 1305-78-8 8052-41-3 91-08-7 584-84-9 Chemical name Limestone Titanium dioxide talc calcium oxide Stoddard solvent toluene-2,6-diisocyanate toluene-2,4-diisocyanate

CA Prop. 65:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes: Health: 2 Fire: 1

Reactivity: 0 Special:

HMIS III rating Health: 2<sup>a</sup> Flammability: 1

Physical hazard:0

## 16. Other Information

**SDS Prepared by:** Top Industrial, Inc. SDS Prepared on: 2014/12/16 Revision date : 2014/12/16 Version: 1.0 Page: 12/12 (30636411/SDS\_GEN\_US/EN)

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION. DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK. END OF DATA SHEET

CANFIELD TECHNOLOGIES, LLC

Lukens Metals

# Safety Data Sheet According to 1907-2006/EC, Article 31

1. IRCODUCT AND GOLDANNIDENTIFICATION

Revised 01/06/2018

35-5pgs 35 County Leo

 Product Trade Name:
 Lead Ingots / Caulking Lead

 Details of the supplier of the safety data sheet.
 Image: Canfield Technologies/BOW Electronic Solders

 This Safety Data Sheet has been updated in accordance with the Globally Harmonized System (GHS).
 Canfield Technologies/BOW Electronic Solders

 Address:
 1 Crossman Road, Sayreville, NJ 08872

 General Phone Number:
 732-316-2100

 INFOTRAC
 24 Hour Emergency Telephone Number: 1-800-535-5053

 INFO RAC
 24 Hour Emergency relephone

 SDS Creation Date
 6-Jan-15

 SDS Revision Date:
 6-Jan-18

#### 2. HAVANDSIDENHECANON

Classification of the substance or mixture: Carcinogen 1B - H350 Classification according to Regulation (EC) NO 1272/2008

GHS08 Health Hazard

Resp.Sens. 1B H350 May cause cancer.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Label elements

Labeling according to Regulation (EC) No 1272/2008 The product is classified and labeled according to the CLP regulation.



GHS08 GHS07				
Signal word Danger				
Hazard-determining components of labeling:				
Lead (Pb)				
Hazard Statements				
H302	Harmful if swallowed .			
H350	May cause cancer.			
Precautionary statements				
P201	Obtain special instructions before use.			
P202	Do not handle untill safety precautions have been read and understood.			
P260	Do not breathe dust/fune/gas/vapors/spray.			
P264	Wash skin thoroughly after handling.			
P273	Avoid release to the environment			
P280	Wear eye protection, protective clothing, protective gloves.			
P308+P313	If exposed or concerned: Get medical advice/ attention.			
P405	Store locked up.			
P501	Dispose of contents/container in according with local/regional/national regulations.			
Other Hazards:	Prevent particles from becoming airborne. Can cause thermal burns when molten.			

Unknown Acute Toxicity Statement: Not Applicable. Classification system: NFPA ratings (scale 0-4 )



LEAD HEALTH Health = 1 Fire = 0

Reactivity = 0

HEALTH
 Health = 1
 FLAMMADULITY
 REACTIVITY
 RESONAL
 Reactivity = 0

Other hazards Results of PBT and vPvB assessment PBT : Not applicable vPvB: Not applicable

## & COMPOSITION OF MIXING

#### **Chemical characterization: Mixtures**

Description: Mixtures of the substances listed below with nonhazardous additions.

CAS No.	Descript	ion		% Range
CAS: 7439-92-1	Lead	٨	Repr. 1A, H350	>99%
EINECS: 231-100-4				
		$\Diamond$	Acute Tox. 4, H302	

#### Additional information:

This solder product does not contain any Substance of very High Concern (SVHC) on the European Chemicals Agency

(ECHA) canadate list.

Composition and weight percent of solder alloys varies widely and can be determined by product label.

4 (FIRST AIDMEASURES

#### Description of first aid measures

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air, consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing:

Induce vomiting, if person is conscious. Seek medical help.

Seek immediate medical advice.

Information for doctor:

Most important symptoms and effects, both acute and delayed. No further relevant information available.

Indication of any immediate medical attention and special treatment needed. No further relevant information available.

#### 6.HAREAGAMERMERSURES

#### Extinguishing media

Suitable extinguishing agents: CO2, Do not use water.

For safety reasons unsuitable extinguishing agents: water

Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO2)

Melted solder above 1000°F will liberate toxic lead fumes and aiphatic aldehydes

#### Advice for fire fighters

Protective equipment: Wear self-contained respiratory protective device.

#### 6 ACCOPENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation

Environmental precautions: Do not allow to enter sewers/surface or ground water.

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Melted solder will solidify on cooling and can scraped up. Use caution to avoid breathing fumes if a gas torch is used to

cut up large pieces.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### RAMANDUME AND STORAGE

#### Handling:

Precautions for safe handling: Prevent formation of dust.

Information about protection against explosions and fires: No special measures required.

## Conditions for safe storage, including any incompatibilities

#### Storage:

Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in dry conditions.

Exposure to sulfur or to high humidity will tarnish solder surface. Specific end use (s) No further relevant information available.

#### B. PAPOSURE CONTROLS/PERSONAL PROJECTION

Additional information about design of technical systems: No further data; see item 7.

#### **Control parameters**

Components with limit values that require monitoring at the workplace:

Lead 7493-92-1

USA ACGH	ACGIH TWA (mg/m³)	0.05 mg/m <sup>3</sup>			
USA NIOSH	NIOSH REL (TWA) ( mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>			
USA IDLH	US IDLH (mg/m³)	100 mg/m³			
USA OSHA	OSHA PEL (TWA) ( mg/m <sup>3</sup> )	50 μg/m³			
Additional information:					
PEL = Permissible Exposure Limit (OSHA)					
TWA = Time-Weighted Average					
OSHA = Occupational Safety and Health Administration.					
ACGIH = American Conference of Governmental Industrial Hygienists					
Exposure controls					
Personal protective equipment:					
General protective and hygienic measures:					
The usual precautionary measures for handling chemicals should be followed.					
Keep away from foodstuffs, beverages and feed.					
huma distant several and and contaminated plathing					

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

#### **Breathing equipment:**

Exposure controls: Use appropriate engineering control such as process enclousures, local exhaust ventilation to control airborne levels below recommended exposure limits.

When ventilation is not sufficient to remove airborne levels from the breathing zone, a NIOSH safety approved respirator or self-contained breathing apparatus should be worn. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

#### Protection of hands:



Protective gloves

Material of gloves: Nitrile rubber, NBR Natural rubber, NR Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and to be observed. Eye protection :

Face Shield or Safety Glasses

9. AHVSIGAL /AND/GHEUIGAL PROPERNIES

Information on basic physical and chemical properties **General Information** Appearance : Form: Metal in sheet form. Color: grey, silver Odor: N/A pH-value: N/A Change in condition Melting point/melting range: 327.43°C (621.4°F) boiling point/boiling range: 1740ºC (3164ºF) Flammability (solid, gaseous): N/A Flash point : N/A Auto igniting: N/A Vapor density : N/A Molecular Weight : 207.21 g/mol Viscosity: N/A Solubility: insoluble in water Specific Gravity (Relative Density): 11.3 **Evaporation Rate:** N/A Vapor Pressure: 1 mm Hg @ 973°C (1783°F)

10. STATEILLINY AND REACTIONINY

Reactivity

Chemical stability

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: No dangerous reactions known

Conditions to avoid: No further relevant information available.

Incompatible materials: Strong acids, strong oxidizers.

Hazardous decompositions products:

Carbon monoxide and carbon dioxide

When heated to soldering temperatures, the solvents are evaporated and rosin may be thermally degraded to

liberate aliphatic aldehydes and acids.

#### 141 TO ACOLOGICALINGORMANION

#### Information on toxicological effects

#### **Routes of exposure**

Inhalation of dust, fumes.

Skin: Contact through physical contact.

Eye: Contact through physical contact or dust and fumes.

Ingestion: Through contamination of skin/ surfaces.

Chronic and Acute Related Symptoms / Effects:

Inhalation: Dust or fumes can cause respiratory irritation.

Skin: Contact with molten metal can cause burns.

Eye: Dust or fumes can cause eye irritation.

Ingestion: Can cause harmful effects.

Acute symptoms can include headaches, abdominal pain, memory loss, kidney failure, anemia, change in skin tone,

reroductive problems, weakess, pain, or tingling.

Chronic exposure may cause cancer or lead poisoning.

Measures of Toxicology: Acute toxicity: Not Classified. Skin corrosion/ Irritation: Not Classified Serious Eye Damage/ Irritation: Not Classified Respiratory or Skin Sesitization: Not Classified Carcinogenic Information: May cause Cancer. IARC (International Agency for Research on Cancer) Group: 2A Lead 7439-92-1 NTP (National Toxicology Program) status: Reasonably anticipated to be human carcinogen.

12 TECOLOGICAL INFORMATION

#### Toxicity

 Aquatic toxicity: No further relevant information available.

 Additional ecological information:

 General notes:

 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

 Danger to drinking water if even small quantities leak into the ground.

 Result of PBT and vPvB assessment

 PBT:
 Not applicable.

 VPvB:
 Not applicable.

#### IS DSPOSAL CONSIDERATIONS

### Waste treatment methods

**Recommendation:** 

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Uncleaned packaging's

Recommendations: Disposal must be made in accordance to official regulations.

### TRI. TREVANSPORTATINFORMANNON

UN- NUMBER	UN 3077
UN proper shipping name	Environmentally Hazardous Substance, solid, n.o.s. (Lead)
IMDG, IATA	
Transport hazard class (es)	
DOT, ADR, IMDG, IATA	Not regulated
Class	9
Packing group	111
Environmental hazards:	Do not release to waterways.
Special precautions for user	Wash skin after contact.
Transport in bulk according to Annex	(II of MARPOL73/78
and the IBC Code	Not applicable.

## **YE RECULATORYAN FORMATION**

Safety, Health and Environmental regulation / legislation specific for the substance or mixture USA The following information relates to product regulation specific to the USA. SARA (Superfund Amendments and Reauthorization Act): Section 311/312 Hazard Classes-Delayed (chronic) Health Hazrad. SARA (Specific toxic chemical listings): Section 313 Emissions Reporting - 0.1%.

US State Regulations: California- Prop. 65- Carcinogens List. California- Prop. 65- Development Toxicity. California- Prop. 65- Reproductive Toxicity male/Female. Massachusetts- Right To Know List. Pennsylvania- Right To Know (Environmental Hazrad) Pennsylvania- Right To Know. New Jersey- Right To Know List.

# Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

Labeling according to Regulation (EC) NO 1272/2008

The product has classified and labeled according to the CLP regulation.

Hazard pictograms



Signal word Danger

## Hazard-determining components of labeling:

Lead	
H302	Harmful if swallowed .
H350	May cause cancer.
Precautionary statement	S
P201	Obtain special instructions before use.
P202	Do not handle untill safety precautions have been read and understood.
P260	Do notbreathe dust/fune/gas/vapors/spray.
P264	Wash skin thoroughly after handling.
P273	Avoid release to the environment
P280	Wear eye protection, protective clothing, protective gloves.
P308+P313	If exposed or concerned: Get medical advice/ attention.
P405	Store locked up.
P501	Dispose of contents/container in according with local/regional/national regulations.

## 46 ONHERINFORMANION

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Bow and Canfield Technologies extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The information on this Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Material Safety Data Sheet as a source for hazard information. **\*Data compared to the previous version altered.** 

LEAD WIE TAL       Set Modely, Vir, No. 58 / Modely, Werk 36, 3013 / Rules And Regulations         According for Accel Register (vol. 77, No. 58 / Modely, Werk 36, 3013 / Rules And Regulations       Supervised Set 10/05/2010       Version: 1.1         SECTION 1: IDENTIFICATION       Supervised Set 10/05/2010       Version: 1.1         SECTION 1: IDENTIFICATION       Product Identifier       Product Name: LEAD METAL         Formula: Pb       Synonyms: DOE RUN LEAD, DOE RUN LEAD ALLOYS AND LEAD STRIP          1.1.       Intended Use of the Product       Use of this substance/mixture: For professional use only.         1.3.       Name, Address, and Telephone of the Responsible Party       Company         The Doe Run Company       1805-243-2287 (Client account number: 12236)         Statis 200       St. Louis, MO 63146       573-626-4813         S73-626-4813       DENTIFICATION         St. Louis, MO 63146       573-626-4813         S73-626-4813       H350         Full text of H-phrases: see section 16       St. Company         1.1.       Classification of the Substance or Mixture         Classification of the Substance or Mixture       Classification of the Substance or Mixture         Classification of the Substance or Mixture       Particle Phrases: see section 15         2.1.       Classification of the Substance or Mixture		352# 5P95
Safety Data Sheet According To Federal Bitter (Vol. 77, No. 52 / Monday, March. 36, 2012 / Rules and Begulations Superneder Date: 10/05/2010 Version: 1.1 SPCTION 11 IDENTIFICATION Section 21 / 2010 / RUN LEAD, DOE RUN LEAD ALLOYS AND LEAD STRIP Product Horm: Substance Product Identifier Formula: Pb Synonyms: DOE RUN LEAD, DOE RUN LEAD ALLOYS AND LEAD STRIP Synonyms: DOE RUN LEAD, DOE RUN LEAD ALLOYS AND LEAD STRIP Synonyms: DOE RUN LEAD, DOE RUN LEAD ALLOYS AND LEAD STRIP T.2. Intended Use of the Product Use of the substance/mixture: For professional use only. 1.3. Name, Address, and Telephone of the Responsible Party Company The Doe Run Company 1801 Park 270 Stite 300 St. Louis, MO 63146 S73-626-4313 1.4. Emergency Telephone Number Emergency Number Emergency Number Classification of the Substance or Mixture Classification of the Substance or Mixture Classification of the Substance or Mixture Classification (GHS-US) Ful text of H-phrases: see section 16 2.1. Label Ilements GHS-US) Frecautionary Statements (GHS-US) Face Add Statements (GHS-US) Frecautionary Statements (GHS-US) F		5 Pgs
Service 12/02/0015       Device 12/02/0015         Sectricy 11: DENTIFICATION         1.1. Product Identifier         Product Form: Substance         Product Form: Substance         Product Name: LEAD METAL         Formula: Pib         Synonyms: DOE RUN LEAD, DOE RUN LEAD ALLOYS AND LEAD STRIP         1.2. Intended Use of the Product         Use of the substance/mkture: For professional use only.         1.3. Name, Address, and Telephone of the Responsible Party         Company         1801 Park 770         Suite 300         St. Louis, MO 63146         573-626-4813         1.4. Emergency Telephone Number         Emergency Number         ES5-243-2287 (Client account number: 12236)         SECTION 2: HAZARDS DENTIFICATION         2.1. Classification of the Substance or Mixture         Classification (GHS-US)         Care. 18         H350         Full text of H-phrases: see section 16         2.2. Label Elements         GHS-US Labeling         Hazard Pictograms (GHS-US)         Precautionary Statements (GHS-US)         Precautionary Statements (GHS-US)         P200 - O than special instructions before use.         P202 - D on thandibu until all safety precautions have been read and un	Safety Data Sheet According To Federal Register / Vol. 77, No. 58 / Monday, M	larch 26, 2012 / Rules And Regulations
1.1.       Product Identifier         Product Form: Substance       Product Name: LEAD METAL         Formula: Pib       Synonyms: DOE RUN LEAD, DOE RUN LEAD ALLOYS AND LEAD STRIP         1.2.       Intended Use of the Product         Use of the substance/mixture: For professional use only.       1.3.         1.3.       Name, Address, and Telephone of the Responsible Party         Company       1801 Park 270         Suite 300       St. Louis, MO 63146         573-626-4813       1.4.         Emergency Telephone Number       Emergency Telephone Number         Emergency Number       : 855-243-2287 (Client account number: 12236)         SECTION 2: HAZARDS IDEVITIE/CATION       2.1.         Classification of the Substance or Mixture       Classification (GHS-US)         Carc. 18       H350         Full text of H-phrase: see see section 16       2.2.         Label Elements       GHS-US Labeling         Hazard Statements (GHS-US)       : Danger         Hazard Statements (GHS-US)       : P201 - Obtain special instructions before use.         P202 - Do not handle until all safety precautions have been read and understood.         P203 - Do not handle until all safety precautions have been read and understood.         P204 - Do not handle until all safety precautions have been read and understood.		e: 12/22/2014 Superseues Date: 10/05/2010 Colorado
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Classification (GHS-US)         Carc. 1B       H350         Full text of H-phrases: see section 16         2.2.       Label Elements         GHS-US Labeling         Hazard Pictograms (GHS-US)       :         Signal Word (GHS-US)       :         Hazard Statements (GHS-US)       :         Precautionary Statements (GHS-US)       :         P202 - Do not handle until all safety precautions have been read and understood.         P280 - Wear eye protection, protective clothing, protective gloves.         P308+P313 - If exposed or concerned: Get medical advice/attention.         P405 - Store locked up.         P501 - Dispose of contents/container in accordance with local, regional, national, and International regulations.         2.3.       Other Hazards         Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory		
Carc. 1B       H350         Full text of H-phrases: see section 16         2.2.       Label Elements         GHS-US Labeling         Hazard Pictograms (GHS-US) <ul> <li>isoa</li> <li>isoa</li> <li>Signal Word (GHS-US)</li> <li>i Danger</li> <li>Hazard Statements (GHS-US)</li> <li>i H350 - May cause cancer.</li> <li>i P201 - Obtain special instructions before use.</li> <li>p202 - Do not handle until all safety precautions have been read and understood.</li> <li>p280 - Wear eye protection, protective clothing, protective gloves.</li> <li>p308+P313 - If exposed or concerned: Get medical advice/attention.</li> <li>p405 - Store locked up.</li> <li>p501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.</li> </ul> 2.3.     Other Hazards         Risk of thermal burns on contact with molter product. Exposure may aggravate those with pre-existing eye, skin, or respiratory		ce or Mixture
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Signal Word (GHS-US)       : Danger         Hazard Statements (GHS-US)       : H350 - May cause cancer.         Precautionary Statements (GHS-US)       : P201 - Obtain special instructions before use.         P202 - Do not handle until all safety precautions have been read and understood.         P280 - Wear eye protection, protective clothing, protective gloves.         P308+P313 - If exposed or concerned: Get medical advice/attention.         P405 - Store locked up.         P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.         2.3. Other Hazards         Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory	GHS-US Labeling	
Signal Word (GHS-US): DangerHazard Statements (GHS-US): H350 - May cause cancer.Precautionary Statements (GHS-US): P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear eye protection, protective clothing, protective gloves. P308+P313 - If exposed or concerned: Get medical advice/attention. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.2.3. Other Hazards Risk of thermal burns on contact with molter product. Exposure may aggravate those with pre-existing eye, skin, or respiratory	Hazard Pictograms (GHS-US)	
Hazard Statements (GHS-US): H350 - May cause cancer.Precautionary Statements (GHS-US): P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear eye protection, protective clothing, protective gloves. P308+P313 - If exposed or concerned: Get medical advice/attention. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.2.3. Other Hazards Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory		GH508
Hazard Statements (GHS-US): H350 - May cause cancer.Precautionary Statements (GHS-US): P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear eye protection, protective clothing, protective gloves. P308+P313 - If exposed or concerned: Get medical advice/attention. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.2.3. Other Hazards Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory	Signal Word (GHS-US)	: Danger
Precautionary Statements (GHS-US): P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear eye protection, protective clothing, protective gloves. P308+P313 - If exposed or concerned: Get medical advice/attention. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.2.3. Other Hazards Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory		: H350 - May cause cancer.
<ul> <li>P202 - Do not handle until all safety precautions have been read and understood.</li> <li>P280 - Wear eye protection, protective clothing, protective gloves.</li> <li>P308+P313 - If exposed or concerned: Get medical advice/attention.</li> <li>P405 - Store locked up.</li> <li>P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.</li> <li>2.3. Other Hazards</li> <li>Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory</li> </ul>	Precautionary Statements (GHS-US)	: P201 - Obtain special instructions before use.
P308+P313 - If exposed or concerned: Get medical advice/attention. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations. <b>2.3. Other Hazards</b> Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory	•	P202 - Do not handle until all safety precautions have been read and understood.
P405 - Store locked up. P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations. <b>2.3. Other Hazards</b> Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory		P280 - Wear eye protection, protective clothing, protective gloves.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations. 2.3. Other Hazards Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory	·	
and international regulations. <b>2.3. Other Hazards</b> Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory		P405 - Store locked up.
Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory		
Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory	2.3. Other Hazards	
	Risk of thermal burns on contact with m conditions.	olten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory

#### Unknown Acute Toxicity (GHS-US) 2.4.

No data available

# SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance 3.1.

: LEAD METAL

Name	: LEAD METAL	: LEAD METAL		
Name	Product Identifier	%	Classification (GHS-US)	
Lead	(CAS No) 7439-92-1	> 99	Carc. 1B, H350	
Leau		· · · · · · · · · · · · · · · · ·		

Mixture 3.2.

۰,

Not applicable

# SECTION 4: FIRST AID MEASURES

#### **Description of First Aid Measures** 4.1.

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

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### Safety Data Sheet

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**First-aid Measures After Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance. Seek medical attention for thermal burns.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Warning! Contains lead. Lead poisoning can occur via an acute dose or through chronic exposure. Symptoms of lead poisoning include headaches, abdominal pain, memory loss, kidney failure, anemia, change in skin tone or pallor, reproductive problems in men, weakness, pain, or tingling in the extremities. May cause cancer.

Symptoms/injuries After Inhalation: Fumes from welding, or processing of this material can be harmful if inhaled.

Symptoms/injuries After Skin Contact: Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Eye Contact: Dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Studies on laboratory animals have shown that exposure to inorganic lead compounds may cause cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

# SECTION 5: FIRE-FIGHTING MEASURES

## 5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire. Application of water stream to hot product may cause frothing and increase fire intensity.

## 5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: In molten form may react violently with water.

### 5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection. **Other Information:** Refer to Section 9 for flammability properties.

# SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (dust, fumes).

### 6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and Material for Containment and Cleaning Up

For Containment: If metal is in molten form allow to cool and collect as a solid. If metal is in solid form collect for remelting purposes.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Recover the product by vacuuming, shovelling or sweeping. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

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Safety Data Sheet

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# SECTION 7: HANDLING AND STORAGE

#### 7.1. **Precautions for Safe Handling**

Precautions for Safe Handling: Use safe furnace practices when using this product.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### Conditions for Safe Storage, Including Any Incompatibilities 7.2.

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from Incompatible materials.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers. In molten form: moisture.

#### 7.3. Specific End Use(s)

For professional use only.

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. **Control Parameters**

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Lead (7439-9	2-1)			
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )		0.05 mg/m <sup>3</sup>	
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )		0.050 mg/m <sup>3</sup>	
USA IDLH	US IDLH (mg/m <sup>3</sup> )		100 mg/m <sup>3</sup>	
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )		50 μg/m³	
	osure Controls			
	Engineering Controls tective Equipment	fountains and si potential exposes Protective gogg respiratory prot		<b>y</b>
Materials for Hand Protect	Protective Clothing ion	: Wear chemicall resistant protec		
Eye Protectio	on	shield.	es or safety glasses. For safe furnace work: Safety glasses. Face	
Skin and Bod			rotective clothing.	
Respiratory P		respiratory prot	s are exceeded or irritation is experienced, NIOSH approved ection should be worn.	
	ard Protection	furnace work.	othing and gloves, as well as safety shoes are required for safe	
	al Exposure Controls		e product to be released into the environment.	
	posure Controls		k or smoke during use.	
	PHYSICAL AND CHEMIC			
	rmation on Basic Physical		-	
Physical State	9	: So		
Appearance		: Blu	iish-gray soft metal	
Odor		: No	data available	
Odor Thresho	old	: No	data available	
рH		: No	data available	
Evaporation I	Rate	: No	data available	
Melting Point		: 62	1 °F (327 °C)	
Freezing Poin		: No	data available	
Boiling Point		: 31	64 °F (1740 °C)	
12/01/2015		EN (English US)		3/5

# LEÁD METAL

Safety Data Sheet According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: 1 mm Hg @ 973 °C (1783 °F)
Relative Vapor Density at 20 °C	: No data available
Specific Gravity	: 11.3
Solubility	: Insoluble in water
Partition Coefficient: N-Octanol/Water	, : No data available
Viscosity	: No data available
9.2. Other Information No additional inform	
SECTION 10: STABILITY AND REACTIVITY	
10.1. Reactivity: In molten form may react vio	lently with water.
	nended handling and storage conditions (see section 7).
10.3. Possibility of Hazardous Reactions: Haza	rdous polymerization will not occur.
10.4. Conditions to Avoid: Incompatible mate	rials. In molten form: moisture.
10.5. Incompatible Materials: Strong acids, str	ong bases, strong oxidizers.
10.6. Hazardous Decomposition Products: The	ermal decomposition generates: lead fumes.
SECTION 11: TOXICOLOGICAL INFORMATIC	DN
11.1. Information On Toxicological Effects	
Acute Toxicity: Not classified	
Skin Corrosion/Irritation: Not classified	
Serious Eye Damage/Irritation: Not classified	
Respiratory or Skin Sensitization: Not classified	
Germ Cell Mutagenicity: Not classified	
Carcinogenicity: May cause cancer.	·
Lead (7439-92-1)	2A
IARC group National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
Reproductive Toxicity: Not classified	
Specific Target Organ Toxicity (Single Exposure): N	ot classified
Specific Target Organ Toxicity (Repeated Exposure	
Aspiration Hazard: Not classified	
-	velding, or processing of this material can be harmful if inhaled.
Symptoms/Injuries After Skin Contact: Risk of ther	
	d from milling and physical alteration will likely cause eye irritation. Fumes
from thermal decomposition or molten material wi	
Symptoms/Injuries After Ingestion: Ingestion is like	ave shown that exposure to inorganic lead compounds may cause cancer.
SECTION 12: ECOLOGICAL INFORMATION	lave shown that exposure to morganic lead compounds may cause cancer.
<b>12.1. Toxicity</b> No additional information availa	
12.2. Persistence and Degradability No additional additionadditional additional additional additional addition	
12.3. Bioaccumulative Potential No addition	
12.4. Mobility in Soil No additional informatio	n available.
12.5. Other Adverse Effects	
	Avoid release to the environment.
SECTION 13: DISPOSAL CONSIDERATIONS	
13.1. Waste treatment methods	te material in accordance with all local regional national and international
regulations.	ste material in accordance with all local, regional, national, and international
Ecology – Waste Materials: Avoid release to the er	vironment.
<b>.</b>	

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Safety Data Sheet

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# **SECTION 14: TRANSPORT INFORMATION**

- 14.1. In Accordance with DOT Not regulated for transport.
- 14.2. In Accordance with IMDG Not regulated for transport.

#### 14.3. In Accordance with IATA Not regulated for transport.

# **SECTION 15: REGULATORY INFORMATION**

#### **US Federal Regulations** 15.1

LEAD METAL

# SARA Section 311/312 Hazard Classes

### Lead (7439-92-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313.

SARA Section 313 - Emission Reporting 0.1%

#### 15.2 **US State Regulations**

		0
Lead (7	439-92-1)	

U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of
	California to cause cancer.
U.S California - Proposition 65 - Developmental	WARNING: This product contains chemicals known to the State of
Toxicity	California to cause birth defects.
U.S California - Proposition 65 - Reproductive	WARNING: This product contains chemicals known to the State of
Toxicity - Female	California to cause (Female) reproductive harm.
U.S California - Proposition 65 - Reproductive	WARNING: This product contains chemicals known to the State of
Toxicity - Male	California to cause (Male) reproductive harm.
Lond (7420,02,4)	

Delayed (chronic) health hazard

Lead (7439-92-1)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

# SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision Date** 

: 12/01/2015

**Other Information** 

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

#### **GHS Full Text Phrases:**

Carc. 1B	Carcinogenicity Category 1B
H350	May cause cancer

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

EAD METAL			J ,
fety Data Sheet ording To Federal Register / Vol. 77, No. 58 / Monday, N	Aarch 26, 2012 / Rules And F	regulations	-
ision Date: 12/01/2015 Date of iss	ue: 12/22/2014	Supersedes Date: 10/05/2010	Version: 1.1
CTION 1: IDENTIFICATION			
.1. Product Identifier			
roduct Form: Substance			
roduct Name: LEAD METAL			۶.
ormula: Pb			
ynonyms: DOE RUN LEAD, DOE RUN LE		AD STRIP	
.2. Intended Use of the Product			
se of the substance/mixture: For profe			
.3. Name, Address, and Telepho	one of the Respon	sible Party	
ompany			
he Doe Run Company			
801 Park 270			
uite 300			
t. Louis, MO 63146			
73-626-4813			
.4. Emergency Telephone Num	ber		
mergency Number	: 855-243-2287	(Client account number: 1223	6)
CTION 2: HAZARDS IDENTIFICAT	ION		
.1. Classification of the Substan	ce or Mixture		
lassification (GHS-US)			
arc. 1B H350			
ull text of H-phrases: see section 16			· · · · ·
.2. Label Elements			
HS-US Labeling			
lazard Pictograms (GHS-US)	: 🔥		
	$\sim$	<i>,</i>	
	GHS08		
ignal Word (GHS-US)	: Danger	· .	
lazard Statements (GHS-US)	: H350 - May ca	use cancer.	
recautionary Statements (GHS-US)		special instructions before use.	
			ns have been read and understood
		ye protection, protective clothi	
		exposed or concerned: Get me	edical advice/attention.
	P405 - Store lo		
		e of contents/container in accor	dance with local, regional, national
		nal regulations.	

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Risk of thermal burns on contact with molten product. Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

#### Unknown Acute Toxicity (GHS-US) 2.4.

No data available

# SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1.	Substance	
Name		

Name	: LEAD METAL		
Name	Product Identifier	%	Classification (GHS-US)
Lead	(CAS No) 7439-92-1	> 99	Carc. 1B, H350

Mixture 3.2.

Not applicable

# **SECTION 4: FIRST AID MEASURES**

#### **Description of First Aid Measures** 4.1.

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

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**First-aid Measures After Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance. Seek medical attention for thermal burns.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Warning! Contains lead. Lead poisoning can occur via an acute dose or through chronic exposure. Symptoms of lead poisoning include headaches, abdominal pain, memory loss, kidney failure, anemia, change in skin tone or

pallor, reproductive problems in men, weakness, pain, or tingling in the extremities. May cause cancer.

Symptoms/Injuries After Inhalation: Fumes from welding, or processing of this material can be harmful if inhaled.

Symptoms/Injuries After Skin Contact: Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Eye Contact: Dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Studies on laboratory animals have shown that exposure to inorganic lead compounds may cause cancer.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

# SECTION 5: FIRE-FIGHTING MEASURES

# 5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire. Application of water stream to hot product may cause frothing and increase fire intensity.

## 5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

**Reactivity:** In molten form may react violently with water.

### 5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection. **Other Information:** Refer to Section 9 for flammability properties.

# SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (dust, fumes).

### 6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods,

protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

# 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

# 6.3. Methods and Material for Containment and Cleaning Up

For Containment: If metal is in molten form allow to cool and collect as a solid. If metal is in solid form collect for remelting purposes.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Recover the product by vacuuming, shovelling or sweeping. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Contact competent authorities after a spill.

# 6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

Safety Data Sheet

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# **SECTION 7: HANDLING AND STORAGE**

#### 7.1. **Precautions for Safe Handling**

Precautions for Safe Handling: Use safe furnace practices when using this product.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### Conditions for Safe Storage, Including Any Incompatibilities 7.2.

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from Incompatible materials.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers. In molten form: moisture.

#### 7.3. Specific End Use(s)

For professional use only.

# **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1. **Control Parameters**

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Lead (7439-92	2-1)			
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )		0.05 mg/m <sup>3</sup>	
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )		0.050 mg/m <sup>3</sup>	
USA IDLH	US IDLH (mg/m <sup>3</sup> )	,	100 mg/m³	
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )		50 μg/m³	
8.2. Expo	sure Controls			
	ngineering Controls ective Equipment	fountains and potential expo	ate ventilation, especially in confined areas. Emergency eye wash safety showers should be available in the immediate vicinity of a osure. Ensure all national/local regulations are observed. ggles. Gloves. Protective clothing. Insufficient ventilation: wear otection.	
Hand Protection : Wear chemi		•	sistant materials and fabrics. Illy resistant protective gloves. If material is hot, wear thermally ective gloves.	
•		shield.	gles or safety glasses. For safe furnace work: Safety glasses. Face	
Skin and Body			protective clothing.	
		respiratory pr	nits are exceeded or irritation is experienced, NIOSH approved otection should be worn.	
		furnace work.	clothing and gloves, as well as safety shoes are required for safe	
	l Exposure Controls		Do not allow the product to be released into the environment.	
	osure Controls		ink or smoke during use.	
ECTION 9: P	HYSICAL AND CHEMIC	<b>AL PROPERTIES</b>	6	
).1. Infor	mation on Basic Physical	and Chemical P	roperties	
hysical State		: S	olid	
Appearance		: B	Bluish-gray soft metal	
Ddor		: N	lo data available	
Ddor Threshol	ld	: N	lo data available	
ьΗ		: N	lo data available	
vaporation R	ate	: N	lo data available	
Melting Point		: 6	21 °F (327 °C)	
reezing Point		: N	lo data available	
Boiling Point		: 3	164 °F (1740 °C)	-
12/01/2015	······	EN (English US)		3/5

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Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: 1 mm Hg @ 973 °C (1783 °F)
Relative Vapor Density at 20 °C	: No data available
Specific Gravity	: 11.3
Solubility	: Insoluble in water
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available
9.2. Other Information No additional info	ormation available.

# SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: In molten form may react violently with water.

- **10.2.** Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid: Incompatible materials. In molten form: moisture.
- **10.5.** Incompatible Materials: Strong acids, strong bases, strong oxidizers.
- 10.6. Hazardous Decomposition Products: Thermal decomposition generates: lead fumes.

## SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: May cause cancer.

Lead (7439-92-1)	
IARC group	2A
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Fumes from welding, or processing of this material can be harmful if inhaled.

Symptoms/Injuries After Skin Contact: Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Eye Contact: Dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Studies on laboratory animals have shown that exposure to inorganic lead compounds may cause cancer.

# SECTION 12: ECOLOGICAL INFORMATION

- 12.1. Toxicity No additional information available.
- **12.2.** Persistence and Degradability No additional information available.
- 12.3. Bioaccumulative Potential No additional information available.
- **12.4.** Mobility in Soil No additional information available.
- 12.5. Other Adverse Effects
- Other Information

: Avoid release to the environment.

# SECTION 13: DISPOSAL CONSIDERATIONS

# 13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Ecology – Waste Materials: Avoid release to the environment.

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

# SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport.

**14.2. In Accordance with IMDG** Not regulated for transport.

14.3. In Accordance with IATA Not regulated for transport.

# **SECTION 15: REGULATORY INFORMATION**

# 15.1 US Federal Regulations

LEAD METAL

SARA Section 311/312 Hazard Classes

## Lead (7439-92-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting

# 15.2 US State Regulations

Lead (7439-92-1)	
U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S California - Proposition 65 - Reproductive Toxicity - Female	WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm.
U.S California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.
Lead (7439-92-1)	
U.S Massachusetts - Right To Know List	

0.1 %

Delayed (chronic) health hazard

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

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U.S. - Pennsylvania - RTK (Right to Know) List

# SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date	: 12/01/2015
Other Information	: This document has been prepared in accordance with the SDS
	requirements of the OSHA Hazard Communication Standard 29 CFR
	1910.1200.

GHS Full Text Phrases:

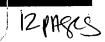
[	Carc. 1B	Carcinogenicity Category 1B
	H350	May cause cancer

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)



Safety Data Sheet



# Safety Data Sheet

# Section 1. Identification

**Product name** 

 Solder Alloy 50Sn/50Pb Bar, Solid Wire, Ribbon, Preforms, Spheres Vaculoy, Hi-Flo, SMG, HAL, JetFlo, Fry-Lo, Exactalloy, Copperflo, Flo-Temp, Cleanwave
 106128

Product code	: 106128
Product type	: Solid.
Date of issue/Date of	: July 9 2018.
revision	

Manufacturer - Supplier	Telephone no.:	Emergency phone:
Affoha Assembly Solutions Inc. Global Headquarters 300 Atrium Drive Somerset, New Jersey 08873	Toll Free: (800) 367-5460 Main Phone: (908) 791-3000	DOMESTIC NORTH AMERICA 800-424-9300 INTERNATIONAL, CALL +1 703-527-3887 (collect calls accepted) Alpha Chemtrec# 5591
ALPHA METALS MEXICO SA DE CV Ave Nafta 800, Parque Industrial STIVA Apodaca NL 66600 Mexico	Tel: +52 81 1156-6602	Tel: 01 800 022 1400 Tel: +52 55 5559-1588
Alpha Assembly Solutions Brasil Soldas Ltda Rio Jaguarão, 1540 - Vila Buriti Manaus Amazonas 69072-055 Brasil	Tel: 55 92 3614-7400	Tel: 55 92 3614-7423

# Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	<ul> <li>RARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION (Fertility) - Category 1A TOXIC TO REPRODUCTION (Unborn child) - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system, reproductive organs) - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1</li> </ul>

**GHS label elements** 

Hazard pictograms



Signal word

: Danger

# Section 2. Hazards identification

: May damage fertility or the unborn child. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure. (nervous system, reproductive organs)
Very toxic to aquatic life with long lasting effects.
<ul> <li>Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.</li> </ul>
: Øbtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
: Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention.
: Store locked up.
: Dispose of contents and container in accordance with all local, regional, national and international regulations.
: None known.

# Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	%	CAS number
術 lead	40-50	7440-31-5
	40-50	7439-92-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

# Section 4. First aid measures

# Description of necessary first aid measures

Eye contact	<ul> <li>Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Get medical attention.</li> </ul>
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	<ul> <li>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.</li> </ul>

# Section 4. First aid measures

Ingestion	: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Most important symptoms/e	ffects, acute and delayed
Potential acute health effect	
Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
<u>Over-exposure signs/symp</u>	otoms
Eye contact	: No specific data.
Inhalation	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Indication of immediate me	dical attention and special treatment needed, if necessary
Notes to physician	<ul> <li>Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.</li> </ul>
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
See toxicological information	on (Section 11)

# Section 5. Fire-fighting measures

<u>Extinguishing media</u> Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

# Section 5. Fire-fighting measures

Hazardous thermal decomposition products	: Decomposition products may include the following materials: metal oxide/oxides	_1
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.	
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.	

# Section 6. Accidental release measures

Personal precautions, protec	tiv	e equipment and emergency procedures
For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
Methods and materials for co	nta	ainment and cleaning up
Small spill	:	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

# Precautions for safe handling

Protective measures	: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities
 Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

# **Control parameters**

# Occupational exposure limits

Ingredient name	Exposure limits
III III III III III III III III III II	ACGIH TLV (United States, 3/2017).
	TWA: 2 mg/m³, (as Sn) 8 hours.
	NIOSH REL (United States, 10/2016).
	TWA: 2 mg/m³, (as Sn) 10 hours.
	OSHA PEL (United States, 6/2016).
	TWA: 2 mg/m³, (as Sn) 8 hours.
lead	OSHA PEL (United States, 5/2005).
	TWA: 0.05 mg/m <sup>3</sup> 8 hours.
	OSHA PEL 1989 (United States, 3/1989).
	TWA: 50 µg/m³, (as Pb) 8 hours.
	ACGIH TLV (United States, 3/2017). Notes: as Pb
	TWA: 0.05 mg/m³, (as Pb) 8 hours.
	OSHA PEL (United States, 6/2016). Notes: as Pb
	TWA: 50 µg/m³, (as Pb) 8 hours.
	NIOSH REL (United States, 10/2016). Notes: See Appendix C -
	Supplemental Exposure Limits Note: The REL and PEL also apply
	to other lead compounds (as Pb).
	TWA: 0.05 mg/m <sup>3</sup> 8 hours.

Appropriate engineering controls	:	If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Individual protection meas	ures	
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-

shields.

# Skin protection

# Section 8. Exposure controls/personal protection

Hand protection :	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection :	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection :	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

# Section 9. Physical and chemical properties

Appearance		
Physical state	:	Solid.
Color	:	Gray.
Odor	:	None.
Odor threshold	:	Not available.
рН	:	Not available.
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Insoluble in the following materials: cold water and hot water.
VOC	:	0 g/i
Partition coefficient: n- octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Not available.
Aerosol product		

# Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Incompatibility with various substances	<ul> <li>Reactive or incompatible with the following materials: oxidizing materials, reducing materials, acids and alkalis. peroxides, Chlorine</li> </ul>
Hazardous decomposition products	<ul> <li>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</li> </ul>
Other Hazardous decomposition products	: metal oxides, toxic. fumes
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

# Section 11. Toxicological information

Routes of entry

: Dermal contact. Inhalation. Ingestion.

# Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
in	LD50 Oral	Rat	>2000 mg/kg	-
lead	LD50 Oral	Rat	>5000 mg/kg	

# Irritation/Corrosion

Not available.

# **Sensitization**

Not available.

# **Mutagenicity**

Product/ingredient name	Test	Experiment	Result
lead	-	Subject: Mammalian-Animal	Equivocal

# <u>Carcinogenicity</u>

No applicable toxicity data

# Additional information:

# **Classification**

Product/ingredient name	OSHA	IARC	NTP
lead	-	2B	Reasonably anticipated to be a human carcinogen.

# Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
lead	-	-	Equivocal	Rat - Female	Oral: 520 mg/kg	-
	-	-	Equivocal	Rat - Female	Inhalation: 3 mg/m <sup>3</sup>	24 hours per day
	Equivocal	-	-	Mouse - Female	Oral: 300 mg/kg	-
	-	Equivocal	-	Mouse	Oral: 4099.2 mg/kg	-

# **Teratogenicity**

# Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
<b>F</b> ad	Equivocal - Oral	Mammal - species unspecified	2118 mg/kg	-
	Equivocal - Inhalation	Rat	10 mg/m³	24 hours per day

# Specific target organ toxicity

Not available.

# Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
lead	Category 1	Not determined	nervous system and reproductive organs

# Aspiration hazard

Not available.

Information on the likely	:	Not available.
routes of exposure		

# Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.

# Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No specific data.
Inhalation	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

# Delayed and immediate effects and also chronic effects from short and long term exposure

<u>Short term exposure</u>	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Long term exposure	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Potential chronic health eff	ects
General	: Causes damage to organs through prolonged or repeated exposure.

.

# Section 11. Toxicological information

Carcinogenicity	: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: May damage the unborn child.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
Fertility effects	: May damage fertility.

# Numerical measures of toxicity

# Acute toxicity estimates

Not available.

# Section 12. Ecological information

# <u>Toxicity</u>

Product/ingredient name	Result	Species	Exposure	
lead	Acute EC50 105 ppb Marine water	Algae - Chaetoceros sp Exponential growth phase	72 hours	
	Acute EC50 0.489 mg/l Marine water	Algae - Ulva pertusa	96 hours	
	Acute EC50 8000 µg/l Fresh water	Aquatic plants - Lemna minor	4 days	
	Acute LC50 530 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours	
	Acute LC50 4400 µg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 0.44 ppm Fresh water	Fish - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling)	96 hours	
	Chronic NOEC 0.25 mg/l Marine water Chronic NOEC 0.03 µg/l Fresh water	Algae - Ulva pertusa Fish - Cyprinus carpio	96 hours 4 weeks	

# Persistence and degradability

Not available.

**Bioaccumulative potential** 

Not available.

# Mobility in soil Soil/water partition : Not available. coefficient (Koc)

Other adverse effects : No known significant effects or critical hazards.

# Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal<br/>of this product, solutions and any by-products should at all times comply with the<br/>requirements of environmental protection and waste disposal legislation and any<br/>regional local authority requirements. Dispose of surplus and non-recyclable products<br/>via a licensed waste disposal contractor. Waste should not be disposed of untreated to<br/>the sewer unless fully compliant with the requirements of all authorities with jurisdiction.<br/>Waste packaging should be recycled. Incineration or landfill should only be considered<br/>when recycling is not feasible. This material and its container must be disposed of in a<br/>safe way. Care should be taken when handling emptied containers that have not been<br/>cleaned or rinsed out. Empty containers or liners may retain some product residues.<br/>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains<br/>and sewers.

# Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	UN	IMDG	ΙΑΤΑ
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

# Section 15. Regulatory information

U.S. Federal regulations	: TSCA 5(a)2 proposed significant new use rule (SNUR): No products were found.
	TSCA 5(a)2 final significant new use rule (SNUR): No products were found.
	TSCA 12(b) one-time export notification: No products were found.
	TSCA 12(b) annual export notification: lead
	Refer to Proposed Rule (59 Federal Register 11122, March 9, 1994 ) for details on TSCA 12(b) applicability for lead.
United States inventory (TSCA 8b)	: All components are listed or exempted.

# SARA 302/304

# **Composition/information on ingredients**

No products were found.

# SARA 311/312

Classification : Delayed (chronic) health hazard

# **SARA 313**

	Product name	CAS number	%	
Form R - Reporting requirements	<b>B</b> ad	7439-92-1	40-50	
Supplier notification	Fead	7439-92-1	40-50	

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

# California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

# Section 15. Regulatory information

<u>Canada</u>	
Canada inventory	: All components are listed or exempted.
International lists	
National inventory	
Australia	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: 🕅 components are listed or exempted.
Malaysia	: All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: 🕅 components are listed or exempted.
Viet Nam	: Not determined.

# Section 16. Other information

# Hazardous Material Information System (U.S.A.)



# Procedure used to derive the classification

Classification	Justification	
Øarc. 2, H351	Calculation method	
Repr. 1A, H360 (Fertility)	Calculation method	
Repr. 1A, H360 (Unborn child)	Calculation method	
STOT RE 1, H372 (nervous system, reproductive organs)	Calculation method	
Aquatic Acute 1, H400	Calculation method	
Aquatic Chronic 1, H410	Calculation method	

<u>History</u>

Date of issue/Date of revision	: July 9 2018.
Date of previous issue	: September 26 2016.
Version	: 2.01
Prepared by	: Regulatory Affairs Department enthone.msds@macdermidenthone.com

Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient
	MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

# Section 16. Other information

as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

 $\overline{V}$  Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

4.5b3271

Alpha Assembly SDS GHS Americas

66 R22 30 12pases

# FORANE® 22

# 1. PRODUCT AND COMPANY IDENTIFICATION

#### **Company**

Arkema Inc. 900 First Avenue King of Prussia, Pennsylvania 19406

## Fluorochemicals

Customer Service Telephone Number: (800) 245-5858 (Monday through Friday, 8:00 AM to 5:00 PM EST)

### **Emergency Information**

ARKEMA

Transportation:

Medical:

CHEMTREC: (800) 424-9300 (24 hrs., 7 days a week) Rocky Mountain Poison Center: (866) 767-5089 (24 hrs., 7 days a week)

### **Product Information**

Product name: Synonyms: Molecular formula: Chemical family: Product use: FORANE® 22 R-22, HCFC-22 CHCIF2 Hydrochlorofluorocarbon Refrigerant

# 2. HAZARDS IDENTIFICATION

<u>Emergency Overview</u> Color: Physical state: Form: Odor:

Clear - colourless gaseous Liquefied gas Slightly ether-like

\*<u>Classification of the substance or mixture:</u> Gases under pressure, Liquefied gas, H280 Specific target organ toxicity - single exposure, Category 3, H336 Hazardous to the ozone layer, Category 1, H420

\*For the full text of the H-Statements mentioned in this Section, see Section 16.

Product code: 04022

Version 3.2

Issued on: 05/06/2016

Page: 1 / 12



# FORANE® 22

**GHS-Labelling** 



Signal word:

# Warning

### Hazard statements:

H280 : Contains gas under pressure; may explode if heated.

- H336 : May cause drowsiness or dizziness.
- H420 : Harms public health and the environment by destroying ozone in the upper atmosphere.

#### Supplemental Hazard Statements:

Overheating or overpressurizing may cause gas release or violent cylinder bursting. May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products. Vapor reduces oxygen available for breathing and is heavier than air. Prolonged or repeated contact may dry skin and cause irritation. May cause frostbite. May cause effects on: Heart

#### Precautionary statements:

#### Prevention:

P261 : Avoid breathing gas/mist/vapours/spray. P271 : Use only outdoors or in a well-ventilated area.

### **Response:**

P304 + P340 : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 : Call a POISON CENTER/doctor if you feel unwell.

### Storage:

P403 + P233 : Store in a well-ventilated place. Keep container tightly closed. P405 : Store locked up. P410 : Protect from sunlight.

#### **Disposal:**

P501 : Dispose of contents/ container to an approved waste disposal plant. P502 : Refer to manufacturer/ supplier for information on recovery/ recycling.

#### Supplemental information:

### Potential Health Effects:

Liquid : Contact with liquid or refrigerated gas can cause cold burns and frostbite. Vapor: Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing. If inhaled: Central nervous system effects: headache, nausea, dizziness, drowsiness, loss of consciousness. Stress induced heart effects: Inhalation may cause an increase in the sensitivity of the heart to adrenaline, which could result in irregular or rapid heartbeats and reduced heart function.

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# FORANE® 22

Medical conditions aggravated by overexposure: Heart disease or compromised heart function.

# **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Methane, chlorodifluoro-	75-45-6	100 %	H280

\*\*For the full text of the H-Statements mentioned in this Section, see Section 16.

## **4. FIRST AID MEASURES**

### 4.1. Description of necessary first-aid measures:

#### Inhalation:

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### Skin:

If on skin, flush exposed skin with lukewarm water (not hot), or use other means to warm skin slowly. Remove contaminated clothing and shoes. Get medical attention if frostbitten by liquid or if irritation occurs. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### Eyes:

Immediately flush eye(s) with plenty of water. Get medical attention if irritation persists.

#### Ingestion:

Ingestion is not applicable - product is a gas at ambient temperatures.

# 4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information) and Section 11 (Toxicology Information) of this SDS.

# 4.3. Indication of immediate medical attention and special treatment needed, if necessary:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

#### Notes to physician:

Do not give drugs from adrenaline-ephedrine group.

## 5. FIREFIGHTING MEASURES

## Extinguishing media (suitable):

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# FORANE® 22

Use extinguishing measures to suit surroundings.

### **Protective equipment:**

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:

Fight fire with large amounts of water from a safe distance. Stop the flow of gas if possible. Water mist should be used to reduce vapor concentrations in air. Cool closed containers exposed to fire with water spray. Closed containers of this material may explode when subjected to heat from surrounding fire. After a fire, wait until the material has cooled to room temperature before initiating clean-up activities. Fire fighting equipment should be thoroughly decontaminated after use. Fire and explosion hazards: May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products.

Liquid and gas under pressure, overheating or overpressurizing may cause gas release and/or violent cylinder bursting.

Container may explode if heated due to resulting pressure rise.

Some mixtures of HCFCs and/or HFCs, and air or oxygen may be combustible if pressurized and exposed to extreme heat or flame.

When burned, the following hazardous products of combustion can occur:

Hydrogen fluoride hydrogen chloride Carbon oxides

Carbonyl halides

# 6. ACCIDENTAL RELEASE MEASURES

# Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:

Eliminate all ignition sources. Evacuate area of all unnecessary personnel. Use Halogen leak detector or other suitable means to locate leaks or check atmosphere. Prevent further leakage or spillage if you can do so without risk. Keep upwind. Evacuate enclosed spaces and disperse gas with floor-level forced-air ventilation. Avoid breathing leaked material. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

#### Protective equipment:

Appropriate personal protective equipment is set forth in Section 8.

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# FORANE® 22

# 7. HANDLING AND STORAGE

### Handling

General information on handling: Keep away from heat, sparks and flames. Avoid contact with skin, eyes and clothing. Avoid breathing gas. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Do not enter confined spaces unless adequately ventilated. Use equipment rated for cylinder pressure. Close valve after each use and when empty Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

### <u>Storage</u>

# General information on storage conditions:

Store in well ventilated area away from heat, direct sunlight and sources of ignition such as flame, sparks and static electricity.

#### Storage stability - Remarks:

Do not apply direct flame to cylinder. Do not store cylinder in direct sun or expose it to heat above 120 F (48.9 C.). Do not drop or refill this cylinder.

# Storage incompatibility -- General:

Store separate from: Alkaline earth metals

Finely divided metals (aluminium, magnesium, zinc...)

Strong oxidizing agents

Alkali metals

strong bases

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Airborne Exposure Guidelines:

## Methane, chlorodifluoro- (75-45-6)

US. ACGIH Threshold Limit Values

Time weighted average

1,000 ppm

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

## Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce

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exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.Consult ACGIH ventilation manual, NFPA Standard 91 and NFPA Standard 654 for design of exhaust system and safe handling.

#### **Respiratory protection:**

Avoid breathing gas. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components (full facepiece recommended). Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

#### Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

### Eye protection:

Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES			
Color:	Clear - colourless		
Physical state:	gaseous		
Form:	Liquefied gas		
Odor:	Slightly ether-like		
Odor threshold:	No data-available		
Flash point	Not applicable		
Auto-ignition temperature:	1,170 °F (632 °C)		
Lower flammable limit (LFL):	13 %(V) None.		
Upper flammable limit (UFL):	None.		
pH:	Not applicable		
Density:	1.19 g/cm3 (77 °F (25 °C))		

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Vapor pressure:	7,033 mmHg (77 °F (25 °C))
Vapor density:	3.00 kg/m3
Boiling point/boiling range:	No data available
Melting point/range:	No data available
Freezing point:	No data available
Evaporation rate:	No data available
Solubility in water:	slightly soluble
Viscosity, dynamic:	No data available
Oil/water partition coefficient:	No data available
Thermal decomposition	No data available
Flammability:	See GHS Classification in Section 2

# **10. STABILITY AND REACTIVITY**

### Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Hazardous reactions: None known.

# Materials to avoid:

Alkaline earth metals Finely divided metals (aluminium, magnesium, zinc...) Strong oxidizing agents Alkali metals Strong bases

Conditions / hazards to avoid: Heat

# Hazardous decomposition products:

Thermal decomposition giving toxic and corrosive products : hydrogen chloride Hydrogen fluoride Carbon oxides Carbonyl halides

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# FORANE® 22

## **11. TOXICOLOGICAL INFORMATION**

### **Data for FORANE® 22**

#### Acute toxicity

#### Inhalation:

Practically nontoxic. (Rat) 4 h LC50 220000 ppm. (Gas)

#### Skin Irritation:

Practically non-irritating. (Rabbit) (Rapid evaporation of the liquid may cause frostbite.)

#### Eye Irritation:

Causes mild eye irritation. (Rabbit) (30 s) signs: Rapid evaporation of the liquid may cause frostbite (gas spray)

### Sensitization:

Causes cardiac sensitization. (dog, rat, mouse, rabbit and monkey) signs: irregular heart beat, rapid heart beat, in some cases, sudden death (Reaction may occur in response to stress (natural adrenaline release) or administration of epinephrine.)

#### Skin Sensitization:

Not a sensitizer. Repeated skin exposure. (Guinea pig) No skin allergy was observed

### Repeated dose toxicity

Chronic inhalation administration to rat, mouse / No adverse systemic effects reported.

Chronic oral administration to Rat / No adverse systemic effects reported.

#### Carcinogenicity

Chronic inhalation administration to mice / signs: No increase in tumor incidence was reported.

Chronic inhalation administration to female rat / signs: No increase in tumor incidence was reported.

Chronic inhalation administration to male rat / affected organ(s): salivary gland / signs: Increased incidence of tumors was reported. / (not considered relevant to humans)

#### **Genotoxicity**

#### Assessment in Vitro:

Genetic changes were observed in laboratory tests using: bacteria

No genetic changes were observed in laboratory tests using: animal cells, yeast

#### Assessment in Vivo:

No genetic changes were observed in laboratory tests using: mice

#### Developmental toxicity

Exposure during pregnancy. inhalation (Rat) / Birth defects were observed. (eye)

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# FORANE® 22

Exposure during pregnancy. inhalation (Rabbit) / No birth defects were observed.

### **Reproductive effects**

Reproduction test. inhalation (rat and mouse) / No toxicity to reproduction / (males)

### Human experience

Inhalation: Lung: Asphyxia, suffocation. Heart: Palpitation. (based on reports of occupational exposure to workers) Skin contact: Skin: irritation, redness, swelling. (repeated or prolonged exposure)

### **12. ECOLOGICAL INFORMATION**

# Chemical Fate and Pathway

Data on this material and/or a similar material are summarized below.

### Data for FORANE® 22

#### **Biodegradation:**

Not readily biodegradable. (28 d) biodegradation 0 %

### Octanol Water Partition Coefficient:

log Pow = 1.08 (Practically no potential to bioaccumulate.)

### Photodegradation:

Half-life direct photolysis: = 8.4 y

#### Mobility and Distribution in the Environment: Moderate adsorption / Log Koc= 1.8

## **Global Warming Potential:**

GWP 1,810 (Global warming potential with respect to CO2 (time horizon 100 years)) GWP 0.33 (Halocarbon global warming potential; HGWP; (R-11 = 1))

#### **Ozone Depletion Potential:**

ODP 0.055 (Ozone depletion potential; ODP; (R-11 = 1))

#### Ecotoxicology

Data on this material and/or a similar material are summarized below.

#### Data for FORANE® 22

Aquatic toxicity data: Practically nontoxic. Brachydanio rerio (zebrafish) 96 h LC50 = 777 mg/l

#### Aquatic invertebrates:

Practically nontoxic. Daphnia magna (Water flea) 48 h EC50 = 433 mg/l

### Microorganisms:

Bacteria 24 h Toxicity threshold > 400 mg/l (under anaerobic conditions)

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# FORANE® 22

# 13. DISPOSAL CONSIDERATIONS

### Waste disposal:

Do not vent the container contents, or product residuals, to the atmosphere. Recover and reclaim unused contents or residuals as appropriate. Recovered/reclaimed product can be returned to an approved certified reclaimer or back to the seller depending on the material. Completely emptied disposable containers can be disposed of as recyclable steel. Returnable cylinders must be returned to seller. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

# 14. TRANSPORT INFORMATION

### US Department of Transportation (DOT)

UN Number :	:	1018
Proper shipping name :	:	Chlorodifluoromethane (Refrigerant gas R 22)
		2.2
Marine pollutant :		no

### International Maritime Dangerous Goods Code (IMDG)

UN Number	: 1018
Proper shipping name	: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R 22)
Class	: 2.2
Marine pollutant	: no

### **15. REGULATORY INFORMATION**

#### **Chemical Inventory Status**

EU. EINECS	EINECS	Conforms to
US. Toxic Substances Control Act	TSCA	The components of this product are all on the TSCA Inventory.
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	Conforms to
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
Japan. Kashin-Hou Law List	ENCS (JP)	Does not conform
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	Conforms to

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## FORANE® 22

China. Inventory of Existing Chemical Substances IECSC (CN) Conforms to

## United States – Federal Regulations

## SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

## SARA Title III - Section 311/312 Hazard Categories: Acute Health Hazard, Sudden Release of Pressure Hazard

#### SARA Title III - Section 313 Toxic Chemicals:

<u>Chemical name</u>	CAS-No.	<u>De minimis</u> concentration	Reportable threshold:
Methane, chlorodifluoro-	75-45-6	1.0 %	25000 lbs (Manufacturing and processing) 10000 lbs (Otherwise used (non- manufacturing/processing))

# Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

## United States – State Regulations

New Jersey Right to Know	
<u>Chemical name</u> Methane, chlorodifluoro-	<u>CAS-No.</u> 75-45-6
Pennsylvania Right to Know	
<u>Chemical name</u> Methane, chlorodifluoro-	<u>CAS-No.</u> 75-45-6
Pennsylvania Right to Know – Environmentally Hazardou	is Substance(s)
Chemical name	CAS-No.
Methane, chlorodifluoro-	75-45-6

## California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

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## FORANE® 22

#### **16. OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3.

H280	Contains gas under pressure; may explode if heated.
H336	May cause drowsiness or dizziness.
H420	Harms public health and the environment by destroying ozone in the upper atmosphere.

#### Latest Revision(s):

Revised Section(s):	chapter 4 update
Reference number:	00000033818
Date of Revision:	05/06/2016
Date Printed:	05/10/2016

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Arkema has implemented a Medical Policy regarding the use of Arkema products in Medical Devices applications that are in contact with the body or circulating bodily fluids (http://www.arkema.com/en/social-responsibility/responsible-product-management/medicaldevice-policy/index.html) Arkema has designated Medical grades to be used for such Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implications that are implications that are implications that are incontact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices , and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.

It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warm purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.

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# ARKEMA

## FORANE® 410A

## 1. PRODUCT AND COMPANY IDENTIFICATION

## <u>Company</u>

Arkema Inc. 900 First Avenue King of Prussia, Pennsylvania 19406

## Fluorochemicals

Customer Service Telephone Number: (800) 245-5858 (Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation:

Medical:

CHEMTREC: (800) 424-9300 (24 hrs., 7 days a week) Rocky Mountain Poison Center: (866) 767-5089 (24 hrs., 7 days a week)

## Product Information

Product name: Synonyms: Molecular formula: Chemical family: Molecular weight: Product use: FORANE® 410A R-410A, HFC 410A, FORANE FX 41 Mixture Hydrofluorocarbon 72.59 g/mol Refrigerant

## 2. HAZARDS IDENTIFICATION

## Emergency Overview

Color: Physical state: Form: Odor: Clear - colourless gaseous Liquefied gas Slightly ether-like

\*Classification of the substance or mixture: Gases under pressure, Liquefied gas, H280

\*For the full text of the H-Statements mentioned in this Section, see Section 16.

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## FORANE® 410A

**GHS-Labelling** 

Hazard pictograms:



Signal word:

## Hazard statements:

H280 : Contains gas under pressure; may explode if heated.

Warning

<u>Supplemental Hazard Statements:</u> Overheating or overpressurizing may cause gas release or violent cylinder bursting.

May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products. May cause frostbite.

May cause headache, nausea, dizziness, drowsiness, loss of consciousness.

May cause cardiac sensitization/cardiac arrhythmia.

May displace oxygen and cause rapid suffocation.

#### Precautionary statements:

## Storage:

P403 : Store in a well-ventilated place. P410 : Protect from sunlight.

## Special labelling:

Contains fluorinated greenhouse gases covered by the Kyoto Protocol. Contains: Difluoromethane; Pentafluoroethane.

Special labelling:

Contains fluorinated greenhouse gases covered by the Kyoto Protocol. Contains: Difluoromethane; Pentafluoroethane.

## Supplemental information:

#### Potential Health Effects:

Liquid : Contact with liquid or refrigerated gas can cause cold burns and frostbite. Vapor: Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing. Central nervous system effects: headache, nausea, dizziness, drowsiness, loss of consciousness.

Stress induced heart effects: irregular heart beat, rapid heart beat, (severity of effects depends on extent of exposure).

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## FORANE® 410A

Medical conditions aggravated by overexposure: Heart disease or compromised heart function.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
Ethane, pentafluoro-	354-33-6	50 %	<u>H</u> 280
Methane, difluoro-	75-10-5	50 %	H220, H280

\*\*For the full text of the H-Statements mentioned in this Section, see Section 16.

## **4. FIRST AID MEASURES**

ARKEMA

## 4.1. Description of necessary first-aid measures:

#### Inhalation:

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### Skin:

If on skin, flush exposed skin with lukewarm water (not hot), or use other means to warm skin slowly. Get medical attention if frostbitten by liquid or if irritation occurs. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### Eyes:

Immediately flush eye(s) with plenty of water.

#### Ingestion:

Ingestion is not applicable - product is a gas at ambient temperatures.

## 4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information) and Section 11 (Toxicology Information) of this SDS.

## 4.3. Indication of immediate medical attention and special treatment needed, if necessary:

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## FORANE® 410A

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

#### Notes to physician:

Do not give drugs from adrenaline-ephedrine group.

## **5. FIREFIGHTING MEASURES**

## Extinguishing media (suitable):

Use extinguishing measures to suit surroundings.

#### Protective equipment:

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

## Further firefighting advice:

Fight fire with large amounts of water from a safe distance.

Stop the flow of gas if possible.

Water mist should be used to reduce vapor concentrations in air.

Cool closed containers exposed to fire with water spray.

Closed containers of this material may explode when subjected to heat from surrounding fire.

After a fire, wait until the material has cooled to room temperature before initiating clean-up activities.

Fire fighting equipment should be thoroughly decontaminated after use.

## Fire and explosion hazards:

May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products. Liquid and gas under pressure, overheating or overpressurizing may cause gas release and/or violent cylinder bursting.

Container may explode if heated due to resulting pressure rise.

Some mixtures of HCFCs and/or HFCs, and air or oxygen may be combustible if pressurized and exposed to extreme heat or flame.

When burned, the following hazardous products of combustion can occur:

Hydrogen fluoride

Carbonyl halides

Carbon oxides

## 6. ACCIDENTAL RELEASE MEASURES

## Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:

Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel. Eliminate all ignition sources. Use Halogen leak detector or other suitable means to locate leaks or check atmosphere. Keep upwind. Evacuate enclosed spaces and disperse gas with floor-level forced-air ventilation. Avoid breathing leaked material. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

#### Protective equipment:

Appropriate personal protective equipment is set forth in Section 8.

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## FORANE® 410A

## 7. HANDLING AND STORAGE

ARKEMA

## <u>Handling</u>

General information on handling: Avoid breathing gas. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and flames. Wear cold-insulating gloves/face shield/eye protection. Do NOT change or force fit connections. Keep container closed. Use only with adequate ventilation. Do not change or force fit connections. Use equipment rated for cylinder pressure. Use a backflow preventative device in piping. Wash thoroughly after handling. Close valve after each use and when empty. Do not enter confined spaces unless adequately ventilated. DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER. Emptied container retains vapor and product residue. Improper disposal or reuse of this container may be dangerous and/or illegal.

#### Storage

## General information on storage conditions:

Keep away from direct sunlight. Keep cylinders restrained. Store in cool, dry, well ventilated area away from sources of ignition such as flame, sparks and static electricity.

## Storage stability – Remarks:

Do not apply direct flame to cylinder. Do not store cylinder in direct sun or expose it to heat above 120 F (48.9 C.). Do not drop or refill this cylinder.

## Storage incompatibility – General:

Store separate from: Finely divided metals (aluminium, magnesium, zinc...) Strong bases Alkali metals Alkaline earth metals Strong oxidizing agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Airborne Exposure Guidelines:

## Ethane, pentafluoro- (354-33-6)

US. OARS. WEELs Workplace Environmental Exposure Level Guide

Time weighted average

1,000 ppm (4,900 mg/m3)

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## FORANE® 410A

Remarks:

Listed

Time weighted average 1,000 ppm (4,900 mg/m3)

Methane, difluoro- (75-10-5)

US. OARS. WEELs Workplace Environmental Exposure Level Guide

Time weighted average	1,000 ppm (2,200 mg/m3)	
Remarks:	Listed	

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

#### Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

#### **Respiratory protection:**

Avoid breathing gas. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components (full facepiece recommended). Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

## Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

## Eye protection:

Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CH	EMICAL PROPERTIES		
Color:	Clear - colourless		
Physical state:	gaseous		
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## FORANE® 410A

Form:	Liquefied gas
Odor:	Slightly ether-like
Odor threshold:	No data available
Flash point	Not applicable
Auto-ignition temperature:	No data available
Lower flammable limit (LFL):	None.
Upper flammable limit (UFL):	None.
pH:	Not applicable
Density:	No data available
Specific Gravity (Relative density):	1.06 (77 °F( 25 °C))Water=1 (liquid)
Vapor pressure:	11,061 mmHg (70.0 °F (21.1 °C))
Vapor density:	2.52 kg/m3
Boiling point/boiling range:	-63.0 °F (-52.8 °C)
Melting point/range:	No data available.
Freezing point:	No data available
Evaporation rate:	No data available
Solubility in water:	No data available
Viscosity, dynamic:	No data available
% Volatiles:	100 %
Molecular weight:	72.59 g/mol
Oil/water partition coefficient:	Not applicable
Thermal decomposition:	Not applicable
Flammability:	See GHS Classification in Section 2
10. STABILITY AND REA	ACTIVITY

**10. STABILITY AND REACTIVITY** 

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## FORANE® 410A

## Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

#### Hazardous reactions: None known.

#### Materials to avoid: Strong oxidizing agents Strong acids

Alkaline materials

#### Conditions / hazards to avoid: Heat

#### Hazardous decomposition products:

Thermal decomposition giving toxic and corrosive products : Hydrogen fluoride Carbonyl halides Carbon oxides

## **11. TOXICOLOGICAL INFORMATION**

Data on this material and/or its components are summarized below.

#### Data for Ethane, pentafluoro- (354-33-6)

## Acute toxicity

#### Inhalation:

Practically nontoxic. (Rat) 4 h LC50 (> 800000 ppm). (Gas)

## Sensitization:

Causes cardiac sensitization. inhalation. (Dog) Stress induced heart effects: Stress induced heart effects: (Reaction may occur in response to stress (natural adrenaline release) or administration of epinephrine.)

## Repeated dose toxicity

Subchronic inhalation administration to Rat / No adverse systemic effects reported.

#### **Genotoxicity**

#### Assessment in Vitro:

No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

#### **Genotoxicity**

## Assessment in Vivo:

No genetic changes were observed in laboratory tests using: mice

## Developmental toxicity

Exposure during pregnancy. inhalation (rat and rabbit) / No birth defects were observed.

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## FORANE® 410A

## Data for Methane, difluoro- (75-10-5)

## Acute toxicity

ARKEMA

Practically nontoxic. (Rat) 4 h LC50 (> 520000 ppm). signs: anesthetic effects, central nervous system Inhalation: depression

Sensitization: Cardiac sensitization not observed. inhalation. (Dog)

Repeated dose toxicity Subchronic inhalation administration to Rat / No adverse effects reported.

#### Genotoxicity

Assessment in Vitro: No genetic changes were observed in laboratory tests using: bacteria, animal cells, human cells

#### Genotoxicity

Assessment in Vivo: No genetic changes were observed in a laboratory test using: mice

## Developmental toxicity

Exposure during pregnancy. inhalation (rat and rabbit) / No birth defects were observed.

## 12. ECOLOGICAL INFORMATION

## **Chemical Fate and Pathway**

Data on this material and/or its components are summarized below.

## Data for Ethane, pentafluoro- (354-33-6)

## **Biodegradation:**

Not readily biodegradable. (Closed Bottle test, 28 d) biodegradation 5 %

## **Octanol Water Partition Coefficient:**

log Pow = 1.48

## **Global Warming Potential:**

GWP 0.84 (Halocarbon global warming potential; HGWP; (R-11 = 1)) GWP 3,450 (Global warming potential with respect to CO2 (time horizon 100 years))

#### **Ozone Depletion Potential:**

ODP 0 (Ozone depletion potential; ODP; (R-11 = 1))

## Data for Methane, difluoro- (75-10-5)

## **Biodegradation:**

Not readily biodegradable. (28 d) biodegradation 5 %

## **Octanol Water Partition Coefficient:**

 $\log Pow = 0.21$ 

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FORANE® 410A

Global Warming Potential: GWP 543 (Global warming potential with respect to CO2 (time horizon 100 years))

**Ozone Depletion Potential:** ODP 0 (Ozone depletion potential; ODP; (R-11 = 1))

Ecotoxicology No data are available.

## 13. DISPOSAL CONSIDERATIONS

#### Waste disposal:

Do not vent the container contents, or product residuals, to the atmosphere. Recover and reclaim unused contents or residuals as appropriate. Recovered/reclaimed product can be returned to an approved certified reclaimer or back to the seller depending on the material. Completely emptied disposable containers can be disposed of as recyclable steel. Returnable cylinders must be returned to seller. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

## **14. TRANSPORT INFORMATION**

#### **US** Department of Transportation (DOT)

UN Number		3163
Proper shipping name	:	Liquefied gas, n.o.s.
Class	:	2.2
Marine pollutant	•	4.2
warme ponutant	:	no
1. / / A B B A / B		

## International Maritime Dangerous Goods Code (IMDG)

UN Number Proper shipping name	: 3163 : LIQUEFIED GAS, N.O.S.
Class	: 2.2
Marine pollutant	: no

## **15. REGULATORY INFORMATION**

Chemical Inventory Status		
EU. EINECS	EINECS	Conforms to
US. Toxic Substances Control Act	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL

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## FORANE® 410A

China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Conforms to
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Conforms to
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	PICCS (PH)	Conforms to
Australia Inventory of Chemical Substances (AICS)	AICS	Conforms to

## United States – Federal Regulations

## SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

## SARA Title III - Section 311/312 Hazard Categories:

Acute Health Hazard, Sudden Release of Pressure Hazard

## SARA Title III -- Section 313 Toxic Chemicals:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

# Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity. <u>United States – State Regulations</u>

## New Jersey Right to Know

<u>Chemical name</u> Methane, difluoro-	<u>CAS-No.</u> 75-10-5
Pennsylvania Right to Know	
<u>Chemical name</u> Methane, difluoro-	<u>CAS-No.</u> 75-10-5
Ethane, pentafluoro-	354-33-6

Product code: 04003

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## FORANE® 410A

Pennsylvania Right to Know – Environmentally Hazardous Substance(s)

<u>Chemical name</u>	CAS-No.

Methane, difluoro-	75-10-5
Methane, difluoro-	75-10-8

## California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

## **16. OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3.

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.

#### Miscellaneous:

Other information:	A sig
	Diffu

A significant new activity notice (SNAC notice) has been issued for Difluoromethane (HFC-32). It is the responsibility of the users of the substance to be aware of and comply with the SNAC notice and to submit a SNAC notification to Environment Canada prior to the commencement of a significant new activity associated with the substance.

Latest Revision(s):

Reference number:	200005120
Date of Revision:	09/28/2016
Date Printed:	09/29/2016

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Arkema has implemented a Medical Policy regarding the use of Arkema products in Medical Devices applications that are in contact with the body or circulating bodily fluids (http://www.arkema.com/en/social-responsibility/responsible-product-management/medicaldevice-policy/index.html) Arkema has designated Medical grades to be used for such Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are information with the body or circulating bodily fluids. In addition, arkema strictly prohibits the use of any Arkema products in Medical Device applications that are information and the body or circulating bodily fluids. In addition, arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.

Product code: 04003

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# ARKEMA

## FORANE® 410A

It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.

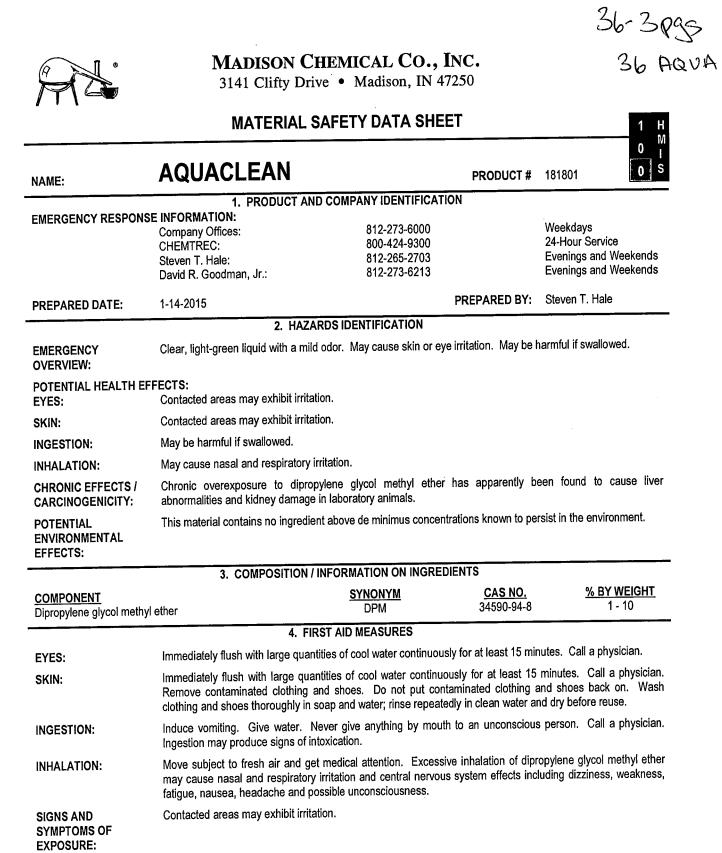
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•



PRIMARY ROUTE(S) Eyes, skin, inhalation.

OF ENTRY:



# MADISON CHEMICAL CO., INC. 3141 Clifty Drive • Madison, IN 47250

NAME: A	QUACLEAN	l	<b>PRODUCT #</b> 181801		
	5.	FIRE FIGHTING MEA	SURES		
FLAMMABLE PROPERTIES:	FLASH POINT: FLAMMABLE LIMIT LEL:	r <b>s:</b> N.D.	oiling (TOC, ASTM D 1310).		
	UEL:	N.D.			
EXTINGUISHING MEDIA:	As appropriate for su	-			
FIRE FIGHTING INSTRUCTIONS:	Use NIOSH / MSHA is involved in a fire.	approved positive pre	essure self-contained breathing apparatus w	hen any material	
	6. ACCI	DENTAL RELEASE	MEASURES		
STEPS TO BE TAKEN IN CASI MATERIAL IS RELEASED OR SPILLED:		with sand and absor ush remainder to drai	b on inert material. Dispose with solid was n with water.	ste. See Waste	
	7. 1	HANDLING AND STO	RAGE		
PRECAUTIONS:	Normal for alkaline m	aterials. Store away	from acids. Keep container closed when no	t in use.	
	8. EXPOSURE C	CONTROLS / PERSO	NAL PROTECTION		
ENGINEERING CONTROLS:	Use good ventilation.	Local exhaust is rec	ommended if TLVs are exceeded.		
RESPIRATORY PROTECTION:	Not needed for norma	al use.			
SKIN PROTECTION:	Impermeable type glo	Impermeable type gloves. Other equipment as required to avoid contact.			
EYE PROTECTION:	Safety eyewear to pro	Safety eyewear to protect against unexpected splashes.			
GENERAL HYGIENE CONSIDERATIONS:	Eyewash facility and emergency shower should be in close proximity. Always wash hands after handling any chemical.				
EXPOSURE GUIDELINES: CHEMICAL IDENTITY Dipropylene glycol methyl ether	CAS NO.         OSHA PEL         ACGIH TLV           34590-94-8         100 ppm (skin)         100 ppm (skin)				
	9. PHYSICA	AL AND CHEMICAL	PROPERTIES		
APPEARANCE & ODOR: BOILING POINT (°F.): VAPOR PRESSURE (mm Hg): VAPOR DENSITY (Air = 1): SOLUBILITY IN WATER: FLASH POINT (Method used): LEL: UEL:	Clear, light-green liquid 212 N.D. Complete. None prior to boiling (T N.D. N.D.		SPECIFIC GRAVITY (WATER = 1): PERCENT VOLATILE BY VOLUME (%): EVAPORATION RATE ( <u>WATER</u> = 1): pH (100%): pH (1% by volume):	1.06 N.D. 1.0 11.0 - 12.0 9.0 - 10.0	
	10. ST	ABILITY AND REAC	TIVITY		
STABILITY: INCOMPATIBILITY (Materials to CONDITIONS TO AVOID: HAZARDOUS DECOMPOSITION HAZARDOUS POLYMERIZATIO	Avoid): Acids, No dat PRODUCTS: Carbon	al is stable. strong oxidizers. a found. n monoxide, carbon d t occur.	ioxide, oxides of sulphur.		

N.A. = Not Available

# MADISON CHEMICAL CO., INC.

3141 Clifty Drive • Madison, IN 47250

# AQUACLEAN

PRODUCT # 181801

## 11. TOXICOLOGICAL INFORMATION

96 hour LC50 70.7 ppm on Fundulus heteroclitus.

NAME:

48 hour LC50 11.7 ppm on Artemia Salina.

Chronic overexposure to dipropylene glycol methyl ether has apparently been found to cause liver abnormalities and kidney damage in laboratory animals.

## 12. ECOLOGICAL INFORMATION

This material contains no hazardous air pollutants (HAPS). This material contains no ingredient above de minimus concentrations known to persist in the environment.

		13. DISPO	SAL CONSIDERATION	NS		
WASTE DISPOSAL METHOD:	Normal for alkaline wa state and federal regula		require pH adjustment	for neutralization	n. Dispose i	n accordance with local,
	14	. TRANSPO	ORTATION INFORMA	TION		
DOT PROPER SHIPPING DESCRIPTION:	Compound, cleaning, N (This material is not a h	IOI, liquid. nazardous n	naterial under regulatio	ns of the US Dep	partment of T	ransportation.)
		15. REGUL	ATORY INFORMATIC	N		
VOC:	0.39 pounds per gallon	(47 grams	per liter).			
TSCA STATUS:	All ingredients are liste	d on the TS	CA inventory.			
CERCLA REPORTABLE QUANTITY:	None established.					
SARA 311 / 312 HAZARD	CLASSES:	X	Acute Health Fire <sup>-</sup> Sudden Release of F	Pressure	 	Chronic Health Reactive
SARA 312 INFORMATION:	Storage of 10,000 pou substance (EHS). Thr				aterial is not	an extremely hazardous
SARA 313 INFORMATION:	This material contains Superfund Amendment	the followir is and Reau	ng substances subject thorization Act of 1986	to the reporting and 40 CFR Par	requirement t 372:	s of Section 313 of the
CHEMICAL NAME None			CATEGORY C	ODE g	<u>CAS NO.</u>	<u>% BY WEIGHT</u>
STATE REGULATORY IN	FORMATION:					
CALIFORNIA (PROPOSITION 65):	California has not ider toxicity.	ntified the i	ngredients listed in Se	ection 3 as know	wn to cause	cancer or reproductive
		16. OT	HER INFORMATION			
MSDS STATUS:	Revised sections 1, 7,	8 and 16 on	1-14-2015			
PRECAUTIONARY LABELING:	WARNING!	May be ha	e skin or eye irritation rmful if swallowed. dipropylene glycol me			
	FOR INDUSTRIA	AL USE	ONLY - KEEP	OUT OF RE	ACH OF	CHILDREN

# 36 Blitz F-WX MATERIAL SAFETY DATA SHEET 2 PQS

PRODUCT IDENTIFICATION

I.

Product Name:	AMCO BLITZ	CAS number:	N/A - mixture
Chemical Name & Synonyms:	N/A - mixture		
Appearance:	Pale yellow water soluti		
Use:	General purpose soft so		
Manufacturer:	Force Industries Divisio	n Tel. 610-647-3	3575
EMERGENCY PHONE No.	CALL CHEMTREC (800	0) 424-9300 * Av	ailable 24 Hours

## II. CHEMICAL COMPOSITION

Material Zinc Chloride Hydrochloric Acid Monoethanolamine.HCl Ammonium Chloride SARA IIICAS Number25 - 40%7646-85-72.0- 10%7647-01-02.0- 10%2002-24-62.0- 10%12125-02-9

OSHA PEL ACGIH TLV 1 mg/m<sup>3</sup>1 mg/m<sup>3</sup> 7 mg/m<sup>3</sup>7.5 mg/m<sup>3</sup> 3 mg/m<sup>3</sup>Eye Irritant 10 mg/m<sup>3</sup> 5 mg/m<sup>3</sup>

Others, if any, are non-hazardous and are claimed as trade secret.

Hazard Rating: HMIS: (H =3 F=0 R=0 PE=C) NFPA: (H=3 F=0 R=0)

## III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA

Target organ statement:	DANGER. Causes severe burns to skin, eyes, and respiratory system.
Effects of Chronic Exposure:	Contact burns, irritation to skin (scarring), eyes and respiratory system. Possible liver and kidney effects.
Effects of Acute Overexposure	
Swallowing:	Can cause damage to digestive system. Corrosive to mucous membranes.
Skin Absorption:	Burns; immediate hazard.
Inhalation:	Irritation to respiratory system. Coughing and sneezing. Existing lung disorders will be aggravated.
Skin Contact:	Dermatitis, possible chemical burns, corrosive to skin. Existing disorders will be aggravated.
Eye Contact:	Irritation to eyes, tearing, burn of eye surfaces, corrosive to eyes, may cause blindness.

## IV. EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call a physician or Poison Control Center. Do not induce vomiting. Give large quantities of water, milk, or 5% sodium bicarbonate solution.

Skin: Promptly flush with water to remove all residue. If rash or burn develops, consult a physician. Material is corrosive.

Inhalation: Remove to fresh air. If fumes are inhaled, call a physician. Provide oxygen.

Eyes: Flush with water for at least 15 minutes to remove all residue. Get medical help immediately.

## V. FIRE AND EXPLOSION DATA

Flashpoint (°F):	N/A			
Flammable limits in air	LOWER: N/A	UPPER:	N/A	(% by volume)
Extinguishing media:	Water, fog, or foam			
Special firefighting procedures:	Full protective equipm	nent required.	May releas	se zinc oxide and HCI fumes.
	Toxic metal halide fur	nes produced		
Unusual fire and explosion hazards:	Dense smoke may be	e generated.		i.

## VI. REACTIVITY INFORMATION

	Ctable (blanc
Stability considerations/Conditions to avoid:	Stable/None
Hazardous polymerization/Conditions to avoid:	Will not occur/None
Incompatibility/Materials to avoid:	Acid may react with metals to produce explosive gas.
Hazardous combustion or, Decomposition products:	Carbon dioxide, water, hydrochloric acid, ammonia, oxides
	of nitrogen, zinc oxide.

VII. SPILL AND LEAK RESPONSE Steps to be taken if material is released or spilled: Contain spill, absorb, sweep-up and dispose. Flush area to chemical sewer. Soda ash (sodium carbonate) is neutralizer for acid. Dispose of in accordance with all federal, state, and local Waste disposal method: regulations. **VIII. SPECIAL PROTECTION INFORMATION** Respiratory protection: If the workstation is not properly ventilated to exhaust all fumes and vapors, use a NIOSH approved mask. Ventilation: Maintain air flow away from user to remove all fumes and vapors, so that the PEL is never exceeded. Adhere to environmental regulations for exhausts. Protective gloves: Chemical and acid impervious Chemical tight safety goggles. Do NOT wear contact lenses. Eye protection: Other protective equipment: Full protective equipment normally used in a brazing operation so as to prevent any contact. Review operations to avoid contact with hazardous gas, liquids or solids. See also: 29 CFR 1910.132 - 29 CFR 1910.140. Personal Protective Equipment 29 CFR 1910.251 - 29 CFR 1910.257. Welding, Cutting and Brazing IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS Precautions to be taken in handling and storage: Store flux at ambient conditions. Wash thoroughly after handling to remove all residue. Other precautions: Do not take internally. Avoid eye and skin contact. Avoid inhaling mist or dust. Professionally wash contaminated clothing before re-use. PHYSICAL AND CHEMICAL PROPERTIES Boiling Point (°F @ 760 mmHg): >212 Specific gravity (H<sub>2</sub>O = 1 @  $72^{\circ}$ F): 1.38 Vapor density (air = 1): N/E Vapor pressure: N/E Percent volatiles by volume: N/E Solubility in water: Appreciable Evaporation rate (butyl acetate = 1): <1 XI. **OPTIONAL INFORMATION** Department of Transportation: DOMESTIC GROUND Proper shipping name: Corrosive liquid, N.O.S. (Zinc Chloride, Hydrochloric Acid) Hazard Class: Class 8 ID & Packing Group Number: UN 1760, PG III ERG Guide Number: 154 **Toxic Substance Control Act:** All components of this compound are listed within the TSCA inventory. SARA Title III Program: This product contains the following toxic chemicals subject to the reporting requirements of EPCRA of 1986 and 40 CFR 372. This information must be included in all MSDS that are copied and distributed for this material. Chemical Name CAS No. Concentrations Zinc Compounds N/A <50% Hydrochloric Acid 7647-01-0 <20% State Right-to-Know Programs: Pennsylvania: This product contains the following chemicals listed in PA Code Title 34, Hazardous Substance List: Ammonium chloride, zinc chloride and hydrochloric acid. This product contains the following compounds subject to the reporting California: and labeling requirements of Proposition 65: None RQ aggregate values apply for RCRA, CERLA, and SARA. NOTES: NA=Not Applicable NE=Not Established H=Health F=Fire R=Reactivity **PE=Personal Equipment** While we believe all information presented herein is accurate and reliable, the data are not to be taken as a guarantee or representation of any kind for which Force Industries assumes legal responsibility. They are offered solely for your consideration, investigation, and verification.

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36 Canfield 7 pgs



# Safety Data Sheet According to 1907-2006/EC, Article 31

Version: 1.0

## 1. PRODUCT AND GOMPANY IDENTIFICATION

Product Trade Name:	100% Watersafe Lead Free Solid Wire Solder Alloy
Details of the supplier of	the safety data sheet:
This Safety Data Sheet has	s been updated in accordance with the Globally Harmonized System (GHS).
Manufacturer Name:	Canfield Technologies/BOW Electronic Solders
Address: '	1 Crossman Road, Sayreville, NJ 08872
General Phone Number:	732-316-2100
INFOTRAC	24 Hour Emergency Telephone Number: 1-800-535-5053
SDS Creation Date	6-Jan-15
SDS Revision Date:	6-Jan-15

## 2 HAZARDS ID ENTITICATION

Classification of the substance or mixture Classification according to Regulation (EC) NO 1272/2008

GHS08 Health Hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS07

Skin Sens. 1B H317 May cause an allergic skin reaction.

Label elements

Labeling according to Regulation (EC) No 1272/2008 The product is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS08

Signal word Danger

Hazard Statements

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

Precautionary statements

P285 In case of inadequate ventilation wear respiratory protection.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor or physician if you feel unwell.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.

P501 Dispose of contents/container in according with local/regional/national regulations.

Hazard description: WHMIS Hazard Symbols D2B- Toxic material causing other toxic effects.

Classification system: NFPA ratings (scale 0-4)



Fire =0 Reactivity = 0



Reactivity=0 O PERSONAL PROTECTION Other hazards Results of PBT and vPvB assessment PBT : Not applicable vPvB: Not applicable

## A ROMPOSITION OF MEANIRE

**Chemical characterization : Mixtures** 

Description: Mixtures of the substances listed below with nonhazardous additions.

		% Range			
CAS No.	Description	•			
CAS: 7440-31-5	Tin	94-97%			
EINECS:231-141-8		0.25%			
CAS: 7440-22-4	Silver	0.20 /0			
EINECS: 231-131-3		3.5-4.5%			
CAS: 7440-50-8	Copper	0.0-4.070			
EINECS:231-159-6					
Additional information:					
This solder product does not contain any Substance of very High Concern (SVHC) on the European Chemicals Agency					

(ECHA) CANDIDATE LIST.

# A FIRST ADM FASURES

Description of first aid measures

After inhalation: Supply fresh air, consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: Seek immediate medical advise.

Information for doctor:

Most important symptoms and effects, both acute and delayed.

Indication of any immediate medical attention and special treatment needed.

## 5.mREnermerMeasures

Extinguishing media Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water. Special hazards arising from the substance or mixture In case of fire, the following can be released: Carbon monoxide (CO) Carbon dioxide (CO2) Advise for fire fighters Protective equipment: Wear self-contained respiratory protective device.

# 0. AGGIDENITAL RELÉASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and clearing up:

Dispose contaminated material as waste in accordance to item 13.

Ensure adequate ventilation. **Reference to other sections** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

## A HANDLING AND STOFACE

Handling:

Precautions for safe handling: Prevent formation of dust Information about protection against explosions and fires: No further data. Conditions for safe storage, including any incompatibilities Storage: Requirements to be met by storerooms and receptacles: Store in a cool location. Information about storage in one common storage facility: not required. Further information about storage conditions: None.

Specific end use(s) No further relevant information available.

## 3 EXPOSURE CONTROLS/INFRSONAL FROMESTION

Additional information about design of technical systems: No further data.

**Control parameters** 

Components with limit values that require monitoring at the workplace:

**(g** 

Tin 7440-31-	5
PEL	2mg/m³
	Metal
REL	2mg/m <sup>3</sup>
TLV	2mg/m³
	Metal
Silver 7440-2	22-4
PEL	0.01 mg/m³
	metal and soluble compounds ( as A
REL	0.01 mg/m³
TLV	0.1 mg/m³
	metal: dust and fume

Additional information:

PEL = Permissible Exposure Limit (OSHA)

TLV= Threshold Limit Value ( ACGIH)

OSHA = Occupational Safety and Health Administration.

ACGIH= American Conference of Governmental Industrial Hygienists

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Breathing equipment:

Exposure controls: use appropriate engineering control such as process enclousures, local exhaust ventilation to control Airborne levels below recommended exposure limits.

When ventilation is not sufficient to remove airborne levels from the breathing zone, a NIOSH safety approved respirator or Self-contained breathing apparatus should be worn. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Protection of hands:



Protective gloves

Material of gloves: Nitrile rubber, NBR Natural rubber. NR

#### Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and to be observed. Eye protection :



Face Shield or safety glasses

## B. PHINGICAL AND CHEMICAL PROPERIES

Information on basic physical and chemical properties **General Information** Appearance : Form: Solid Metal in wire, ribbon, bar Color: Silver grey Mild Odor: pH-value: Not determined.

Change in condition					
Melting point/melting ran	ge: 217°C ( 423 °F )				
Flash point :	Undetermined.				
Auto igniting:	Product is not self igniting.				
Danger of explosion:	Product does not present an explosion hazard.				
Density at 20°C ( 68°F ):	3.5 g/cm3 ( 29.208 lbs/gal)				
Solubility in / miscibility with Water: Insoluble.					
Bulk density at 20 C (68 F): 4000 Kg/m <sup>3</sup>					
Solids Content:	100.00%				
Organic Content:	0.00%				

#### ANIDITE DATE MARRY

#### Reactivity

Chemical stability

Thermal decomposition /conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known

Conditions to avoid No further relevant information available.

Incompatible materials: Strong acids, strong oxidizers.

Hazardous decompositions products: No dangerous decomposition products known.

#### IN TOXIGOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: Primary irritant effect: On the skin: Irritant to skin and mucous membranes. On the eye: Irritant effect. Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations: Irritant **Carcinogenic categories** IARC (International Agency for Research on Cancer) None of the ingredients is listed. NTP (National Toxicology Program) AD JEROLOGICAN, INFORMAVION Toxicity

Aquatic toxicity: No further relevant information available. Additional ecological information: General notes: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Result of PBT and vPvB assessment

Not applicable. PBT:

## VPvB: Not applicable.

## 18. DISROSAL CONSIDERATIONS

Waste treatment methods

**Recommendation:** 

1

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Uncleaned packaging's:

Recommendations:

Disposal must be made in accordance to regulations.

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Sec. Sec. Sec. 1.

IN TRANSPORT INFORMATION

UN- NUMBER	Not applicable.			
DOT, IMDG, ADN, IATA	Not applicable.			
ADR	Not applicable.			
UN proper shipping name	Not applicable.			
DOT, ADN, ADR	Not applicable.			
IMDG, IATA	Not applicable.			
Transport hazard class (es)				
DOT, IMDG	Not applicable.			
Class	Not applicable.			
ADR, ADN, IATA				
Class	Not applicable.			
Packing group				
DOT, ADR, IMDG, IATA	Not applicable.			
Environmental hazards:				
Marine pollutant:	No			
Special precautions for user	Not applicable.			
Transport in bulk according to Annex II of MARPOL73/78				
and the IBC Code	Not applicable.			

#### 15. RECULATORY INFORMATION AND A SAME AND A S

Safety, Health and environmental regulation/ legislation specific for the substance or mixture

USA The following information relates to product regulation specific to the USA.

SARA (Superfund Amendments and Reauthorization Act)

Section 355 (Extremely hazardous substances):

None of the ingredients is listed

Section 313 (Specific toxic chemical listings):

7440-22-4 Silver

7440-50-8 Copper

TSCA (Toxic Substances Control Act): Canfield Technologies certifies that all components listed below for the subject finished Product are on the TSCA Inventory of chemical Substance and are not subject to any chemical specific regulation under TSCA Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

All ingredients are listed or exempt from listing.

**California Proposition 65** 

Chemicals known to cause cancer: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity: None of the ingredients is listed.

Carcinogenic categories

EPA (Environmental Protection Agency)

7440-22-4 Silver

7440-50-8 Copper

NIOSH-CA (NATIONAL Institute for Occupational Safety and Health)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

CANADA:

Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

Labeling according to Regulation (EC) NO 1272/2008

The product has classified and labeled according to the CLP regulation.

Hazard pictograms

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GHS08 Signal word Danger Hazard-determining components of labeling: Gum Rosin

#### Hazard statements

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

**Precautionary statements** 

P285 In case of inadequate ventilation wear respiratory protection.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED : Call a POISON CENTER or doctor or physician if you feel unwell.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.

P501 Dispose of contents/container in according with local/regional/national regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

#### 16 OMHER INFORMATION

The information contained herein is based on data considered accurate and is offered solely for information,

consideration and investigation. Canfield Technologies extends no warranties, makes no representations and assumes

no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. This

Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process.

All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of

the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that

employees must be trained on how to use a Safety Data Sheet as a source for hazard information.

Abbreviations and acronyms:

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

ICAO: International Civil Aviation Organization.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

IMDG: International Maritime Code for Dangerous Goods.

DOT: US Department of Transportation.

IATA: International Air Transport Association.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

NFPA: National Fire Protection Association (USA).

HMIS: Hazardous Materials Identification System (USA).

WHMIS: Workplace Hazardous Materials Information System (Canada).

LC50: Lethal concentration, 50 percent.

LD50: Lethal dose, 50 percent.

Data compared to the previous version altered.

Silver-Copper-Phosphorus Alloys

Safety Data Sheet

1. Product and Company Identification Manufacturer Lucas-Milhaupt, Inc. 5656 South Pennsylvania Avenue Cudahy, WI 53110 USA Telephone: 414-769-6000

www.lucasmilhaupt.com

Emergency Phone Number

CHEMTREC : within USA or Canada 1-800-424-9300 CHEMTREC : outside USA or Canada 1-704-741-5970

SDS Number: 77

Product: AG-CU-P

Product Codes: 28704 (SIL-FOS 10), 71-100 (SIL-FOS 10), 34286 (SIL-FOS 5M), 26310 (SIL-FOS 1), 27953 (SIL-FOS 1), 2774 (SIL-FOS 2), 71-020 (SIL-FOS 2), 34649 (SIL-FOS 2F), 28134 (SIL-FOS 2M), 35502 (SIL-FOS 2M), 71-017 (SIL-FOS 2M), 35503 (SIL-FOS 5), 25841 (SIL-FOS 5), 7054 (SIL-FOS 5)), 71-050 (SIL-FOS 5), 28118 (SIL-FOS 5F), 71-052 (SIL-FOS 5F), 17152 (HANDY-FLO 6), 71-062 (HANDY-FLO 6), 17244 (HANDY-FLO 6), 35542 (SIL-FOS 6i), 71-063 (SIL-FOS 6i), 28126 (SIL-FOS 6), 71-060 (SIL-FOS 6), 29538 (SIL-FOS 15),7153 (SIL-FOS 15), 71-150 (SIL-FOS 15), 26047 (SIL-FOS 15), 35528 (SIL-FOS 15), 35544 (SIL-FOS 15LP), 19422 (SIL-FOS 18W), 31138 (SIL-FOS 18M), 35207 (SIL-FOS 18M),71-181 (SIL-FOS 18M), 35216 (SIL-FOS 18), 71-180 (SIL-FOS 18)

36 SIL - FOS 7 PQS

Product Use(s): Alloys for brazing and other metallurgical processes

2. Hazards Identification

Classification(s): None applicable

Label Symbol(s): None applicable

Label Signal Word(s): None applicable

Label Hazard Statement(s): None applicable

Label Precautionary Statement(s)

The acute toxicities of 74-94% of the product's ingredients are unknown.

3. Composition/Information on Ingredients

Ingredient	CAS Number	8	Impurities
Copper	7440-50-8	74-94	None known
Phosphorus	7723-14-0	2-8	None known
Silver	7440-22-4	<1-19	None known

#### 4. First Aid Measures

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## Еуе

Flush affected areas with water for at least fifteen minutes. Seek medical assistance if necessary.

# Skin

Remove contaminated clothing. Wash affected area with large quantities of water for at least five minutes. Seek medical attention if necessary. Launder or dry-clean clothing before reuse.

#### Ingestion

\_\_\_\_\_\_

If subject is conscious, induce vomiting. If unconscious or convulsive, seek immediate medical assistance. Do not give anything by mouth to an unconscious or convulsive person.

## Inhalation

If signs and symptoms of toxicity are observed, remove subject from area, administer oxygen, and seek medical attention. Keep the subject warm and at rest. Perform artificial respiration if breathing has stopped.

# Note to Physician or Poison Control Center

None of the components are acutely toxic by ingestion, nor are they absorbed through the skin. Long-term chronic exposure may cause argyria.

# 5. Fire Fighting Measures

Fire and Explosion Hazards

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These products are non-flammable and non-explosive. If present in a fire or explosion, they may emit fumes of the constituent metals and/or phosphorus pentoxide.

Extinguishing Media

Use dry chemical. Do not use water.

## Fire Fighting Instructions

If fighting a fire in which these products are present, wear a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

#### 6. Accidental Release Measures

\_\_\_\_\_

Methods and Materials

If a finely-divided form of product is spilled, clean up spillage so as to minimize dispersion of dust. Either wet sweeping or vacuuming using HEPA filtration is recommended.

Personal Precautions

Avoid contact with skin, eyes, and mucous membranes.

#### Environmental Precautions

Prevent spills from entering sewers or contaminating soil.

7. Handling and Storage \_\_\_\_\_

Handling Precautions

No special handling precautions are required.

#### Work and Hygiene Practices

\_\_\_\_\_

To prevent ingestion following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing or protective equipment before entering eating/drinking areas.

Storage Precautions

Do not store in proximity to incompatible materials (see Section #10).

8. Exposure Controls and Personal Protection 

Ingredients - Exposure Limits

Copper

Silver

ACGIH TLVs: 0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dusts and mists) OSHA PELs: 0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dusts and mists) Phosphorus No applicable OSHA PEL(s)

No applicable ACGIH TLV(s)

ACGIH TLV: 0.1 mg/m3 TWA (metal)

OSHA PEL: 0.01 mg/m3 TWA

Ingredients - Biological Limits

\_\_\_\_\_ Copper No ACGIH BEI(s) or other biological limit(s) Phosphorus No ACGIH BEI(s) or other biological limit(s) Silver No ACGIH BEI(s) or other biological limit(s)

Engineering Controls 

Use dilution or local exhaust ventilation adequate to maintain concentrations of all components and their byproducts to within their applicable standards.

Eye/Face Protection \_\_\_\_\_

Wear eye protection adequate to prevent eye contact with the product and injury if the product is used with a flame. Plastic-frame spectacles with side shields are recommended.

Skin Protection

Wear protective gloves and clothing to prevent skin injuries if the product is used with a flame. Avoid flammable fabrics.

#### Respiratory Protection \_\_\_\_\_

If an exposure level to a component(s) exceeds an applicable standard, use a NIOSH-approved respirator having a configuration (facepiece, filter media,

assigned protection factor, etc.) effective for the concentration of the component(s) generated. For guidance on selection and use of respirators, consult American National Standard Z88.2 (ANSI, New York, NY 10036, USA).

# 9. Physical and Chemical Properties

Appearance: Yellow-white metals, various forms Odor: none Odor threshold: not applicable pH: not applicable Melting Point: approx. 1,178F./637C. Freezing point: not applicable Boiling point/boiling range: not determined Flash Point: not applicable Evaporation Rate: not applicable Flammability Class: not applicable Lower Explosive Limit: not applicable Upper Explosive Limit: not applicable Vapor pressure: not applicable Vapor density: not applicable Relative density (H2O): 7.4-8.6 Solubility (H2O): insoluble Oil-water partition coefficient: not applicable Autoignition Point: not applicable Decomposition temperature: not applicable Viscosity: not applicable

10. Stability and Reactivity

Reactivity: none reasonably foreseeable Stability: stable Hazardous Polymerization: will not occur Risk of Dangerous Reactions: silver and copper can form unstable acetylides in contact with acetylene gas.

Incompatible Materials

\_\_\_\_\_

Strong oxidizers; ammonia; azides; nitric acid; ethylene imine; sulfuric acid; chlorine trifluoride; inorganic and organic peroxides; peroxyformic acid; oxalic acid; bromates, chlorates, and iodates of alkali and alkali earth metals; tartaric acid; 1-bromo-2-propyne; permonosulfuric acid; alkaline hydroxides.

Hazardous Decomposition Products

Heating to elevated temperatures may liberate fumes of the constituent metals and/or phosphorus pentoxide.

Primary Routes(s) of Entry

Ingestion; inhalation.

## Eye Hazards

Eye contact with these products in finely-divided forms may cause irritation, conjunctivitis, ulceration of the cornea, and/or argyria, a permanent gray discoloration of the eyes, skin, mucous membranes, and respiratory tract.

#### Skin Hazards

\_\_\_\_\_

Skin contact with these products in finely-divided forms may cause irritation, argyria, discoloration, and/or contact dermatitis.

Ingestion Hazards

Ingestion of these products may cause nausea, vomiting, and gastrointestinal irritation.

## Inhalation Hazards

Inhalation of toxicologically-significant quantities of the components is unlikely when the product is used in accordance with instructions and specified protective measures (see Section #8). When phosphorus is overheated in air, it is converted to phosphorus pentoxide, which is corrosive and irritating to eyes, nose, throat, and mucous membranes.

## Symptoms Related to Overexposure

Pre-existing pulmonary diseases (e.g., bronchitis, asthma) may be aggravated by inhalation overexposure, particularly as fume.

# Delayed Effects from Long Term Overexposure

Chronic overexposure by inhalation and/or ingestion may aggravate preexisting diseases of the liver, kidneys, and gastrointestinal system.

# Carcinogenicity

The product contains no chemicals classified as potential or demonstrated carcinogens by IARC, NTP, or OSHA.

Germ Cell Mutagenicity

The product contains no chemicals determined to be germ cell mutagens.

# Reproductive Effects

The product contains no chemicals determined to be damaging to fertility or to the unborn child. Acute Toxicity Estimates

Acute Toxicity Estimates

LD50 (oral): >2,000 mg/kg LD50 (dermal): no data available LC50: 4,300 mg/m3

Interactive Effects of Components: no data available

## 12. Ecological Information

No ecological data is available for the product or any of its components.

Ozone Depletion Potential: This product contains no ingredients listed in the Annexes to the Montréal Protocol on Substances that Deplete the Ozone Layer.

# 13. Disposal Considerations

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Consult applicable Federal, State/Provincial, and local regulations.

14. Transport Information

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Transport is not regulated by USDOT, TDG (Canada), IATA, or IMO.

15. Regulatory Information

United States Regulatory Information

All components of this product are listed on the EPA's TSCA inventory.

SARA Hazard Classes: Chronic Health Hazard

SARA Section 313 Notification

This product contains these components in concentrations >1% (>0.1% for carcinogens) subject to Section 313 of the Emergency Preparedness and Community Right-to-Know Act (EPCRA) of 1986 and of 40CFR, Part 372:

- 1. Copper (CASRN 7440-50-8)
- 2. Phosphorus (CASRN 7723-14-0)
- 3. Silver (CASRN 7440-22-4)

Canadian Regulatory Information

All components of these products are listed on either the Domestic Substances List (DSL) or the Nondomestic Substances List (NDSL).

WHMIS Class(es) and Division(s): D2B Components on Ingredients Disclosure List:

- 1. Copper, elemental (CASRN 7440-50-8)
- 2. Phosphorus (CASRN 7723-14-0)
- 3. Silver, elemental (CASRN 7440-22-4)

This product has been classified according to the hazard criteria of the CPR and this SDS contains all of the information required by the CPR.

16. Other Information

HMIS Ratings (Legend)

Health - 2\* (moderate chronic hazard) Flammability - 1 (slight hazard) Physical Hazard - 0 (minimal hazard) PPE - see Note Note: Lucas-Milhaupt Inc. recommends use of protective eyewear and gloves (Personal Protection Index "B") as standard PPE. HMIS recommends that its ratings be used only in conjunction with a fully implemented HMIS program, and that specific PPE codes be created by the user, who is familiar with the actual conditions under which the product is used. We cannot anticipate every condition of the product's use, and it is the user's responsibility to evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

NFPA Ratings

Health - 2 Flammability - 1 Reactivity - 0

Preparation Information

Date of Preparation: 22 December 2015 Date of Prior SDS: 8 December 2014

## Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Lucas-Milhaupt, Inc.

66 RZZ30 6Pgs



# Dynatemp 22

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 04/12/2016 Version: 1.1

Marchael Califica Real P			
SECTION 1: Identification of the s	ubstance/mixture and of the com	pany/undertakin	g
1.1. Product identifier	and the second se	BULL BERRY	
Product form	: Substance		
Substance name	: Dynatemp 22		
Chemical name	: 75-45-6		
	ubstance or mixture and uses advised ag	ainst	
1.2. Relevant identified uses of the s Use of the substance/mixture	: Refrigerant	,	
	-		
1.3. Details of the supplier of the saf	ety data sneet		
Dynatemp International, Inc. 100 Sterling Parkway, Suite 111 Mechanicsburg, PA 17050 Phone: 1-800-791-9232, (outside the U.S.: Fax: 717-249-9043 www.Dynatempintt.com Email: info@dynatempintt.com	+1-717-249-0157)		
1.4. Emergency telephone number			and the second
Emergency number	: Contact Chemtrec at 800.424.9300	(24 hours)	
			9
SECTION 2: Hazards identification 2.1. Classification of the substance			TROUGH WITH STAT
Classification (GHS-US)			)
Liquefied gas H280			
			· · · · · · · · · · · · · · · · · · ·
2.2. Label elements GHS-US labeling Hazard pictograms (GHS-US)	:		•
	GHS04		
Signal word (GHS-US)	: Warning		ind.
Hazard statements (GHS-US)	: H280 - Contains gas under pressure		
Precautionary statements (GHS-US)	: P410+P403 - Protect from sunlight.	Store in a weil-vertua	ted place
11 Commence Veneral displace of c	ay cause dizziness and loss of concentration. Ind can cause asphyxiation in confined space conyl halides such as phosgene. Rapid evap	es. Al niunei leiniueid	Luies, (-200 C), decomposition product
None of the ingredients are of unknown tox			
SECTION 3: Composition/inform			
3.1. Substance		A STATE AND	
	: Mono-constituent		
Substance type	: Dynatemp 22		
Name		%	Classification (GHS-US)
Name	Product identifier (CAS No) 75-45-6	100	Liquefied gas, H280
	1 (LAS ND1 / 0-40-0	100	
Chlorodifluoromethane	10		
		THE REAL PROPERTY OF	-

Dynatemp 22 Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 4: First aid measures	
.1. Description of first aid measure	s
irst-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
irst-aid measures after inhalation	: Allow victim to breathe fresh air. Allow the victim to rest.
irst-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
irst-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
irst-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Notes to physician: Because of the possible disturbances of cardiac rhythm, catecholamine drugs such as epinephrine should be used with special caution and only insituations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.
.2. Most important symptoms and	effects, both acute and delayed
symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
1.3. Indication of any immediate me No additional information available	dical attention and special treatment needed
SECTION 5: Firefighting measure	95 · · · ·
1. Extinguishing media	
Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand. Use agent that is most appropriate for type of surrounding fire.
Insuitable extinguishing media	: Do not use a heavy water stream.
2. Special hazards arising from th	e substance or mixture
ubstance is not flammable in air at tempera	emperature relief devices but may still rupture under fire conditions. Decomposition may occur. This atures up to 100°C (212°F) at atmospheric pressure. However, mixtures of this substance with high nd/or temperature can become combustible in the presence of an ignition source.
.3. Advice for firefighters	
irefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
rotection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
ECTION 6: Accidental release n	neasures
.1. Personal precautions, protectiv	e equipment and emergency procedures
.1.1. For non-emergency personnel	
mergency procedures	: Evacuate unnecessary personnel.
5.1.2. For emergency responders	
Protective equipment	: Equip cleanup crew with proper protection.
mergency procedures	: Ventilate area.
2. Environmental precautions Prevent entry to sewers and public waters.	Notify authorities if liquid enters sewers or public waters.
.3. Methods and material for conta	
Aethods for cleaning up	: Store away from other materials.
5.4. Reference to other sections See Heading 8. Exposure controls and pers	conal protection.
SECTION 7: Handling and storage	
7.1. Precautions for safe handling Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
7.2. Conditions for safe storage, inc	luding any incompatibilities
de Contentions for sale storaget int	: Keep only in the original container in a cool, well ventilated place. Keep container closed when
Storage conditions	not in use.

# Dynatemp 22

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Incompatible products Incompatible materials Storage area	1	<ul> <li>Strong bases. Strong acids.</li> <li>Sources of ignition. Direct sunlight.</li> <li>Store in a well-ventilated place. Protect cylinder and its fittings from physical damage. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over.</li> </ul>
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## 7.3. Specific end use(s)

No additional information available

# SECTION 8: Exposure controls/personal protection

#### 8.1, Control parameters

Chlorodifluoromet	thane (75-45-6)	and the second
ACGIH	ACGIH TWA (ppm)	1000 ppm
OSHA	Not applicable	

: Avoid all unnecessary exposure.
: Wear protective gloves.
: Chemical goggles or safety glasses.
: Not required under normal conditions. If concentrations exceed exposure limits, use NIOSH approved respirator.
: Do not eat, drink or smoke during use.
: Ensure adequate ventilation, especially in confined areas. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

# SECTION 9: Physical and chemical properties

04/12/2016	EN (English US) 3/8
Viscosity, kinematic	: No data available
Viscosity	: No data available
Decomposition temperature	: 632 °C
Auto-ignition temperature	: No data available
_og Kow	: No data available
Log Pow	: No data available
Solubility	: Water: 2.6 g/l
Density	: 1.191 g/cm <sup>3</sup>
Relative density of saturated gas/air mixture	: 1.19
Relative vapor density at 20 °C	: 3
Relative density	: No data available
/apor pressure	: 10439 hPa
Dxidizing properties	: No data available
xplosive properties	: No data available
Explosion limits	: No data available
lammability (solid, gas)	: No data available
Relative evaporation rate (ether=1)	: >1
Relative evaporation rate (butyl acetate=1)	: No data available
Flash point	: No data available
Boiling point	: -40.8 °C
Freezing point	: No data available
Aelting point	: No data available
H.	: No data available
)dor threshold	: No data available
Ddor	: Faint ethereal
Color	: Coloriess
ppearance	: Clear, coloriess liquid and vapor
1. Information on basic physical and hysical state	; Gas

Viscosity, dynamic	: No data available
9.2. Other information	
Gas group	: Liquefied gas
SECTION 10: Stability and react	tivity
0.1. Reactivity	
Decomposes on heating	
10.2. Chemical stability	ALL MED VARIAN SALES PAR AND ST AND S
Stable at normal temperatures and storage	e conditions.
10.3. Possibility of hazardous react	
Not established.	1
10.4. Conditions to avoid	
Direct sunlight. Extremely high or low tem	peratures.
10.5. Incompatible materials	
Strong acids. Strong bases.	
10.6. Hazardous decomposition pro	oducts
Halogens, halogen acids and possibly car	
SECTION 11: Toxicological info	
11.1. Information on toxicological e	
Acute toxicity	: Not classified
Chlorodifluoromethane (75-45-6)	
LC50 inhalation rat (ppm)	220000 ppm/4h
ATE US (gases)	220000.000 ppmV/4h
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Chlorodifluoromethane (75-45-6)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
Reproductive toxicity	No. Mad alage Mard

: Not classified Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated : Not classified exposure) : Not classified Aspiration hazard Potential Adverse human health effects and : No additional information available

**SECTION 12: Ecological information** 12.1. Toxicity Dynatemp 22 777 mg/l LC50 fish 1 433 mg/l EC50 Daphnia 1 EC50 other aquatic organisms 1 250 mg/l ×. 12.2. Persistence and degradability Dynatemp 22 Not established. Persistence and degradability

symptoms

Dynatemp 22 Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Bloaccumulative potential Dynatemp 22	and the second secon
Bioaccumulative potential	Not established.
Chlorodifiuoromethane (75-45-6)	
BCF fish 1	(no significant bioaccumulation)
Log Pow	1.08
12.4. Mobility in soil	
lo additional information available	
12.5. Other adverse effects	
Other information	: Avoid release to the environment.
SECTION 13: Disposal consideration	S
13.1. Waste treatment methods	Carrier of Listan and the short of the state of the
Naste disposal recommendations	: Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Comply with applicable federal, state/provincial and local regulations. Empty pressure vessels should be returned to the supplier.
Ecology - waste materials	: Avoid release to the environment.
SECTION 14: Transport information	
Department of Transportation (DOT)	
n accordance with DOT	
ransport document description	: UN1018 Refrigerant gas R 22, 2.2
JN-No.(DOT)	: UN1018
Proper Shipping Name (DOT)	: Refrigerant gas R 22
Department of Transportation (DOT) Hazard	: 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
lazard labels (DOT)	: 2.2 - Non-fiammable gas
OT Packaging Non Bulk (49 CFR 173.xxx)	: 304
OT Packaging Bulk (49 CFR 173.xxx)	: 314;315
OT Special Provisions (49 CFR 172.102)	: T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.
OT Packaging Exceptions (49 CFR 173.xxx)	: 306
OT Quantity Limitations Passenger aircraft/rail 9 CFR 173.27)	: 75 kg
OT Quantity Limitations Cargo aircraft only (49 FR 175.75)	: 150 kg
OT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
ർദ്ദിന്തെങ്കിയ	
ther information	: No supplementary information available.
DR	
o additional information available	
ransport by sea	· · · · ·
o additional information available	
Nr transport	
o additional information available	
4/12/2016	EN (English US) 5/8

# Dynatemp 22

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Dynatemp 22	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Sudden release of pressure hazard
Chlorodifluoromethane (75-45-6)	STATE AND
Listed on the United States TSCA (Toxic Sub Listed on United States SARA Section 313	stances Control Act) inventory
SARA Section 313 - Emission Reporting	1.0% deminimis reporting level
15.2. International regulations	
CANADA Chlorodifluoromethane (75-45-6)	
Listed on the Canadian DSL (Domestic Subst	tances List)
WHMIS Classification	Class A - Compressed Gas
EU-Regulations	
Chlorodifluoromethane (75-45-6)	
· · · · · · · · · · · · · · · · · · ·	ean Inventory of Existing Commercial Chemical Substances) No. 1272/2008 [CLP]
Listed on the EEC inventory EINECS (Europe Classification according to Regulation (EC)	No. 1272/2008 [CLP]
Listed on the EEC inventory EINECS (Europe Classification according to Regulation (EC) No additional information available Classification according to Directive 67/548, No additional information available	No. 1272/2008 [CLP]

#### **SECTION 16: Other information**

Other information

: None.

 Full text of H-phrases:
 Iquefied gas
 Gases under pressure Liquefied gas

 H280
 Contains gas under pressure; may explode if heated

SDS US (GHS HazCom 2012)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

66 R410A 7 pgs



Dynatemp 410A Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of Issue: 04/12/2016 Version: 1.1

	the second of the company/undertaking
	substance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Mixture
Product name	: Dynatemp 410A
Other means of identification	: R410A
1.2. Relevant identified uses of the s	substance or mixture and uses advised against
Jse of the substance/mixture	: Refrigerant
1.3. Details of the supplier of the sat	fety data sheet
Dynatemp International, Inc. 100 Sterling Parkway, Suite 111 Mechanicsburg, PA 17050 Phone: 1-800-791-9232, (outside the U.S.: Fax: 717-249-9043 www.Dynatempinti.com Email: info@dynatempinti.com	+1-717-249-0157)
1.4. Emergency telephone number	
Emergency number	: Contact Chemtrec at 800.424.9300 (24 hours)
SECTION 2: Hazards identification	
2.1. Classification of the substance	ormixture
Classification (GHS-US) Liquified gas H280	
2.2. Label elements	
GHS-US labeling	
Hazard pictograms (GHS-US)	GH504
Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: H280 - Contains gas under pressure; may explode if heated
Precautionary statements (GHS-US)	: P410+P403 - Protect from sunlight. Store in a well-ventilated place
recaduonary statements (one cor	
2.3. Other hazards	
Non-flammable material. Overexposure ma result from exposure. Vapors displace air a may include hydrofluoric acid (HF) and carb 2.4. Unknown acute toxicity (GHS U	
None of the ingredients are of unknown tox	
SECTION 3: Composition/inform	ation on ingredients
3.1. Substance	and the second se
Not applicable - this product is a mixture.	

# Dynatemp 410A Safety Data Sheet

2. Mixture	Total Comments of the		
Name	Product identifier	%	Classification (GHS-US)
Ethane, pentafluoro-	(CAS No) 354-33-6	50	Liquefied gas, H280 Liquefied gas, H280
Difluoromethane	(CAS No) 75-10-5	1 50	
SECTION 4: First aid measures			
1.1. Description of first aid measure	es	the later and the	
First-aid measures general	: Never give anything by mouth to an advice (show the label where possit	e).	
First-aid measures after inhalation	: Allow victim to breathe fresh air. Allo		
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.		
First-ald measures after eye contact	<ul> <li>Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.</li> <li>Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.</li> </ul>		
First-aid measures after ingestion			
	Notes to physician: Because of the possible disturbances of cardiac rhythm, catecholamine drugs such as epinephrine should be used with special caution and only insituations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.		
4.2. Most important symptoms and	l effects, both acute and delayed	1.2.2.1.2.1.2.	
Symptoms/injuries	: Not expected to present a significant	t hazard under antio	cipated conditions of normal use.
4:3. Indication of any immediate m No additional information available	edical attention and special treatment nee	led	
SECTION 5: Firefighting measur			
		LAS BE SHEETS	and the second second
5.1. Extinguishing media Suitable extinguishing media	: Foam, Dry powder, Carbon dioxide	Water spray. Sand	. Use agent that is most appropriate for
Sultable extinguishing media	type of surrounding fire.		
Unsuitable extinguishing media	: Do not use a heavy water stream.		
5.2. Special hazards arising from t	he substance or mixture	C. St. States	
Cylinders are equipped with pressure and	temperature relief devices but may still ruptur	e under fire conditio	ns. Decomposition may occur. This
substance is not formable in oir at tompo	eratures up to 100°C (212°F) at atmospheric p and/or temperature can become combustible	essure, However, I	mixtures of this substance with high
automore is not flammable in air at tompo	ratures up to 100°C (212°F) at atmospheric p and/or temperature can become combustible	essure. However, I in the presence of a	mixtures of this substance with high in ignition source.
substance is not flammable in air at tempe concentrations of air at elevated pressure	and/or temperature can become combustible : Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v	essure. However, i in the presence of a exposed containers. vater from entering e	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters	and/or temperature can become combustible : Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v	essure. However, i in the presence of a exposed containers. vater from entering e	Exercise caution when fighting any
Substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3 Advice for firefighters Firefighting instructions Protection during firefighting	<ul> <li>and/or temperature can become combustible</li> <li>Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v</li> <li>Do not enter fire area without properapparatus.</li> </ul>	essure. However, i in the presence of a exposed containers. vater from entering e	Exercise caution when fighting any environment.
Substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release	<ul> <li>ratures up to 100°C (212°F) at atmospheric p and/or temperature can become combustible</li> <li>Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v</li> <li>Do not enter fire area without prope apparatus.</li> </ul>	essure. However, i in the presence of a exposed containers. vater from entering e	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a         5.3       Advice for firefighters         Firefighting instructions         Protection during firefighting         SECTION 6: Accidental release         6.1.       Personal precautions, protection	<ul> <li>and/or temperature can become combustible and/or temperature can become combustible</li> <li>Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v</li> <li>Do not enter fire area without properapparatus.</li> </ul>	essure. However, i in the presence of a exposed containers. vater from entering e	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel	<ul> <li>and/or temperature can become combustible and/or temperature can become combustible</li> <li>Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v</li> <li>Do not enter fire area without properapparatus.</li> </ul>	essure. However, i in the presence of a exposed containers. vater from entering e	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel Emergency procedures	ratures up to 100°C (212°F) at atmospheric p and/or temperature can become combustible : Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v : Do not enter fire area without prope apparatus. measures ive equipment and emergency procedures	essure. However, i in the presence of a exposed containers. vater from entering e	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders	<ul> <li>Instruction of the second constraints of the second const</li></ul>	essure. However, i in the presence of a exposed containers, rater from entering e r protective equipm	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment	ratures up to 100°C (212°F) at atmospheric p and/or temperature can become combustible : Use water spray or fog for cooling e chemical fire. Prevent fire-fighting v : Do not enter fire area without prope apparatus. measures ive equipment and emergency procedures	essure. However, i in the presence of a exposed containers, rater from entering e r protective equipm	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures	<ul> <li>Instruction of the second construction of the second construct</li></ul>	essure. However, i in the presence of a exposed containers, rater from entering e r protective equipm	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions	<ul> <li>Instruction of the second construction of the second combustible of the second comb</li></ul>	ressure. However, i in the presence of a exposed containers, vater from entering e r protective equipment tection.	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters	<ul> <li>instruction of the second se</li></ul>	ressure. However, i in the presence of a exposed containers, vater from entering e r protective equipment tection.	Exercise caution when fighting any environment.
substance is not flammable in air at tempe concentrations of air at elevated pressure a 5.3. Advice for firefighters Firefighting instructions Protection during firefighting SECTION 6: Accidental release 6.1. Personal precautions, protecti 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions	<ul> <li>instruction of the second se</li></ul>	ressure. However, i in the presence of a exposed containers, vater from entering e r protective equipment tection.	Exercise caution when fighting any environment.

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SECTION 7: Handling an					
1. Precautions for safe	nandling		it wild account water before eating drinking or		
smoking ar of vapor.		smoking and when leaving work. Pro	hands and other exposed areas with mild soap and water before eating, drinking or ing and when leaving work. Provide good ventilation in process area to prevent formation por.		
.2. Conditions for safe s	torage, including	any incompatibilities			
Storage conditions	:	Keep only in the original container in not in use.	n a cool, well ventilated place. Keep container closed when		
ncompatible products	:	Strong bases. Strong acids.			
ncompatible materials		: Sources of ignition. Direct sunlight. : Store in a well-ventilated place. Protect cylinder and its fittings from physical damage.			
Storage area		Cylinders should be stored upright a	and firmly secured to prevent falling or being knocked over.		
7.3. Specific end use(s) No additional information availab	ble				
SECTION 8: Exposure c	ontrols/persor	nal protection			
8.1. Control parameters	and the second se	Marker aller a reader			
Difluoromethane (75-10-5)	NO MARK		A CONTRACTOR OF A CONTRACTOR		
Mfg's Acceptable Exposure Limit	TWA (8 hr) (ppm)	)	1000 ppm		
Ethane, pentafluoro- (354-33	-6)				
WEEL (AIHA)	Workplace Enviro Guide TWA (ppm	onmental Exposure Level (WEEL) n)	1000 ppm		
8.2. Exposure controls	1. 1. 1. 1. T.	CARE AND A COMPLEX	The same and the wards		
Personal protective equipment		: Avoid all unnecessary exposure.			
Hand protection		: Wear protective gloves.			
Eye protection		: Chemical goggles or safety glasses			
Respiratory protection		approved respirator.	ns. If concentrations exceed exposure limits, use NIOSH		
Other information		: Do not eat, drink or smoke during u	JS <b>0.</b>		
Engineering Controls		: Ensure adequate ventilation, especiarge amounts are released. Mech	cially in confined areas. Local exhaust should be used when nanical ventilation should be used in low or enclosed places.		
SECTION 9: Physical ar	d chemical pr	roperties			
9.1. Information on basi			AND A REAL PROPERTY OF A DATA		
Physical state		: Gas			
Appearance		: Clear, colorless liquid and vapor			
Color		: Clear, Colorless			
Odor		: Faint ethereal			
Odor threshold		: No data available			
рН		: No data available			
Melting point		: No data available			
Freezing point		: No data available			
Boiling point		: -48.5 °C			
Flash point		: No data available			
	=1)	: >1			
	-	: No data available			
Relative evaporation rate (CCL					
Relative evaporation rate (CCL Flammability (solid, gas) Explosion limits		: No data available			
Relative evaporation rate (CCL Flammability (solid, gas) Explosion limits Explosive properties		: No data available			
Relative evaporation rate (CCL Flammability (solid, gas) Explosion limits Explosive properties Oxidizing properties		: No data available : No data available			
Relative evaporation rate (CCL Flammability (solid, gas) Explosion limits Explosive properties Oxidizing properties Vapor pressure 21.1 °C		No data available No data available 14,844 hPa, 11,894 mm Hg			
Relative evaporation rate (CCL Flammability (solid, gas) Explosion limits Explosive properties Oxidizing properties		: No data available : No data available			

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Relative vapor density (air=1)	: 3
Molecular mass	: 72.6 g/mol
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: > 750 °C
Decomposition temperature	: > 250 °C
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
9.2. Other information	

## VOC content

: Liquiefied gas

**SECTION 10: Stability and reactivity** 

10.1. Reactivity Decomposes on heating

Gas group

10.2. Chemical stability

: 0

Stable at normal temperatures and storage conditions

Direct sunlight. Extremely high or low temperatures.

 10.6.
 Hazardous decomposition products

 Halogens, halogen acids and possibly carbonyl halides

 SECTION 11: Toxicological information

 11.1.
 Information on toxicological effects

10.3. Possibility of hazardous reactions

Not established.

Acute toxicity

10.4. Conditions to avoid

10.5. Incompatible materials Strong acids. Strong bases.

: Not classified

Difluoromethane (75-10-5)	
LC50 inhalation rat (mg/l)	1890 g/m³ (Exposure time: 4 h)
ATE US (vapors)	1890.000 mg/V4h
ATE US (dust, mist)	1890.000 mg/l/4h
Ethane, pentafluoro- (354-33-6)	
LC50 inhalation rat (mg/l)	2910 g/m³ (Exposure time: 4 h)
ATE US (vapors)	2910.000 mg/l/4h
ATE US (dust, mist)	2910.000 mg/l/4h
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

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: Based on available data, the classification criteria are not met. Potential Adverse human health effects and

symptoms

#### **SECTION 12: Ecological information**

12.1. Toxicity

No additional information available

2.2. Persistence and degradability	
Dynatemp 410A	
Persistence and degradability	Not established.
Difluoromethane (75-10-5)	
Persistence and degradability	Not established.
Ethane, pentafluoro- (354-33-6)	
Persistence and degradability	Not established.
2.3. Bioaccumulative potential	North Reading to the formation of the second state of the second s
Dynatemp 410A	As Eres A rec
Bioaccumulative potential	Not established.
Difluoromethane (75-10-5)	A A A A A A A A A A A A A A A A A A A
Bioaccumulative potential	Not established.
Ethane, pentafluoro- (354-33-6)	
Bioaccumulative potential	Not established.
2.4. Mobility in soil lo additional information available	
2.5. Other adverse effects	
iffect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.
Other information SECTION 13: Disposal consideration 3.1. Waste treatment methods	ns
SECTION 13: Disposal consideration	
SECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be rejused after re-conditioning. Recover, reclaim by distillation or remove to a permitted</li> </ul>
SECTION 13: Disposal consideration 3.1. Waste treatment methods	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> </ul>
SECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations Ecology - waste materials SECTION 14: Transport information	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> </ul>
ECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations Ecology - waste materials ECTION 14: Transport information Department of Transportation (DOT)	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> </ul>
ECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations acology - waste materials ECTION 14: Transport information Department of Transportation (DOT) transport document description	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> <li>UN3163 Liquefied gas, n.o.s., 2.2</li> </ul>
ECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations Ecology - waste materials ECTION 14: Transport information Department of Transportation (DOT) Transport document description UN-No.(DOT)	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> </ul>
SECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations Ecology - waste materials	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> <li>UN3163 Liquefied gas, n.o.s., 2.2</li> <li>UN3163</li> </ul>
ECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations Ecology - waste materials ECTION 14: Transport information Department of Transportation (DOT) Transport document description UN-No.(DOT) Proper Shipping Name (DOT) Department of Transportation (DOT) Hazard Classes	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> <li>UN3163 Liquefied gas, n.o.s., 2.2</li> <li>UN3163</li> <li>Liquefied gas, n.o.s.</li> </ul>
ECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations Ecology - waste materials ECTION 14: Transport information Department of Transportation (DOT) Transport document description UN-No.(DOT) Proper Shipping Name (DOT) Department of Transportation (DOT) Hazard	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> <li>UN3163 Liquefied gas, n.o.s., 2.2</li> <li>UN3163</li> <li>Liquefied gas, n.o.s.</li> <li>2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115</li> </ul>
ECTION 13: Disposal consideratio 3.1. Waste treatment methods Vaste disposal recommendations Cology - waste materials ECTION 14: Transport information Department of Transportation (DOT) Transport document description UN-No.(DOT) Proper Shipping Name (DOT) Department of Transportation (DOT) Hazard Classes Hazard labels (DOT)	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> <li>UN3163 Liquefied gas, n.o.s., 2.2</li> <li>UN3163</li> <li>Liquefied gas, n.o.s.</li> <li>2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115</li> </ul>
ECTION 13: Disposal consideration 3.1. Waste treatment methods Vaste disposal recommendations Ecology - waste materials ECTION 14: Transport information Department of Transportation (DOT) Transport document description UN-No.(DOT) Proper Shipping Name (DOT) Department of Transportation (DOT) Hazard Classes	<ul> <li>Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder can be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted waste disposal facility. Empty pressure vessels should be returned to the supplier.</li> <li>Avoid release to the environment.</li> <li>UN3163 Liquefied gas, n.o.s., 2.2</li> <li>UN3163</li> <li>Liquefied gas, n.o.s.</li> <li>2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115</li> <li>2.2 - Non-flammable gas</li> </ul>

# **Dynatemp 410A**

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DOT Special Provisions (49 CFR 172.102)	:	T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	150 kg
DOT Vessel Stowage Location	:	A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

#### ADR

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

## **SECTION 15: Regulatory information**

Dynatemp 410A	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Sudden release of pressure hazard
Difluoromethane (75-10-5)	
Listed on the United States TSCA (Toxic Substances	Control Act) inventory
Ethane, pentafluoro- (354-33-6)	
Listed on the United States TSCA (Toxic Substances	Control Act) inventory

#### CANADA

Difluoromethane (75-10-5)	
WHMIS Classification	Class A - Compressed Gas
Ethane, pentafluoro- (354-33-6)	
Listed on the Canadian DSL (Domes	stic Sustances List)
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

#### EU-Regulations

Difluoromethane (75-10-5)	
Listed on the EEC inventory EINECS (European Inventory of	Existing Commercial Chemical Substances)
Ethane, pentafluoro- (354-33-6)	
Listed on the EEC inventory EINECS (European Inventory of	f Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP] No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD] No additional information available

#### National regulations

Difluoromethane (75-10-5)	
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Impor Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on NZIOC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)	

# **Dynatemp 410A**

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#### Ethane, pentafluoro- (354-33-6)

Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

#### 15.3. US State regulations

No additional information available

#### **SECTION 16: Other information**

Other information

: None.

#### Full text of H-phrases:

ſ	Compressed gas	Gases under pressure Compressed gas
- [	Liquefied gas	Gases under pressure Liquefied gas
	H280	Contains gas under pressure; may explode if heated

#### SDS US (GHS HazCom 2012)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Version: 1.1 Date of issue: 04/12/2016

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier 1.1. Product name

: CHOICE R-421A

: Refrigerant

1.2, And Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

1.3. Details of the supplier of the safety data sheet

Dynatemp International, Inc. 100 Sterling Parkway, Suite 111 Mechanicsburg, PA 17050 Phone: 1-800-791-9232, (outside the U.S.: +1-717-249-0157) Fax: 717-249-9043 www.Dynatempintl.com Email: info@dynatempintl.com

1.4. Emergency telephone number

Emergency number

: Contact Chemtrec at 800.424.9300 (24 hours)

#### SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

**Classification (GHS-US)** Liquefied gas H280

2.2. Label elements

#### **GHS-US** labeling

Hazard pictograms (GHS-US)



: Warning

Signal word (GHS-US) Hazard statements (GHS-US) Precautionary statements (GHS-US)

- : H280 Contains gas under pressure; may explode if heated
- : P410+P403 Protect from sunlight. Store in a well-ventilated place

#### 2.3. Other hazards

Non-fiammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphydation in confined spaces. At higher temperatures, (>250°C), decomposition products may include hydrofluoric acid (HF) and carbonyl halides such as phosgene. Rapid evaporation of the liquid may cause frostbite..

2.4. Unknown acute toxicity (GHS-US)

None of the ingredients are of unknown toxicity.

#### SECTION 3: Composition/information on ingredients

2. Mixture			
Name	Product identifier	%	Classification (GHS-US)
Ethane, pentafluoro-	(CAS No) 354-33-6	58	Liquefied gas, H280
1,1,1,2-Tetrafluoroethane	(CAS No) 811-97-2	42	Liquiefied gas, H280

#### Description of first aid measures. 4,1. : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice First-aid measures general (show the label where possible). : Allow victim to breathe fresh air. Allow the victim to rest. First-aid measures after inhalation

# CHOICE R-421A Safety Data Sheet

irst-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by
int aid measures offer and contract	warm water rinse. : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness
irst-aid measures after eye contact	persist.
irst-ald measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
	Notes to physician: Because of the possible disturbances of cardiac rhythm, catecholamine drugs such as epinephrine should be used with special caution and only insituations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.
2. Most important symptoms and	effects, both acute and delayed
ymptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
3. Indication of any immediate me to additional information available	dical attention and special treatment needed
SECTION 5: Firefighting measure	
.1. Extinguishing media	and the second state of th
uitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand. Use agent that is most appropriate for type of surrounding fire.
Insuitable extinguishing media	: Do not use a heavy water stream.
5.2. Special hazards arising from th	e substance or mixture
Cylinders are equipped with pressure and to	emperature relief devices but may still rupture under fire conditions. Decomposition may occur. This atures up to 100°C (212°F) at atmospheric pressure. However, mixtures of this substance with high ind/or temperature can become combustible in the presence of an ignition source.
5.3. Advice for firefighters	The state of the s
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
	: Do not enter fire area without proper protective equipment, including self-contained breathing
SECTION 6: Accidental release r 6.1. Personal precautions, protectiv	apparatus.
SECTION 6: Accidental release r 6.1. Personal precautions, protectiv 6.1.1. For non-emergency personnel Emergency procedures	apparatus. measures ve equipment and emergency procedures : Evacuate unnecessary personnel.
SECTION 6: Accidental release r 6.1. Personal precautions, protectiv 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders	apparatus.  measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures	apparatus. measures ve equipment and emergency procedures : Evacuate unnecessary personnel.
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions	apparatus.  measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.
SECTION 6: Accidental release r 6.1. Personal precautions, protectiv 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters.	apparatus.  measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters.
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for conta	apparatus.  measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters. ainment and cleaning up
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for contained Methods for cleaning up	apparatus.  measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters.
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for conta Methods for cleaning up 6.4. Reference to other sections	apparatus.
SECTION 6: Accidental release r         6.1.       Personal precautions, protective         6.1.1.       For non-emergency personnel         Emergency procedures       6.1.2.         6.1.2.       For emergency responders         Protective equipment       Emergency procedures         6.2.       Environmental precautions         Prevent entry to sewers and public waters.       6.3.         Methods and material for conta       Methods for cleaning up         6.4.       Reference to other sections         See Heading 8. Exposure controls and per	apparatus.  measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters.  ainment and cleaning up  : Store away from other materials.  sonal protection.
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for conta Methods for cleaning up 6.4. Reference to other sections See Heading 8. Exposure controls and per SECTION 7: Handling and stora	apparatus.  measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters.  ainment and cleaning up  : Store away from other materials.  sonal protection.  ge
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for conta Methods for cleaning up 6.4. Reference to other sections See Heading 8. Exposure controls and per SECTION 7: Handling and storag 7.1. Precautions for safe handling	apparatus.  Measures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters.  ainment and cleaning up  : Store away from other materials.  sonal protection.  ge  · Wash bands and other exposed areas with mild soap and water before eating, drinking or
SECTION 6: Accidental release r 6.1. Personal precautions, protective 6.1.1. For non-emergency personnel Emergency procedures 6.1.2. For emergency responders Protective equipment Emergency procedures 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for conta Methods for cleaning up 6.4. Reference to other sections See Heading 8. Exposure controls and per SECTION 7: Handling and storag 7.1. Precautions for safe handling Precautions for safe handling	apparatus.
SECTION 6: Accidental release r         6.1. Personal precautions, protective         6.1.1. For non-emergency personnel         Emergency procedures         6.1.2. For emergency responders         Protective equipment         Emergency procedures         6.2. Environmental precautions         Prevent entry to sewers and public waters.         6.3. Methods and material for contra         Methods for cleaning up         6.4. Reference to other sections         See Heading 8. Exposure controls and per         SECTION 7: Handling and storage         7.1. Precautions for safe handling         Precautions for safe storage, in	apparatus.  neasures re equipment and emergency procedures : Evacuate unnecessary personnel. : Equip cleanup crew with proper protection. : Ventilate area.  Notify authorities if liquid enters sewers or public waters. ainment and cleaning up : Store away from other materials.  sonal protection.  ge : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation o vapor.  cluding any incompatibilities : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.
SECTION 6: Accidental release r         6.1. Personal precautions, protective         6.1.1. For non-emergency personnel         Emergency procedures         6.1.2. For emergency responders         Protective equipment         Emergency procedures         6.2. Environmental precautions         Prevent entry to sewers and public waters.         6.3. Methods and material for contra         Methods for cleaning up         6.4. Reference to other sections         See Heading 8. Exposure controls and per         SECTION 7: Handling and storage         7.1. Precautions for safe handling         Precautions for safe storage, in         Storage conditions	apparatus.  neasures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters. ainment and cleaning up  : Store away from other materials.  sonal protection.  ge  : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation o vapor.  cluding any incompatibilities  : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.  : Strong bases, Strong acids.
SECTION 6: Accidental release r         6.1. Personal precautions, protective         6.1.1. For non-emergency personnel         Emergency procedures         6.1.2. For emergency responders         Protective equipment         Emergency procedures         6.2. Environmental precautions         Prevent entry to sewers and public waters.         6.3. Methods and material for contra         Methods for cleaning up         6.4. Reference to other sections         See Heading 8. Exposure controls and per         SECTION 7: Handling and storag         7.1. Precautions for safe handling         Precautions for safe storage, in         Storage conditions         Incompatible products	apparatus.
6.1.1. For non-emergency personnel         Emergency procedures         6.1.2. For emergency responders         Protective equipment         Emergency procedures         6.2. Environmental precautions         Prevent entry to sewers and public waters.         6.3. Methods and material for conta         Methods for cleaning up         6.4. Reference to other sections         See Heading 8. Exposure controls and per         SECTION 7: Handling and storage         7.1. Precautions for safe handling         Precautions for safe handling	apparatus.  neasures  re equipment and emergency procedures  : Evacuate unnecessary personnel.  : Equip cleanup crew with proper protection.  : Ventilate area.  Notify authorities if liquid enters sewers or public waters. ainment and cleaning up  : Store away from other materials.  sonal protection.  ge  : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation o vapor.  cluding any incompatibilities  : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.  : Strong bases, Strong acids.

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7.3. Specific end use(s)

No additional information available

# SECTION 8: Exposure controls/personal protection

Control parameters 8.1.

1,1,1,2-Tetrafluoroethane (8	11-97-2)	AND ENTRY ELECTION FREEMAN	
WEEL (AIHA)	Workplace Environmental Exposure Level (WEEL) Guide TWA (ppm)	1000 ppm	
Ethane, pentafluoro- (354-33	-6)	10 JUN 1 1 10 10 10 10 10 10 10 10 10 10 10 10	
WEEL (AIHA)	Workplace Environmental Exposure Level (WEEL) Guide TWA (ppm)	1000 ppm	
8.2. Exposure controls	A CONTRACTOR OF A CONTRACT OF	Contraction of the second s	
Personal protective equipment	.: Avoid all unnecessary exposure.		
Hand protection	: Wear protective gloves.		
Eye protection	: Chemical goggles or safety glasses.		
Respiratory protection	: Not required under normal condit approved respirator.	ions. If concentrations exceed exposure limits, use NIOSH	
Other information	: Do not eat, drink or smoke during	use.	
Engineering Controls		ecially in confined areas. Local exhaust should be used when chanical ventilation should be used in low or enclosed places.	

### **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and	chemical properties	the second se
Physical state	: Gas	
Appearance	: Clear, coloriess gas	
Color	: Clear	
Odor	: No data available	
Odor threshold	: No data available	
рН	: No data available	
Relative evaporation rate (butyl acetate=1)	: No data available	
Melting point	: No data available	
Freezing point	: No data available	
Boiling point	: -40.2 °C	
Flash point	: No data available	
Auto-Ignition temperature	: No data available	
Decomposition temperature	: No data available	
Flammability (solid, gas)	: No data available	
Vapor pressure at 21.1 °C	: 7,059 mm Hg	
Vapor pressure at 21.1 °C	: 9,411 hPa	
Relative vapor density at 20 °C	: No data available	
Relative density	: No data available	
Solubility	: Nil (in water)	
og Pow	: No data available	
og Kow	: No data available	
/iscosity, kinematic	: No data available	
/iscosity, dynamic	: No data available	
Explosive properties	: No data available	,
Oxidizing properties	: No data available	
Explosive limits	: No data available	
9.2. Other information	STREET, SPAIN SELECT	
VOC content	: 0 g/l	
Gas group	: Liquefied gas	
04/12/2016	EN (English US)	3/7

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SECTION 10: Stability a	d reactivity	
10.1. Reactivity		
Decomposes on heating		
10.2. Chemical stability		
Stable at normal temperatures	nd storage conditions	
10.3. Possibility of hazard	us reactions	
Not established.		
10.4. Conditions to avoid		
Direct sunlight. Extremely high	low temperatures.	
10.5. Incompatible materi	S. C. S.	1000
Strong acids. Strong bases.		
10.6. Hazardous decompo	ition products	1210
Halogens, halogen acids and pe	sibly carbonyl halides	
<b>SECTION 11: Toxicolog</b>	al information	
11.1. Information on toxic	logical effects	
Acute toxicity	: Not classified	
1,1,1,2-Tetrafluoroethane (8	-97-2)	

LC50 inhalation rat (mg/l)	
LCSO Inhalation rat (mg/l)	1500 g/m <sup>a</sup> (Exposure time: 4 h)
Ethane, pentafluoro- (354-33-6)	
LC50 inhalation rat (mg/l)	2910 g/m³ (Exposure time: 4 h)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
CarcInogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological infor	mation
12.1. Toxicity	THE REPORT OF THE STREET
No additional information available	
2.2. Persistence and degradabil	ty
CHOICE R-421A	2 Alen public and a second
Persistence and degradability	Not established.
1,1,1,2-Tetrafluoroethane (811-97-2)	
Persistence and degradability	Not established.
Ethane, pentafluoro- (354-33-6)	
Persistence and degradability	Not established.
2.3. Bioaccumulative potential	
CHOICE R-421A	
Bioaccumulative potential	Not established.

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Sister Circlinoroethane (811-97-2) Bioaccumulative potential	Not established.	
Ethano panalitico (554-5545)	Not established.	
Bioaccumulative potential	Not established.	
12.4. Mobility in soil		
No additional information available		
12.5. Other adverse effects	A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNE	
Other information	: Avoid release to the environment.	
SECTION 13: Disposal consideration		
3.1. Waste treatment methods Vaste disposal recommendations	I Disease in a sefer memory in assemble as with local, state and foderal new letters. O the decays	
	Dispose in a safe manner in accordance with local, state and federal regulations. Cylinder ca be re-used after re-conditioning. Recover, reclaim by distillation or remove to a permitted was disposal facility. Compty with applicable federal, state/provincial and local regulations. Empty pressure vessels should be returned to the supplier.	
Ecology - waste materials	: Avoid release to the environment.	
SECTION 14: Transport information		
n accordance with DOT		
ransport document description	: UN1078 Refrigerant gases, n.o.s., (1,1,1,2-tetrafluoroethane, pentafluoroethane) 2.2	
IN-No.(DOT)	: 1078	
DOT NA no.	: UN1078	
roper Shipping Name (DOT)	: Refrigerant gases, n.o.s.	
azard Classes (DOT)	: 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115	
azard labels (DOT)	: 2.2 - Non-flammable gas	
OT Symbols	: G - Identifies PSN requiring a technical name	
OT Special Provisions (49 CFR 172.102)	: T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.	
OT Packaging Exceptions (49 CFR 173.xxx)	: 306	
OT Packaging Non Bulk (49 CFR 173.xxx)	: 304	
OT Packaging Bulk (49 CFR 173.xxx)	: 314;315	
OT Quantity Limitations Passenger aircraft/rail 9 CFR 173.27)	: 75 kg	
OT Quantity Limitations Cargo aircraft only (49 FR 175.75)	: 150 kg	
OT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.	
DR		
o additonal information available		
ransport by sea		
o additional information available		
r transport		
o additional information available		
ECTION 15: Regulatory information		
5.1. US Federal regulations		
ભારાભારત્વયમ		
SARA Section 311/312 Hazard Classes	Sudden release of pressure hazard Immediate (acute) health hazard	

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Listed on the United States TSCA (Toxic Substances Control Act) invent	ory
Ethane, pentafluoro- (354-33-6)	
Listed on the United States TSCA (Toxic Substances Control Act) Invent	ory

#### CANADA

Listed on the Canadian DSL (Domestic S	Sustances List)
WHMIS Classification	Class A - Compressed Gas
Ethane, pentafluoro- (354-33-6)	
Listed on the Canadian DSL (Domestic S	Sustances List)
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

#### **EU-Regulations**

1,1,1,2-Tetrafluoroethane (811-97-2)	
Listed on the EEC inventory EINECS (European Inventory of Existing Co	mmercial Chemical Substances)
Ethane, pentafluoro- (354-33-6)	
Listed on the EEC inventory EINECS (European Inventory of Existing Co	mmercial Chemical Substances)

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

No additional information available

#### 15.2.2. National regulations

1,1,1,2-Tetrafluoroethane (811-97-2)	L De Maleinan M
Listed on the AICS (Australian Inventory of Chemical Substances)	
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)	
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory	
Listed on the Japanese ISHL (Industrial Safety and Health Law)	
Listed on the Korean ECL (Existing Chemicals List)	
Listed on NZIoC (New Zealand Inventory of Chemicals)	
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)	
Ethane, pentafluoro- (354-33-6)	
Listed on the AICS (Australian Inventory of Chemical Substances)	1
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)	
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory	
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory	

#### 15.3. US State regulations

No additional information available

### **SECTION 16: Other information**

Other information

: None.

Full text of H-phrases:

Compressed gas	Gases under pressure Compressed gas
Liquefied gas	Gases under pressure Liquefied gas
H280	Contains gas under pressure; may explode if heated

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SDS US (GHS HazCom 2012)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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# 98116 inpgs

# SAFETY DATA SHEET

#### 1. Identification

Material name: VULKEM 116 GRAY Material: 426712 323

#### Recommended use and restriction on use

**Recommended use: Sealant** Restrictions on use: Not known.

## Manufacturer/Importer/Supplier/Distributor Information

Tremco U.S Sealants 3735 Green Road Cleveland OH 44122 US

Contact person: **Telephone:** Emergency telephone number: EH&S Department 216-292-5000 1-800-424-9300 (US); 1-613-996-6666 (Canada)

#### 2. Hazard(s) identification

#### **Hazard Classification Health Hazards** Category 1 Respiratory sensitizer Category 1 Skin sensitizer Category 1B Germ Cell Mutagenicity Category 1A Carcinogenicity **Unknown toxicity - Health** 13.49 % Acute toxicity, oral 17.59 % Acute toxicity, dermal 94.66 % Acute toxicity, inhalation, vapor Acute toxicity, inhalation, dust or mist 99.96 % **Environmental Hazards** Category 1 Acute hazards to the aquatic environment Unknown toxicity - Environment Acute hazards to the aquatic 74.73 % environment Chronic hazards to the aquatic 100 % environment **Label Elements**

Hazard Symbol:



/	
Signal Word:	Danger
Hazard Statement:	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause genetic defects. May cause cancer. Very toxic to aquatic life.
Precautionary	
Statement: Prevention:	Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release
	to the environment.
Response:	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Specific treatment (see this label). Wash contaminated clothing before reuse. Collect spillage.
Storage:	Store locked up.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

## 3. Composition/information on ingredients

#### Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Calcium Carbonate (Limestone)	1317-65-3	10 - 30%
Heavy aromatic naphtha	64742-94-5	3 - 7%
Titanium dioxide	13463-67-7	3 - 7%
Aromatic petroleum distillates	64742-95-6	0.5 - 1.5%
4,4'-Methylene bis(phenylisocyanate)	101-68-8	0.5 - 1.5%
1,2,4-Trimethylbenzene	95-63-6	0.5 - 1.5%
Polymethylene polyphenyl isocyanate	9016-87-9	0.1 - 1%



Aluminum oxide	1344-28-1	0.1 - 1%		
1,3,5-Trimethylbenzene	108-67-8	0.1 - 1%		
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	0.1 - 1%		
Diphopylmethane dijsocyanate	26447-40-5	0.1 - 1%		
* All concentrations are percent	by weight unless i	ingredient is a gas. Gas concentrations are in percent by volume.		
First-aid measures				
ngestion:	Call a PO	Call a POISON CENTER/doctor//if you feel unwell. Rinse mouth.		
nhalation:	Call a phy provide ar oxygen.	Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.		
Skin Contact:	clean con shoes and	If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.		
Eye contact:	water. If e	rial that contacts the eye should be washed out immediately with pasy to do, remove contact lenses. If eye irritation persists: Get dvice/attention.		
lost important symptoms/eff	ects, acute an	d delayed		
Symptoms:	May caus	e skin and eye irritation.		
Symptoms: dication of immediate medica				
Symptoms: dication of immediate medica Treatment:	al attention an			
dication of immediate medica Treatment:	al attention an	d special treatment needed		
dication of immediate medica Treatment: . Fire-fighting measures	al attention an Symptom	d special treatment needed		
dication of immediate medica Treatment: . Fire-fighting measures General Fire Hazards:	I attention an Symptom No unusu	al fire or explosion hazards noted.		
dication of immediate medica Treatment: . Fire-fighting measures General Fire Hazards:	No unusu extinguish	al fire or explosion hazards noted.		
dication of immediate medica Treatment: Fire-fighting measures General Fire Hazards: Suitable (and unsuitable) Suitable extinguishing	No unusu extinguish	ad special treatment needed s may be delayed. al fire or explosion hazards noted. ing media		
dication of immediate medica Treatment: Fire-fighting measures General Fire Hazards: Suitable (and unsuitable) Suitable extinguishing media: Unsuitable extinguishing, media:	No unusu extinguish Use fire-e Do not us	ad special treatment needed s may be delayed. al fire or explosion hazards noted. ing media extinguishing media appropriate for surrounding materials.		
dication of immediate medica Treatment: Fire-fighting measures General Fire Hazards: Suitable (and unsuitable) Suitable extinguishing media: Unsuitable extinguishing, media: Specific hazards arising from the chemical:	No unusu extinguish Use fire-e Do not us During fire	ad special treatment needed s may be delayed. al fire or explosion hazards noted. hing media extinguishing media appropriate for surrounding materials. e water jet as an extinguisher, as this will spread the fire. e, gases hazardous to health may be formed.		
dication of immediate medica Treatment: . Fire-fighting measures General Fire Hazards: Suitable (and unsuitable) Suitable extinguishing media: Unsuitable extinguishing, media: Specific hazards arising from	No unusu extinguish Use fire-e Do not us During fire	ad special treatment needed s may be delayed. al fire or explosion hazards noted. hing media extinguishing media appropriate for surrounding materials. extinguishing media appropriate for surrounding materials. e, gases hazardous to health may be formed. ons for firefighters		



6. Accidental release measure	S
Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Methods and material for containment and cleaning up:	Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so.
7. Handling and storage	
Precautions for safe handling:	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.
Conditions for safe storage, including any incompatibilities:	Store locked up.

## 8. Exposure controls/personal protection

#### **Control Parameters**

**Occupational Exposure Limits** 

Chemical Identity	type	Exposure Limit Values	Source
Calcium Carbonate (Limestone) - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium Carbonate (Limestone) - Respirable fraction.	PEL.	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Heavy aromatic naphtha	PEL	100 ppm 400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Titanium dioxide	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Titanium dioxide - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)



4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	US. ACGIH Threshold Limit Values (2011)
bis(prenynsocyanato)	Ceiling	0.02 ppm 0.2 mg/m3	Contaminants (29 CFR 1910.1000) (02 2006)
1,2,4-Trimethylbenzene	TWA	25 ppm	US. ACGIH Threshold Limit Values (2011)
Polymethylene polyphenyl isocyanate	TWA	0.005 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceiling	0.02 ppm 0.2 mg/m	Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum oxide - Respirable fraction.	TWA	1 mg/m	3 US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m	3 US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum oxide - Total dust.	PEL	15 mg/m	Contaminants (29 CFR 1910.1000) (02 2006)
1,3,5-Trimethylbenzene	TWA	25 ppm	US. ACGIH Threshold Limit Values (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.02 mg/m	3 (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2. millions o particle per cub foot of a	of 1910.1000) (2000) s c ir
	TWA	0.1 mg/m	1910.1000) (2000)
Crystalline Silica (Quartz)/ Silica Sand - Total dust.	TWA	0.3 mg/m	3 US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)

Chemical name	type	Exposure Limit Values	Source
Diisodecyl phthalate TWAEV	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)	
Calcium Carbonate (Limestone) - Total dust.	STEL	20 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)



Calcium Carbonate (Limestone) - Respirable fraction.	TWA		3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium Carbonate (Limestone) - Total dust.	TWA		10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA		200 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWAEV		200 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Heavy aromatic naphtha	TWA	400 ppm	1,590 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011)
Titanium dioxide - Total dust.	TWA		10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA		3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWAEV	-	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Titanium dioxide - Total dust.	TWA		10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
4,4'-Methylene bis(phenylisocyanate)	CEILING	0.01 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97 as amended) (07 2007)
4,4'-Methylene bis(phenylisocyanate)	TWAEV	0.005 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	CEV	0.02 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

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4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
1,2,4-Trimethylbenzene	TWA .	25 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,2,4-Trimethylbenzene	TWAEV	25 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
1,2,4-Trimethylbenzene	TWA	25 ppm	123 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Polymethylene polyphenyl isocyanate	TWA	0.005 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Polymethylene polyphenyl isocyanate	TWAEV	0.005 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	CEV	0.02 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

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Polymethylene polyphenyl isocyanate	TWA	0.005 ppm	0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
1,3,5-Trimethylbenzene	TWA	25 ppm	-	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,3,5-Trimethylbenzene	TWAEV	25 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
1,3,5-Trimethylbenzene	TWA	25 ppm	123 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA		0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWAEV	T	0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	(	).1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls

Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information:	Use personal protective equipment as required.
Eye/face protection:	Wear goggles/face shield.
Skin Protection Hand Protection:	Use suitable protective gloves if risk of skin contact.
Other:	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin. 8/17



## 9. Physical and chemical properties

Appearance	
Physical state:	solid
Form:	Paste
Color:	Gray
Odor:	Mild
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	Slower than n-Butyl Acetate
Flammability (solid, gas):	No
Upper/lower limit on flammability or explo	osive limits
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.1334
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

## 10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.



1. Toxicological information		
	viay be ingected by the	
Innananon	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.	
Grant Contract	Causes mild skin irritation. May cause an allergic skin reaction.	
Eye contact:	Eye contact is possible and should be avoided.	
Information on toxicological effec	ts	
Acute toxicity (list all possible i	routes of exposure)	
Oral Product:	ATEmix: 41,691.2 mg/kg	
Dermal Product:	ATEmix: 8,468.09 mg/kg	
Inhalation Product:	No data available.	
Repeated dose toxicity Product:	No data available.	
Skin Corrosion/Irritation Product:	No data available.	
Serious Eye Damage/Eye Irritati Product:	on No data available.	
Specified substance(s): Heavy aromatic naphtha	in vivo (Rabbit, 24 - 72 hrs): Not irritating	
Titanium dioxide	in vivo (Rabbit, 24 - 72 hrs): Not irritating	
Aromatic petroleum distillates	in vivo (Rabbit, 24 - 72 hrs): Not irritating	
4,4'-Methylene bis(phenylisocyanate)	in vivo (Rabbit, 24 - 72 hrs): Not irritating	
1,2,4-Trimethylbenzene	e in vivo (Rabbit, 30 min): Not irritating	
Aluminum oxide,	in vivo (Rabbit, 24 hrs): Not irritating	
1,3,5-Trimethylbenzene	in vivo (Rabbit, 30 min): Not irritating	

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Respiratory or Skin Sensitization Product:	n May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization by inhalation.
Carcinogenicity Product:	No data available.
IARC Monographs on the Evalu	ation of Carcinogenic Risks to Humans:
Titanium dioxide	Overall evaluation: Possibly carcinogenic to humans.
Crystalline Silica (Quartz)/ Silica Sand	Overall evaluation: Carcinogenic to humans.
Crystalline Silica (Quartz)/ Silica Sand	
US. OSHA Specifically Regulat No carcinogenic cor	ed Substances (29 CFR 1910.1001-1050): nponents identified
Germ Cell Mutagenicity	
In vitro Product:	No data available.
In vivo Product:	No data available.
Reproductive toxicity Product:	No data available.
Specific Target Organ Toxicity Product:	No data available.
Specific Target Organ Toxicit Product:	y - Repeated Exposure No data available.
Aspiration Hazard Product:	No data available.
Other effects:	No data available.

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# 12. Ecological information

#### Ecotoxicity:

Acute hazards to the aquatic environment:

Fish Product:	No data available.
Specified substance(s): Titanium dioxide	LC 50 (Mummichog (Fundulus heteroclitus), 96 h): > 1,000 mg/l Mortality
1,2,4-Trimethylbenzene	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 7.19 - 8.28 mg/l Mortality
1,3,5-Trimethylbenzene	LC 50 (Goldfish (Carassius auratus), 96 h): 9.89 - 15.05 mg/l Mortality
Aquatic Invertebrates Product:	No data available.
Specified substance(s): Titanium dioxide	EC 50 (Water flea (Daphnia magna), 48 h): > 1,000 mg/l Intoxication
1,2,4-Trimethylbenzene	LC 50 (Scud (Elasmopus pectinicrus), 24 h): 4.89 - 5.62 mg/l Mortality
1,3,5-Trimethylbenzene	EC 50 (Water flea (Daphnia magna), 24 h): 50 mg/l Intoxication

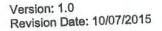
# Chronic hazards to the aquatic environment:

Fish Product:	No data available.
Specified substance(s): Heavy aromatic naphtha	NOAEL (Oncorhynchus mykiss, 28 d): 0.098 mg/l QSAR
Titanium dioxide	LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l experimental result
Aromatic petroleum distillates	NOAEL (Daphnia magria, 21 d): 2.6 mg/l read across
Aluminum oxide	NOAEL (Pimephales promelas, 28 d): 4.7 mg/l experimental result
Aquatic Invertebrates Product:	No data available.
Toxicity to Aquatic Plants Product:	No data available.
Persistence and Degradability	
Biodegradation Product:	No data available.

Product:

TREMCO.	Revision Date: 10/07/2015
BOD/COD Ratio Product:	No data available.
Bioaccumulative Potential Bioconcentration Factor (BC Product:	F) No data available.
Partition Coefficient n-octar Product:	ol / water (log Kow) No data available.
Mobility in Soil:	No data available.
Other Adverse Effects:	Very toxic to aquatic organisms.
13. Disposal considerations	
Disposal instructions:	Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Contaminated Packaging:	No data available.
14. Transport information	
TDG:	
Not Regulated	
CFR / DOT:	
Not Regulated	
IMDG:	
Not Regulated	
15. Regulatory information	
US Federal Regulations	
TSCA Section 12(b) Expor None present or	t Notification (40 CFR 707, Subpt. D) none present in regulated quantities.
US. OSHA Specifically Re	gulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.





# CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
4.4'-Methylene	5000 lbs.
bis(phenylisocyanate) Polymethylene	5000 lbs.
polyphenyl isocyanate 2,4-Toluene diisocyanate Cumene Naphthalene Xylene Toluene-2,6-Diisocyanate Ethylbenzene	100 lbs. 5000 lbs. 100 lbs. 100 lbs. 100 lbs. 1000 lbs.

# Superfund Amendments and Reauthorization Act of 1986 (SARA)

## Hazard categories

Delayed (Chronic) Health Hazard Immediate (Acute) Health Hazards

# SARA 302 Extremely Hazardous Substance

	Reportable	Threshold Planning Quantity
<u>Chemical Identity</u> 2,4-Toluene diisocyanate Toluene-2,6-Diisocyanate	<u>quantity</u> 100 lbs. 100 lbs.	500 lbs. 100 lbs.

#### SARA 304 Emergency Release Notification antity

Chemical Identity	Reportable qua
Diisodecyl phthalate 4.4'-Methylene	5000 lbs.
bis(phenylisocyanate) Polymethylene	5000 lbs.
polyphenyl isocyanate 2,4-Toluene dilsocyanate Cumene Naphthalene Xylene Toluene-2,6-Dilsocyanate Ethylbenzene Dilsodecyl phthalate (mixed ls)	100 lbs. 5000 lbs. 100 lbs. 100 lbs. 100 lbs. 1000 lbs.



SARA 311/312 Hazardous C	hemical
Chemical Identity	Threshold Planning Quantity
2,4-Toluene diisocyanate	500lbs
Toluene-2,6-Diisocyanate	100lbs
Calcium Carbonate	500 lbs
(Limestone)	
Heavy aromatic naphtha	500 lbs
Titanium dioxide	500 lbs
Aromatic petroleum	500 lbs
distillates	
4.4'-Methylene	500 lbs
bis(phenylisocyanate)	
1,2,4-Trimethylbenzene	500 lbs
Polymethylene polyphenyl	500 lbs
isocyanate	
Aluminum oxide	500 lbs
1,3,5-Trimethylbenzene	500 lbs
Crystalline Silica (Quartz)/	500 lbs
Silica Sand	
Diphenylmethane	500 lbs
diisocyanate	
ulisucyaliato	

## SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3) None present or none present in regulated quantities.

# Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

#### Reportable quantity Chemical Identity

Cheminal Monthly	and the second se
2,4-Toluene diisocyanate	10000 lbs
Toluene-2,6-Diisocyanate	10000 lbs

#### **US State Regulations**

#### **US. California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

# US. New Jersey Worker and Community Right-to-Know Act

#### **Chemical Identity**

Calcium Carbonate (Limestone) Heavy aromatic naphtha Titanium dioxide

## US. Massachusetts RTK - Substance List

#### **Chemical Identity**

Calcium Carbonate (Limestone) Heavy aromatic naphtha Titanium dioxide Crystalline Silica (Quartz)/ Silica Sand 2,4-Toluene diisocyanate Toluene-2,6-Diisocyanate



Version: 1.0 Revision Date: 10/07/2015

US. Pennsylvania RTK - Hazardov	us Substance	es
<u>Chemical Identity</u> Diisodecyl phthalate Calcium Carbonate (Limestone) Heavy aromatic naphtha Titanium dioxide		
US. Rhode Island RTK		
<u>Chemical Identity</u> Diisodecyl phthalate		
Other Regulations:		,
Regulatory VOC (less water and exempt solvent):	70 g/l	
VOC Method 310:	1.72 %	
Inventory Status:		o and a second sec
Australia AICS:		One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:		All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:		One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:		One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substance	ces:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):		One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:		One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:		One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:		All components in this product are listed on or exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.

exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.

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Japan ISHL Listing:

New Zealand Inventory of Chemicals:

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Version: 1.0 Revision Date: 10/07/2015

Japan Pharmacopoeia Listing:

One or more components in this product are not listed on or exempt from the Inventory.

### 16.Other information, including date of preparation or last revision

<b>Revision Date:</b>	10/07/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

AQ IIPASES carpro trading ltd.

### Safety Data Sheet

	Safety Data Sheet	
	according to Regulation (EC) No 1907/2006	AG Trons
Print date: 22,03.2016	Iron-X Product code:	Page 1 of 11
SECTION 1: Identificati	ion of the substance/mixture and of the company/undertaking	
1.1. Product identifier Iron-X		
1.2. Relevant identified u	ses of the substance or mixture and uses advised against	
Use of the substance/ Automotive care pr		
Uses advised against none		
1.3. Details of the supplie	er of the safety data sheet	
Company name: Street:	carpro trading ltd. 7, Lfigeneias 4th floor strovolos	
Place:	1687 Nicosia (CYPRUS)	
Responsible Departme	ent: +972 546 411 911	
1.4. Emergency telephon number:	e +972 546 411 911	and the second second
SECTION 2: Hazards in	dentification	and the second se
2.1. Classification of the	substance or mixture	
Acute toxicity: Acu Serious eye dama	ge/eye irritation: Eye Dam. 1 a sensitisation: Skin Sens. 1 s: o metals. ed. rgic skin reaction.	
2.2. Label elements		
Regulation (EC) No. 12	72/2008	
Hazard components a ammonium merca Alcohols, C10-16, piperonal	for labelling ptoacetate ethoxylated, sulfates, sodium salts	
Signal word:	Danger	
Pictograms:		
Hazard statements	•	
H290	May be corrosive to metals.	
H302	Harmful if swallowed.	
H317 H318	May cause an allergic skin reaction. Causes serious eye damage.	
Precautionary staten P101	If medical advice is needed, have product container or label at hand.	
P102	Keep out of reach of children.	

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### Safety Data Sheet

according to Regulation (EC) No 1907/2006

Iron-X Product code:	Page 2 of 11
Wear protective gloves/protective clothing/eye protection/face protection.	
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, it present and easy to do. Continue rinsing.	
Immediately call a POISON CENTER/doctor.	
If skin irritation or rash occurs: Get medical adviceration of the second a	
	Product code: Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. If skin irritation or rash occurs: Get medical advice/attention.

### 2.3. Other hazards

The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

### SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Chemical characterization aqueous solution

### Hazardous components

CAS No	Chemical name	Quantity		
CAUNO	EC No	Index No	REACH No	-
		g to Regulation (EC) No. 1272/2008	[CLP]	
5421-46-5	ammonium mercaptoacetate			25 - < 30 %
	226-540-9			
	Met. Corr. 1, Acute Tox	c. 3, Skin Sens. 1; H290 H301 H317		5 . 40.9/
68585-34-2	Alcohols, C10-16, etho	5 - < 10 %		
	500-223-8			
	Skin Irrit. 2, Eye Dam.	1; H315 H318		<1 %
120-57-0	piperonal	1 . 1	and the second	< 1 70
	204-409-7			
	Skin Sens. 1B; H317			

Full text of H and EUH statements: see section 16.

### Labelling for contents according to Regulation (EC) No 648/2004

5 % - 15 % anionic surfactants, perfumes.

### **Further Information**

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Remove contaminated, saturated clothing immediately.

### After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately. Apply cortisone spray at early stage.

### After contact with skin

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

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### Safety Data Sheet

according to Regulation (EC) No 1907/2006

according	to Regulation (EC) No 19072000	
	Iron-X	Page 3 of 11
Print date: 22.03.2016	Product code:	
rinsing. Consult an ophthalmologist.	Remove contact lenses, if present and easy to do. Continue	
O II a abusicion in 20V CASE!	e drunken in little sips (dilution effect). Do NOT induce vomiting.	
4.2. Most important symptoms and effects, both acu		
No information available. 4.3. Indication of any immediate medical attention a Treat symptomatically.	and special treatment needed	
SECTION 5: Firefighting measures		
5.1. Extinguishing media		
Suitable extinguishing media Carbon dioxide (CO2). Dry extinguishing powo	der. alcohol resistant foam. Atomized water.	
Unsuitable extinguishing media High power water jet.	mixture	
5.2. Special hazards arising from the substance or In case of fire may be liberated: Carbon mono (NOx). Ammonia (NH3)	<u>mixture</u> oxide Carbon dioxide (CO2). Sulphur oxides. Nitrogen oxides	
5.3. Advice for firefighters Wear a self-contained breathing apparatus ar In case of fire and/or explosion do not breathe		
Additional information Co-ordinate fire-fighting measures to the fire separately. Do not allow entering drains or su	surroundings. Collect contaminated fire extinguishing water	
SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equipment a Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Ave Wear personal protection equipment. (See High slip hazard because of leaking or spille	oid contact with skin, eyes and clothes. section 8.) d product.	
6.2. Environmental precautions Discharge into the environment must be avo barriers).	bided. Prevent spread over a wide area (e.g. by containment or c	bil
6.3. Methods and material for containment and c Absorb with liquid-binding material (e.g. san Treat the recovered material as prescribed i Clean contaminated articles and floor accor	in the section on waste disposal.	
6.4. Reference to other sections Safe handling: see section 7 Personal protection equipment: see section Disposal: see section-13		an a
SECTION 7: Handling and storage		and the second
7.1. Precautions for safe handling		
Advice on safe handling Provide adequate ventilation.	Davis	sion date: 22.03.201
	GB - EN	Name and a state of the state o

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### Safety Data Sheet

according to Regulation (EC) No 1907/2006

	Iron-X	
Print date: 22.03.2016	Product code:	Page 4 of 11
Wear suitable protective clothing. (	See section 8.)	
Advice on protection against fire and Usual measures for fire prevention.		
Further information on handling Avoid contact with skin, eyes and c General protection and hygiene me	lothes. asures: See section 8.	
7.2. Conditions for safe storage, includir	ng any incompatibilities	
Requirements for storage rooms and Keep container tightly closed in a c Keep/Store only in original container Unsuitable materials for Container:	ool, well-ventilated place. er.	
Advice on storage compatibility Do not store together with: Explosiv substances.	ves. Oxidizing solids. Oxidizing liquids. Radioactive sub	ostances. Infectious
Further information on storage condi Keep the packing dry and well seal Recommended storage temperatur Protect against: Light. UV-radiation	ed to prevent contamination and absorbtion of humidity e: 20°C	у.
7.3. Specific end use(s)		
refer to chapter 1.		

### SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

### 8.2. Exposure controls







### Appropriate engineering controls

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

### Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Take off contaminated clothing and wash it before reuse. Street clothing should be stored separately from work clothing. Contaminated work clothing should not be allowed out of the workplace.

### Eye/face protection

Tightly sealed safety glasses. DIN EN 166

### Hand protection

Pull-over gloves of rubber. Suitable material: Butyl rubber. (penetration time (maximum wearing period): >= 8 h):

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anding	to	Regulation	(EC) No	0	1907/2006
DRIMOSS	ю	Requiation	1		

	according to Regulation (EC)	No 1907/2006	
	Iron-X		Page 5 of 11
	Product code:		Tuge
rint date: 22.03.2016 Before using check leak tightness / in before taking off and air them well. The selected protective gloves have EN 374 derived from it.	npermeability. In the case of to satisfy the specifications of	wanting to use the gloves again, clean them FEU Directive 89/686/EEC and the standard	
Skin protection Suitable protective clothing: Lab apro Minimum standard for preventive me 500 (D).		orking materials are specified in the TRGS	
With correct and proper use, and un Respiratory protection necessary at Suitable respiratory protective equip The filter class must be suitable for that may arise when handling the pr must be used.	oment: Combination filtering d the maximum contaminant co roduct. If the concentration is	hing protection is nerved an evide exposure limit values levice (EN 14387) Type : A/P1-3 oncentration (gas/vapour/aerosol/particulates exceeded, self-contained breathing apparate	s) us
No special precautionary measures			
9.1. Information on basic physical and c	liquid		
Physical state:	colourless		
Colour.	characteristic	Test method	
Odour:		7,5	
pH-Value (at 20 °C):		1,0	
Changes in the physical state		not determined	
Melting point:		103 °C	
Initial boiling point and boiling range:		not determined	
Flash point:		No data available	
Sustaining combustion:		NO GAIA AVAILABIO	
Explosive properties			
none		not determined	
Lower explosion limits:		not determined	
Upper explosion limits:		not determined	
Ignition temperature:		not determined	
Decomposition temperature:			
Oxidizing properties			
none		not determined	
Vapour pressure:		not determined	
Density: Water solubility:		not determined	
Viscosity / dynamic:		not determined	
Viscosity / kinematic:		not determined	
		not determined	
Flow time:		not determined	
Vapour density:			

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according to Regulation (EC) No 1907/2006

Print date: 22.03.2016	Iron-X Product code:	Page 6 of 11
Solid content:	not determined	
SECTION 10: Stability and reactivity	and a second	1
10.1. Reactivity		
May be corrosive to metals.		
10.2. Chemical stability		
The product is chemically stable und	er recommended conditions of storage, use and temperature.	
10.3. Possibility of hazardous reactions		
No information available.		
10.4. Conditions to avoid Protect against: UV-radiation/sunligh	t. heat.	
10.5. Incompatible materials Materials to avoid: Reducing agent. (	Oxidizing agents. Strong acid	
10.6. Hazardous decomposition products In case of fire may be liberated: Carb (NOx). Ammonia (NH3)	oon monoxide Carbon dioxide (CO2). Sulphur oxides. Nitrogen o	Dxides
SECTION 11: Toxicological information	n	and the second
11.1. Information on toxicological effects		
Toxicocinetics, metabolism and distrib No data available.	ution	
Acute toxicity Harmful if swallowed.		
ATEmix calculated ATE (oral) 344,8 mg/kg		
CAS No Chemical name		

CAS No 5421-46-5	Chemical name						
	Exposure route	Dose		Species	Source		
	ammonium mercaptoacetate						
	oral	LD50 mg/kg	(35-142)	Rat. (OECD 402)	ECHA Dossier		
	dermal	LD50	> 1430 mg/kg	Rat. (OECD 402)	ECHA Dossier		

### Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

### Sensitising effects

May cause an allergic skin reaction. (ammonium mercaptoacetate), (piperonal)

### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Ammonium thioglycolate:

In-vitro mutagenicity: Ames test negative.

No evidence for: Carcinogenicity

Developmental toxicity/teratogenicity:

NOAEL = 15 mg/kg; maternal Tox. (OECD Guideline 414)

NOAEL = 75 mg/kg; delvelop. Tox. (OECD Guideline 414)

### STOT-single exposure

Based on available data, the classification criteria are not met.

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### Safety Data Sheet

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Iron-X				
Print date: 22.03.2016	Product code:	Page 7 of 11		
STOT-repeated exposure Based on available data, the classification	criteria are not met.			
Aspiration hazard				
Based on available data, the classification				
Specific effects in experiment on an animal No data available.				

### **SECTION 12: Ecological information**

### 12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	
5421-46-5	ammonium mercaptoace	tate			Charles Mill	Consider Manuals	
	Acute fish toxicity	LC50	>100 mg/l		Oncorhynchus mykiss (OECD 203)	ECHA Dossier	

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
5421-46-5	ammonium mercaptoacetate	-2,99 (pH = 7)

#### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Other adverse effects

No data available.

### **Further information**

Do not allow to enter into surface water or drains.

### **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

#### Advice on disposal

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled.

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to EAKV:

### Waste disposal number of waste from residues/unused products

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances Classified as hazardous waste.

#### Waste disposal number of used product

200129 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); detergents containing hazardous substances Classified as hazardous waste.

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### Safety Data Sheet

according to Regulation (EC) No 1907/2006

Iron-X				
Print date: 22.03.2016	Produ	ict code:	Page 8 of 11	
PROTECTI collected m hazardous Classified a Contaminated packaging	CKAGING; ABSORBENTS, WIPIN /E CLOTHING NOT OTHERWISE unicipal packaging waste); packag	SPECIFIED; packaging (includ ing containing residues of or cor	ing separately	
SECTION 14: Transport inf	ormation			
and transport (ADR/RID)				
14.1. UN number:	UN 1760			
14.2. UN proper shipping				
14.3. Transport hazard cla	ss(es): 8			
14.4. Packing group:	111			
Hazard label:	8			
Classification code: Special Provisions: Limited quantity:	C9 274 5 L			
Excepted quantity:	E1 3			
Transport category: Hazard No:	3 80			
Tunnel restriction code:	E			
nland waterways transport (	(DN)			
14.1. UN number:	UN 1760			
14.2. UN proper shipping	ame: CORROSIVE LIC (ammonium merc			
14.3. Transport hazard cla	ss(es): 8			
14.4. Packing group:	III			
Hazard label:	8			
Classification code:	C9			
Special Provisions:	274			
Limited quantity:	5 L			
Excepted quantity:	E1			
Marine transport (IMDG)				
14.1. UN number:	UN 1760			
14.2. UN proper shipping	(ammonium thiog			
14.3. Transport hazard cla				
14.4. Packing group:	111			
Hazard label:	8			

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according to Regulation (EC) No 1907/2006

	Iron-X	
Print date: 22.03.2016	Product code:	Page 9 of 1
	Â	
	8	
Marine pollutant:	NO	
Special Provisions:	223, 274	
Limited quantity:	5L	
Excepted quantity: EmS:	E1 F-A, S-B	
Air transport (ICAO)	F-74, 3-D	
	UN 1760	
<u>14.1. UN number:</u>		
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (ammonium thioglycolate)	
14.3. Transport hazard class(es):	8	
14.3. Transport hazard class(es): 14.4. Packing group:	8 	
Hazard label:	8	
	ð Á	
Special Draviaianay		
Special Provisions: Limited quantity Passenger:	A3 A803 1 L	
Passenger LQ:	Y841	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:	852	
IATA-max. quantity - Passenger:	5 L	
IATA-packing instructions - Cargo:	856	
IATA-max. quantity - Cargo:	60 L	
14.5. Environmental hazards		
ENVIRONMENTALLY HAZARDOUS:	no	
14.6. Special precautions for user No information available.		
14.7. Transport in bulk according to Annex	I of Marpol and the IBC Code	
No information available.	10 Jan 19 (19 (19 (19 (19 (19 (19 (19 (19 (19	
SECTION 15: Regulatory information		
15.1. Safety, health and environmental reg	ulations/legislation specific for the substance or mixture	
EU regulatory information		
2010/75/EU (VOC):	No information available.	
2004/42/EC (VOC):	No information available.	
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)	
Additional information		
The mixture is classified as hazardou REACH 1907/2006 Appendix XVII: 3	s according to regulation (EC) No 1272/2008 [CLP].	
National regulatory information		
Employment restrictions:	Observe restrictions to employment for juvenils according to the work protection guideline' (94/33/EC). Observe employment resume the Matemity Protection Directive (92/85/EEC) for expensional mothers.	estrictions

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Water contaminating of	class (D):		Page 10 of 11		
		3 - highly water contaminating			
15.2. Chemical safety as					
Chemical safety a	ssessments for s	ubstances in this mixture were not carried out.			
SECTION 16: Other in	formation	provide the second s	a nu raite a		
Changes					
Rev. 1.0; 25.06.20					
Rev. 1.1; 21.03.20	16, Changes in c	chapter: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.			
Abbreviations and ac	ronyms				
ADR: Accord euro	péen sur le trans	port des marchandises dangereuses par Route			
CAS Chemical Abs	stracts Service				
DNEL: Derived No					
		FOR RESEARCH ON CANCER			
International Carria					
		for Dangerous Goods			
IATA: International					
IAIA-DGR: Dange	rous Goods Regi	ulations by the "International Air Transport Association" (IATA)			
ICAO: Internationa		rganization the "International Civil Aviation Organization" (ICAO)			
GHS: Globally Har	monized System	of Classification and Labelling of Chemicals			
GefStoffV: Gefahr	stoffverordnung (	Ordinance on Hazardous Substances, Germany)			
LOAEL: Lowest ob					
		effect concentration			
LC50: Lethal conce					
LD50: Lethal dose,					
NOAEL: No observ		ct level			
NOAEC: No obser	ved adverse effe	ct level			
NTP: National Toxi	cology Program				
N/A: not applicable					
		I Transport of Dangerous Goods by Rail)			
PNEC: predicted n	o effect concentr	ation			
PBT: Persistent bid					
		mant le transport des marchandises dangereuses par chemin de			
		ernational Transport of Dangerous Goods by Rail)			
		Reauthorization Act			
SVHC: substance					
TRGS Technische					
TSCA: Toxic Subst VOC: Volatile Orga		4			
		sergefährdender Stoffe			
WGK: Wassergefäl					
Relevant H and EUH s	statements (num	ber and full text)			
H290		psive to metals.			
H301	Toxic if swall				
H302	Harmful if sw				
H315	Causes skin				
H317	Blass satisfies a	n allergic skin reaction.			

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of

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### Safety Data Sheet

according to Regulation (EC) No 1907/2006

	Iron-X	
Print date: 22.03.2016	Product code:	Page 11 of 11

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

99 (sheet steel)

1. Identification	
Product identifier	Galvanized Steel-Low C and HSLA Steel (Hot Dipped)
Other means of identification	·
Product code	TECHS 001
Synonyms	Steel
Recommended use	Construction Products, Finished Goods Components, Capital Goods Components.
<b>Recommended restrictions</b>	None known.
Manufacturer / Importer / Supp	lier / Distributor information
Manufacturer/Supplier Address	Steel Dynamics, Inc Flat Roll Group - The Techs Division 2400 Second Avenue Pittsburgh, PA 15219
Telephone number Fax E-mail Emergency telephone number	412-464-5000 412-464-2019 info@thetechs.com 412-464-5000
2. Hazard(s) identificatio	n
Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	None.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash skin with soap and water.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.

### 3. Composition/information on ingredients

Steel Dynamics® Flat Roll Group The Techs Division

**Mixtures** 

Chemical name	CAS number	%	
Iron	7439-89-6	80-99.5	
Zinc	7440-66-6	0.5-19.0	
Manganese	7439-96-5	0.0-1.35	
Nickel	7440-02-0	0-0.2	

The product is an alloy. At temperatures above the melting point steel products may liberate fumes containing oxides of iron and alloying elements.

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Product contains less than 0.004% cadmium and less than 0.01% lead, mercury, hexavalent chromium, antimony, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE). Some of these components are specifically regulated by OSHA.

4. First-aid measures	
Inhalation	In case of inhalation of fumes from heated product: Move into fresh air and keep at rest. Get medical attention if symptoms persist. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration.
Skin contact	Contact with dust: Wash skin with soap and water. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area. In case of burns with hot metal, rinse with plenty of cold water. If burns are severe, consult a physician.
Eye contact	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Do not rub eye. Get medical attention if irritation develops and persists.
Ingestion	Not likely, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.
Most important symptoms/effects, acute and delayed	Symptoms can include irritation, redness, scratching of the cornea, and tearing. Mechanical rubbing may increase skin irritation. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain.
General information	Processing may generate hazardous fumes and dusts.
5. Fire-fighting measures	
Suitable extinguishing media	This material will not burn. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None.
Specific hazards arising from the chemical	Metallic coating will begin to melt around 427°C (800°F) and the metal will begin to melt around 1510°C (2750°F). This product will proceed to a liquid and will form irritating and toxic gaseous metallic oxides at extremely high temperatures.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
6. Accidental release mea	sures
Personal precautions, protective equipment and emergency procedures	Cold solid metal: No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the SDS for additional personal protection advice when handling this product. I metal: Avoid contact with hot material. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid generation and spreading of dust and fumes.
Methods and materials for containment and cleaning up	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. Collect dust using a vacuum cleaner equipped with HEPA filter. Steel products may be recycled.
Environmental precautions	Metals in massive forms presents a limited hazard for the environment.
7. Handling and storage	
Precautions for safe handling	Avoid generation and spreading of dust. Do not breathe fumes or dust from this material. Avoid contact with sharp edges and hot surfaces. Use appropriate gloves and tools to ensure safe handling. Follow the recommendations in ANSI Z49.1, Safety in welding and cutting (ANSI=American National Standard Institute).
Conditions for safe storage, including any incompatibilities	Store in a dry area.
8. Exposure controls/pers	onal protection

Туре	Value	Form
Ceiling	5 mg/m3	Fume.
PEL	1 mg/m3	
Туре	Value	Form
TWA	0.1 mg/m3	Inhalable fraction.
	0.02 mg/m3	Respirable fraction.
TWA	1.5 mg/m3	Inhalable fraction.
	Celling PEL Type TWA	Ceiling 5 mg/m3 PEL 1 mg/m3 Type Value TWA 0.1 mg/m3 0.02 mg/m3

**US. NIOSH: Pocket Guide to Chemical Hazards** 

Components	Туре	Value	Form		
Manganese (CAS 7439-96-5)	STEL	3 mg/m3	Fume.		
	TWA	1 mg/m3	Fume.		
Nickel (CAS 7440-02-0)	TWA	0.015 mg/m3			
Biological limit values	No biological exposure limits noted t	for the ingredient(s).			
Appropriate engineering controls	Use local exhaust when welding, bu excessive dust or fume exposure. In Consult 29 CFR 1910 for other requ	organic lead and cadmium are	specifically regulated material.		
ndividual protection measure	s, such as personal protective equipm	nent			
Eye/face protection	Use of safety glasses or goggles is machining operations.	equired for welding, burning, s	awing, brazing, grinding or		
Skin protection					
Hand protection	Wear suitable protective gloves to prevent contact, cuts and abrasions.				
Other	Risk of contact: Wear suitable protective clothing.				
Respiratory protection	Not normally needed. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.				
Thermal hazards	When material is heated, wear gloves to protect against thermal burns. Thermally protective apro and long sleeves are recommended when volume of hot material is significant.				
General hygiene considerations	Always observe good personal hygio and before eating, drinking, and/or s equipment to remove contaminants.	moking. Routinely wash work			

Appearance	Massive, solid metal.	
Physical state	Solid.	
Form	Solid.	-
Color	Metallic gray.	
Odor	None.	
Odor threshold	Not applicable.	
pH	Not applicable.	
Melting point/freezing point	2751.8 °F (1511 °C) Base metal, 798.8 - 899.6 °F (426 - 482 °C) Metallic Coati	ng
Initial boiling point and boiling range	Not applicable.	
Flash point	Not applicable.	
Evaporation rate	Not applicable.	
Flammability (solid, gas)	Not applicable.	
Upper/lower flammability or exp	osive limits	
Flammability limit - lower (%)	Not applicable.	
Flammability limit - upper (%)	Not applicable.	
Explosive limit - lower (%)	Not applicable.	
Explosive limit - upper (%)	Not applicable.	
Vapor pressure	Not applicable.	
Vapor density	Not applicable.	
Relative density	Not available.	
Solubility(ies)		
Solubility (water)	Insoluble in water.	
Partition coefficient (n-octanol/water)	Not applicable.	
Auto-ignition temperature	Not applicable.	
Decomposition temperature	Not available.	
Viscosity	Not applicable.	

### 10. Stability and reactivity

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Contact with strong acids will release highly flammable hydrogen gas.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids.
Hazardous decomposition products	Metal oxides.

### 11. Toxicological information

Information on likely routes of	exposure
Ingestion	Solid steel: Not relevant, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.
Inhalation	No inhalation hazard under normal conditions. Welding, burning, sawing, brazing, grinding or machining operations may generate fumes and dusts of metal oxides. High concentrations of freshly formed fumes/dusts of metal oxides can produce symptoms of metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in the mouth, dryness, and irritation of the throat, followed by weakness, muscle pain, fever, and chills.
Skin contact	Under normal conditions of intended use, this material does not pose a risk to health. Dust may irritate skin. Contact with hot material can cause thermal burns which may result in permanent damage.
Eye contact	Under normal conditions of intended use, this material does not pose a risk to health. Contact with hot material can cause thermal burns which may result in permanent damage. Grinding and sanding this product may generate dust. Dust may irritate the eyes.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms include itching, burning, redness, and tearing of eyes. Mechanical irritation of skin. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain.

### Information on toxicological effects

Acute toxicity

Welding, cutting and metalizing can generate ozone. Ozone can cause irritation of eyes, nose and	
respiratory tract.	

Components	Species	Test Results
Iron (CAS 7439-89-6)		
Acute		
Oral		
LD50	Rat	30 g/kg
Manganese (CAS 7439-96-5)		
Acute		
Oral	- 23	0000
LD50	Rat	9000 mg/kg
Skin corrosion/irritation	Not classified.	·
Serious eye damage/eye Irritation	Not classified.	
Respiratory or skin sensitization	<b>1</b>	
<b>Respiratory</b> sensitization	No data available.	
Skin sensitization	Contains nickel: May cau	ise an allergic skin reaction.
Germ cell mutagenicity	'No data available.	
Carcinogenicity	For solid product: The pr	oduct is not classified as carcinogen.
IARC Monographs. Overall	Evaluation of Carcinogen	icity
Nickel (CAS 7440-02-0)		2B Possibly carcinogenic to humans.
NTP Report on Carcinogens	3	
Nickel (CAS 7440-02-0)		Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	No data available.	
Specific target organ toxicity - single exposure	Not classified.	:
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not applicable for solids.	
Chronic effects	diseases. Exposure to manganese	est over a long period of time increases the risk of developing lung fume/dust can affect the central nervous system (apathy, drowsiness, poil symptoms such as postural tremors).

The ingredients of the alloy are bound within the product and release is not expected under normal conditions. In its manufactured and shipped state, this product is considered non-hazardous. Processing may generate hazardous fumes and dusts.

Ecotoxicity	Not expected	d to be harmful to aquatic organisms.	
Components		Species	Test Results
Iron (CAS 7439-89-6)			
Aquatic			
Fish	LC50	Channel catfish (Ictalurus punctatus)	> 500 mg/l, 96 hours
Nickel (CAS 7440-02-0)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.916 mg/l, 96 hours
Zinc (CAS 7440-66-6)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.24 mg/l, 96 hours
Persistence and degradability	No data avai	lable.	
Bioaccumulative potential		lable on bioaccumulation.	
Mobility in soil	Not available		
Mobility in general		, due to the form of the product.	
Other adverse effects	None known		
13. Disposal consideration		te and residues in accordance with applicat	ale federal state, and local requisitions
Disposal instructions Hazardous waste code	Not regulate		איס ופעסומו, אמנס, מווע וטכמו ופטעומעטווג.
Hazardous waste code Waste from residues / unused	9	u. ommendations are based on material as su	nnlied Disposal must be in accordance
waste from residues / unused products	with current a	applicable laws and regulations, and materia i recycle, if practical.	
Contaminated packaging	Since emptie emptied.	ed containers may retain product residue, fo	llow label warnings even after containe
14. Transport information	1	· · · · · · · · · · · · · · · · · · ·	
DOT		and the second	
Not regulated as dangerous g	noods.		
IATA	30000.		
Not regulated as dangerous of	boods.		
MDG			
Not regulated as dangerous g	goods.		
Transport in bulk according to	Not applicab	le.	
Annex II of MARPOL 73/78 and			
the IBC Code			
15. Regulatory information			
JS federal regulations		use conditions, this material may be consid R 1910.1200.	ered to be hazardous in accordance wi
TSCA Section 12(b) Export	Notification (4	0 CFR 707, Subpt. D)	
Not regulated. US. OSHA Specifically Reg	ulated Substar	nces (29 CFR 1910.1001-1050)	
Not listed. CERCLA Hazardous Substa	ance List (40 C	FR 302.4)	
Manganese (CAS 7439-9	96-5)	LISTED	
Nickel (CAS 7440-02-0)		LISTED	
Zinc (CAS 7440-66-6)	authority of		
Superfund Amendments and Re		Act of 1986 (SARA) azard - No	
Hazard categories	Delayed Haz		

### SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No chemical

### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
Zinc	7440-66-6	0.5-19.0	
Manganese	7439-96-5	0.0-1.35	
Nickel	7440-02-0	0-0.2	
Other federal regulations			

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Manganese (CAS 7439-96-5)

Nickel (CAS 7440-02-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated. (SDWA)

### **US state regulations**

#### **US. Massachusetts RTK - Substance List**

Manganese (CAS 7439-96-5) Nickel (CAS 7440-02-0) Zinc (CAS 7440-66-6)

### US. New Jersey Worker and Community Right-to-Know Act

Manganese (CAS 7439-96-5) Nickel (CAS 7440-02-0) Zinc (CAS 7440-66-6)

### US. Pennsylvania Worker and Community Right-to-Know Law

Manganese (CAS 7439-96-5) Nickel (CAS 7440-02-0) Zinc (CAS 7440-66-6)

### **US. Rhode Island RTK**

Manganese (CAS 7439-96-5) Nickel (CAS 7440-02-0) Zinc (CAS 7440-66-6)

### **US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Nickel (CAS 7440-02-0)

### International Inventories

Country(s) or region Inventory name

#### United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

On inventory (yes/no)\* Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. Other information, including date of preparation or last revision

<b>Revision date</b>	June 11, 2015
Version #	02
NFPA Ratings	
Disciaimer	This information is provided without warranty. The information is believed to be correct. The

This information should be used to make an independent determination of the methods to safeguard workers and the environment. SDS's for specific coatings are available upon request.

SDS# Pro-Blue Date: October 2015

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### **Pro-Blue**<sup>™</sup>

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name: Pro-Blue** Catalog Number: Pro-Blue Manufactured by: DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA, 30097 Information Phone No.: 1+678.542.3600 EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies) PREPARED BY: V. Leone

### SECTION 2. HAZARDOUS INGREDIENTS INFORMATION

#### **GHS Classification:**

Skin Irritation Category 1B Eye Irritation Category 1

Label Elements:



Signal Word Danger!

Hazard Statement(s)

H314	Causes severe skin bums and eye damage.
H318	Causes serious eye damage.

#### Precautionary statement(s)

P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe mist or spray.

- P264 Wash thoroughly after handling.
- Wear rubber, neoprene or nitrile gloves and protective clothing, and safety goggle or a face shield to protect eyes and face. P280

#### Response

P301+330+33*	I IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353	3 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse SKIN with water or shower.
P363	Wash contaminated clothing before reuse.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338	B IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.

P405	Store locked up
P501	Dispose of contents and container to appropriate facility in accordance with Federal, State, and local regulations.

## Pro-Blue<sup>™</sup>

### SECTION 3. HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS No.	EINECS No.	% or Range	<b>GHS Classification</b>	
Water	7732-18-5	231-791-2	60-80	Not classified	
Sodium hydroxide	1310-73-2	215-185-5	15-20	H314: Skin Corrosion H318: Eye Damage H402: Aquatic Acute	Category 1A Category 1 Category 3
Sodium Carbonate	497-19-8	207-838-8	1-3	H315: Skin Irritant Cate	· ·
Sodium Gluconate	527-07-1	208-407-7	1-3	H319: Eye Irritant Cate H515: Skin Irritant Cate H319: Eve Irritant Cate	egory 3

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### **SECTION 4. FIRST AID MEASURES**

### 4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physiclan. Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately. Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes, lifting lower and upper evelids occasionally. Get medical attention immediately.

Note to Physician: Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, consider the use of therapeutic doses of steroids. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

#### 4.2. Signs and Symptoms of Exposure:

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

### **SECTION 5. FIREFIGHTING MEASURES**

#### Suitable and Unsuitable Extinguishing Media:

This product is not flammable. However, sodium hydroxide solutions can react with non-ferrous metals to generate flammable hydrogen gas. Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increase fire intensity.

#### Special Equipment and Precautions for Fire-Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment and clothing during clean-up.

Methods and Material for Containment and Clean-Up: Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, then neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. do not use aluminum tools to collect absorbed material or aluminum containers to store collected waste. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities (700 gallons) of this product. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Remove contaminated clothing immediately.

Chemical Emergency: P 800-255-3924 P 678.542.3600 F 678.542.3700

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### **SECTION 7. HANDLING AND STORAGE**

Precautions for Safe Handling: Keep in a tightly closed container. Protect from physical damaga. Keep this and all chemicals out of the reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapors and mists. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues. Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Observe all warnings and precautions listed for the product.

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### **SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Airborne Exposure Limits: Sodium Hydroxide: OSHA Permissible Exposure Limit (PEL): 15 mg/m3 Ceiling ACGIH Threshold Limit Value (TLV): 15 mg/m3 Ceiling

#### **Appropriate Engineering Controls:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <u>Industrial Ventilation. A Manual of Recommended Practices</u>, most recent edition, for details.

Personal Respirators: If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear rubber, neoprene, nitrile, Saranex® boots, gloves, lab coat, apron or coveralls, as necessary and appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.

Work Hyglenic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using the bathroom.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Blue liquid Odor: Odorless Odor Threshold: Not established pH @ 25°C: 14 Melting Point (Pour Point): <25°F Boiling Point: >200°F Flash Point: Not established Evaporation Rate (Water = 1): >1 Flammable Limits: Not established LEL: N/A UEL: N/A Vapor pressure (mm Hg): Same as water Vapor Density (Air = 1): Same as water Specific gravity (H2O = 1): 1.190 Solubility in water: Water miscible Octanol/Water Partition Coefficient: Not available Autoignition Temperature: Not available Decomposition Temperature: Not available

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### SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat, incompatibles.

Incompatible Materials: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitro methane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magneslum, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide.

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Hazardous Decomposition Products: Sodium oxide. Decomposition by reaction with non-ferrous metals releases flammable and explosive hydrogen gas.

### SECTION 11. TOXICOLOGICAL INFORMATION

**Potential Health Effects:** 

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe initiation, sneezing, sore throat or runny nose. Severe pneumonitis may occur. Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

Carcinogenic effects: Not classified

Teratogenicity/Reproductive toxicity: Not classified

Mutagenic effects: Not classified

Numerical Measures of Toxicity:

#### Sodium hydroxide (Irritation data): Skin, rabbit: 500 mg/24H severe; Eye rabbit: 50 ug/24H severe.

Sodium Carbonate (acute toxicity): Oral, LD50, rat: >2,000 mg/kg Inhalation, rat: 2.3 mg/l 2h (chronic toxicity):Inhalation, rat, target organ: lungs, 0.07 mg/l, observed effect. No effect on reproduction. Irritation: Rabbit, non-irritant (skin). Rabbit, irritant (eyes).

Sodium Gluconate: ivn-rbt LDLo: 7630 mg/kg

### SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Sodium hydroxide: Fish: Carp: 180ppm (LC100); 24H; Aquatic: This product is toxic to Aquatic Life. Toxicity is primarily associated with pH. Persistence and Degradability: Biodegradable Bioaccumulative Potential: No data available Mobility in Soil: No data available. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or imigation water supplies, lakes, streams, ponds, or rivers. Other Adverse Effects: None known Other: For more information, see <u>"HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."</u>

### **SECTION 13. DISPOSAL CONSIDERATIONS**

Dispose of spill clean- up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Treat empty containers as hazardous. Dispose of container and unused contents in accordance with federal, state and local requirements. RCRA Hazard Class (if discarded): CORROSIVE D002.

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### SECTION 14. TRANSPORTATION INFORMATION

US DOT: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII DOT Proper Shipping Name: Corrosive liquid, basic inorganic, N.O.S. (contains sodium hydroxide) **DOT Hazard Class: 8** UN Number: UN3266 Packing Group: II iMO: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII Limited Quantity: No Marine Pollutant: No ADR/RID Class: 8 ADR/RID Packing Group; il IMDG Hazard Class: 8 IMDG Packing Group: II ADNR Class: 8 ADNR Item: UN3266 IATA Hazard Class: 8 IATA Packing Group: II Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

### SECTION 15, REGULATORY INFORMATION

#### US EPA

**Comprehensive Environmental Response Compensation and Liability** 

Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds. Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

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Toxic Substances Control Act (TSCA) Status: The ingredients of this product is not listed on the TSCA inventory.

#### State Right to Know

California Proposition 65: This product does not contain any materials on the Proposition 65 List of Chemicals Known to Cause Cancer or Reproductive Toxicity. Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified.

Pennsylvania: Hazardous substances must be identified. California SCAQMD Rule 443.1 (VOC's): None

### **Chemical Inventory Status**

Canada Ingredient	TSCA	EC	Japan	Aust	ralia	Korea	DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes		Yes	Yes	No	Yes
Federal, State & International Regula	ations								
	SARA	302	SARA	313	TSCA	CER	RCLA 26	61.33 8(d)	
Ingredient	RQ TP	Q CI	hemical	RCRA	List -				

Sodium Hydroxide (1310-73-2)

1000 No No No No

**Chemical Weapons Convention: No** TSCA 12(b): No CDTA: No SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Mixture / Liquid) Australian Hazchem Code: 2R **Poison Schedule: S6** 

No

### WHMIS:

This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

## **Pro-Blue**<sup>™</sup>

### **SECTION 16. OTHER INFORMATION:**

Revision Summary: All Sections: New GHS Format SDS DATE REVISED: 10/09/2015

RCRA Hazard Class (if discarded): CORROSIVE D002.

HMIS III Ratings HMIS III®

Health	3
Physical Hazard	1
Personal Protection	1

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

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SDS# Pro-Blue Date: October 2015

UPAKES Total Pages: 6 CX pro blue

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### **Pro-Blue**<sup>™</sup>

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Pro-Blue Catalog Number: Pro-Blue Manufactured by: DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA, 30097 Information Phone No.: 1 +678.542.3600 EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies) PREPARED BY: V. Léone

### SECTION 2. HAZARDOUS INGREDIENTS INFORMATION

### **GHS Classification:**

Skin Irritation Category 1B Eye Irritation Category 1

Label Elements:



Signal Word Danger!

Hazard Statement(s)

H314	Causes severe skin burns and eye damage.
H318	Causes serious eve damage.

Precautionary statement(s)

P102	Keep out of reach of children.	
P103	Read label before use.	
P260	Do not breathe mist or spray.	

- P264 Wash thoroughly after handling.
- P280 Wear rubber, neoprene or nitrile gloves and protective clothing, and safety goggle or a face shield to protect eyes and face.

### Response

P301+330+331 IF SWALLOV	VED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (	or hair): Take off immediately all contaminated clothing. Rinse SKIN with water or shower.
	inated clothing before reuse.
P304+340 IF INHALED:	Remove person to fresh air and keep comfortable for breathing.
P305+351+338 IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately	call a POISON CENTER or doctor.

P405	Store locked up
P501	Dispose of contents and container to appropriate facility in accordance with Federal, State, and local regulations.

DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA 30097 Chemical Emergency: P 800-255-3924 P 678.542.3600 F 678.542.3700

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### SECTION 3. HAZARDOUS INGREDIENTS INFORMATION

					•
INGREDIENT	CAS No.	EINECS No.	% or Range	<b>GHS Classification</b>	
Water	7732-18-5	231-791-2	60-80	Not classified	
Sodium hydroxide	1310-73-2	215-185-5	15-20	H314: Skin Corrosion H318: Eye Damage H402: Aquatic Acute	Category 1A Category 1 Category 3
Sodium Carbonate	497-19-8	207-838-8	1-3	H315: Skin Irritant Cate H319: Eye Irritant Cate	
Sodium Gluconate	527-07-1	208-407-7	1-3	H515: Skin Irritant Cate H519: Eve Irritant Cate	egory 3

**DIVFRSI** 

### **SECTION 4. FIRST AID MEASURES**

### 4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately. Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician: Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, consider the use of therapeutic doses of steroids. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

#### 4.2. Signs and Symptoms of Exposure:

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severily of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe initation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

### **SECTION 5. FIREFIGHTING MEASURES**

#### Suitable and Unsuitable Extinguishing Media:

This product is not flammable. However, sodium hydroxide solutions can react with non-ferrous metals to generate flammable hydrogen gas. Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increase fire intensity.

#### Special Equipment and Precautions for Fire-Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment and clothing during clean-up.

Methods and Material for Containment and Clean-Up: Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, then neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. do not use aluminum tools to collect absorbed material or aluminum containers to store collected waste. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities (700 gallons) of this product. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Remove contaminated clothing immediately.

Chemical Emergency: P 800-255-3924 P 678.542.3600 F 678.542.3700

## Pro-Blue<sup>™</sup>

### **SECTION 7. HANDLING AND STORAGE**

Precautions for Safe Handling: Keep in a tightly closed container. Protect from physical damage. Keep this and all chemicals out of the reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapors and mists. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues. Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Observe all warnings and precautions listed for the product.

**NIVFRS** 

### **SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Airborne Exposure Limits: Sodium Hydroxide: OSHA Permissible Exposure Limit (PEL): 15 mg/m3 Ceiling ACGIH Threshold Limit Value (TLV): 15 mg/m3 Ceiling

#### **Appropriate Engineering Controls:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <u>Industrial Ventilation, A Manual of Recommended Practices</u>, most recent edition, for details.

Personal Respirators: If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear rubber, neoprene, nitrile, Saranex® boots, gloves, lab coat, apron or coveralls, as necessary and appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using the bathroom.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Blue liquid Odor: Odorless Odor Threshold: Not established pH @ 25°C: 14 Melting Point (Pour Point): <25°F Boiling Point: >200°F Flash Point: Not established Evaporation Rate (Water = 1): >1 Flammable Limits: Not established LEL: N/A UEL: N/A Vapor pressure (mm Hg): Same as water Vapor Density (Air = 1): Same as water Specific gravity (H2O = 1): 1.190 Solubility In water: Water miscible Octanol/Water Partition Coefficient: Not available Autoignition Temperature: Not available Decomposition Temperature: Not available

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### SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat, incompatibles.

Incompatible Materials: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitro methane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide.

Hazardous Decomposition Products: Sodium oxide. Decomposition by reaction with non-ferrous metals releases flammable and explosive hydrogen gas.

### SECTION 11. TOXICOLOGICAL INFORMATION

### **Potential Health Effects:**

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur. Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

Carcinogenic effects: Not classified

Teratogenicity/Reproductive toxicity: Not classified

Mutagenic effects: Not classified

Numerical Measures of Toxicity:

#### Sodium hydroxide (irritation data): Skin, rabbit: 500 mg/24H severe; Eye rabbit: 50 ug/24H severe.

Sodium Carbonate (acute toxicity): Oral, LD50, rat: >2,000 mg/kg Inhalation, rat: 2.3 mg/l 2h (chronic toxicity):Inhalation, rat, target organ: lungs, 0.07 mg/l, observed effect. No effect on reproduction. Irritation: Rabbit, non-irritant (skin). Rabbit, irritant (eyes).

Sodium Gluconate: ivn-rbt LDLo: 7630 mg/kg

### **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity: Sodium hydroxide: Fish: Carp: 180ppm (LC100); 24H; Aquatic: This product is toxic to Aquatic Life. Toxicity is primarily associated with pH. Persistence and Degradability: Biodegradable Bioaccumulative Potential: No data available Mobility in Soil: No data available. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers. Other Adverse Effects: None known Other: For more information, see <u>"HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."</u>

### SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of spill clean- up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Treat empty containers as hazardous. Dispose of container and unused contents in accordance with federal, state and local requirements. RCRA Hazard Class (if discarded): CORROSIVE D002.

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### SECTION 14. TRANSPORTATION INFORMATION

US DOT: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII DOT Proper Shipping Name: Corrosive liquid, basic inorganic, N.O.S. (contains sodium hydroxide) **DOT Hazard Class: 8** UN Number: UN3266 Packing Group: II IMO: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII Limited Quantity: No Marine Pollutant: No ADR/RID Class: 8 ADR/RID Packing Group: II **IMDG Hazard Class: 8** IMDG Packing Group: II ADNR Class: 8 ADNR Item: UN3266 IATA Hazard Class: 8 IATA Packing Group: II Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

### **SECTION 15. REGULATORY INFORMATION**

#### US EPA

Comprehensive Environmental Response Compensation and Liability

Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds. Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

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Toxic Substances Control Act (TSCA) Status: The ingredients of this product is not listed on the TSCA inventory.

State Right to Know

California Proposition 65: This product does not contain any materials on the Proposition 65 List of Chemicals Known to Cause Cancer or Reproductive Toxicity.

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified. Pennsylvanla: Hazardous substances must be identified. California SCAQMD Rule 443.1 (VOC's): None

### **Chemical Inventory Status**

Canada									
Ingredient	TSCA	EC	Japan	Aust	ralia	Korea	DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes		Yes	Yes	No	Yes
Federal, State & International Regulation	s								
	SARA	302	SARA	313	TSCA	CEI	RCLA 26	61.33 8(d)	
Ingredient	RQ TF	Q C	hemical	RCRA	List -				
Sodium Hydroxide (1310-73-2)	No I	No	No	1000	No	D N	0		

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

TSCA 12(b): No CDTA: No SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Mixture / Liquid) Australian Hazchem Code: 2R Poison Schedule: S6

#### WHMIS:

This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

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### **SECTION 16. OTHER INFORMATION:**

Revision Summary: All Sections: New GHS Format SDS DATE REVISED: 10/09/2015

RCRA Hazard Class (if discarded): CORROSIVE D002.

HMIS III Ratings HMIS III®

Health the state of the second and	3.00 +
Brock all a	
Physical Hazard	1.
Personal Protection	1

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

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SDS# Pro-Green Date: October 2015 SPASES Total Pages: 5 CV Ro Green

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### **Pro-Green**<sup>™</sup>

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Pro-Green Indoor Coil Cleaner Catalog Number: Pro-Green Manufactured by: DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA, 30097 Information Phone No.: 1+678.542.3600 EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies) PREPARED BY: V. Leone

### SECTION 2. HAZARDOUS IDENTIFICATION

**GHS Classification:** 

Skin Irritation Category 2 Eye Irritation Category 2A

Label Elements:



Signal Word Warning!

### Hazard Statement(s)

H315 Causes skin irritation. H319 Causes serious eye irritation.

Precautionary statement(s)

P102	Keep out of reach of children.
P103	Read label before use.
P264	Wash thoroughly after handling.
P280	Wear rubber, nitrile or neoprene protective gloves and clothing, and safety goggles or
	face shield to protect eyes and face.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P332 + 313	If skin irritation occurs: Get medical attention.
P362 + 364	Take off contaminated clothing and wash it before reuse.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313	If eye initiation persists: Get medical advice/attention.

### SECTION 3. HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS No.	EINECS No.	% or Range	<b>GHS Classification</b>	
Water	7732-18-5	231-791-2	60-80	Not classified	
Sodium silicate	1344-09-8	215-687-4	<1	H314: Causes severe skin burns and eye damage H335: May cause	Category 1B
				respiratory irrit.	
2-Butoxyethanol	111-76-2	203-905-0	1-5	H302: Harmful if swallowed	Category 4
				Che	emical Emergency: P 800-255-3924

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### SECTION 3. HAZARDOUS INGREDIENTS INFORMATION(cont.)

INGREDIENT	CAS No.	EINECS No.	% Or Range	<b>GHS Classification</b>	
				H312: Harmful in contact with skin	Category 4
				H315: Causes skin irri.	Category 2
				H319: Causes serious eye irritation	Category 2A
				H332: Harmful if inhaled	Category 4
Tetrasodium EDTA	64-02-8	200-573-9	< 1	H302: Harmful if swallowed	Category 4
				H318: Causes serious eve damage	Category 1

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### **SECTION 4. FIRST AID MEASURES**

#### 4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

ingestion: DO NOT INDUCE VOMITING! Give large quantities of water if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Wash with soap and water. Rinse with copious amounts of fresh, running water. If irritation persists, get medical attention.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

#### 4.2. Signs and Symptoms of Exposure:

Inhalation: Effects from inhalation of mists and vapors vary from mild to moderate irritation of the upper respiratory tract, depending on severity of exposure. Abusive or excessive inhalation of vapors may cause irritation to the upper respiratory tract, dizziness, nausea and other central nervous system effects.

Ingestion: Swallowing can cause gastro-intestinal irritation, nausea, vomiting, diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis. Minimal toxicity.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: May cause pain and moderate irritation of eyes.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the product.

### **SECTION 5. FIREFIGHTING MEASURES**

Suitable and Unsuitable Extinguishing Media:

This product is not flammable. Use dry chemical, carbon dioxide, foam or other media suitable for the primary source of the fire.

Special Equipment and Precautions for Fire-Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode. Cool fire-exposed containers with a water spray.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment and clothing during cleen-up.

Methods and Material for Containment and Clean-Up: Contain and absorb liquid with clay, vermiculite or other inert substance, sweep up and package in a container suitable for disposal. Wash away residues with water. Dispose of absorbed material in accordance with Federal, local and state regulations.

DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA 30097 Chemical Emergency: P 800-255-3924 P 678.542.3600 F 678.542.3700

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### SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep in a tightly closed container. Protect from physical damage. Keep this and all chemicals out of the reach of children. Wash thoroughly after handling.

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Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatible materials. Observe all warnings and precautions listed for the product. Observe all warnings and precautions listed for the product.

#### SECTION 8, EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits: 2-butoxyethanol: OSHA Permissible Exposure Limit (PEL): 50ppm (skin) ACGIH Threshold Limit Value (TLV): 20ppm

#### **Appropriate Engineering Controls:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <u>Industrial Ventilation. A Manual of Recommended Practices</u>, most recent edition, for details.

Personal Respirators (NIOSH Approved): Not required for normal use in accordance with label directions.

Skin Protection: Use rubber, neoprene or nitrile gloves to minimize skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. A source of running water or other eyewash provisions should be nearby.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using the bathroom.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Odor: **Odor Threshold:** pH @ 25°C: Melting Point (Pour Point) : **Boiling Point :** Flash Point: Evaporation Rate (Water = 1): Flammable Limits: LEL: UEL · Vapor pressure (mm Hg): Vapor Density (Air = 1): Specific gravity (H2O = 1): Solubility in water: Octanol/Water Partition Coefficient: Autoignition Temperature: Decomposition Temperature:

Mild glycol ether Not established >11 Not established > 220°F None >1 Not applicable N/A N/A Same as water Same as water 1.020 Water miscible Not available Not available Not available

Clear green liquid

### SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Incompatibles.

Incompatible Materials: Avoid contact with strong oxidizing agents, strong alkalis and strong acids

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Hydrogen sulfide, Sulfur Dioxide.

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Potential Health Effects:

Inhalation: Effects from inhalation of mists and vapors vary from mild to moderate irritation of the upper respiratory tract, depending on severity of exposure. Abusive or excessive inhalation of vapors may cause irritation to the upper respiratory tract, dizziness, nausea and other central nervous system effects.

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Ingestion: Swallowing can cause gastro-intestinal irritation, nausea, vomiting, diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis. Minimal toxicity.

Skin Contact: Frequent or prolonged contact may cause irritation.

Eye Contact: May cause pain and moderate irritation of eyes.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the product.

Carcinogenic effects: Not classified

Teratogenicity/Reproductive toxicity: Not classified

Mutagenic effects: Not classified

Numerical Measures of Toxicity: Not available

### **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity: Sodium hydroxide: Fish: Carp: 180ppm (LC100); 24H; Aquatic: Not available Persistence and Degradability: Blodegradable. Bioaccumulative Potential: No bioaccumulation potential based on available literature. Mobility in Soil: Final destination of reacted products is water. Readily adsorbed into soil. Other Adverse Effects: None known Other: For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

### SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of spill-clean up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved by recovery should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. Empty containers of this material, properly rinsed with water, pose no disposal hazard and may be recycled. State and local disposal regulations may differ from federal disposal regulations.

### SECTION 14. TRANSPORTATION INFORMATION

US DOT: Not classified as a shipping hazard International (Water, I.M.O.) Not classified a shipping hazard DOT Proper Shipping Name: Compound Cleaning Liquid, N.O.I. **DOT Hazard Class: None UN Number: None Packing Group: None** Limited Quantity: No Marine Pollutant: No ADR/RID Class: None ADR/RID Packing Group: None IMDG Hazard Class: None IMDG Packing Group: None **ADNR Class: None** ADNR Item: None **IATA Hazard Class: None** IATA Packing Group: None Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

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### **SECTION 15. REGULATORY INFORMATION**

Federal, State & International Regulations U.S. REGULATIONS: U.S. EPA:

**Comprehensive Environmental Response Compensation and Liability** 

Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds.

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Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

Toxic Substances Control Act (TSCA) Status: The ingredients of this product are on the TSCA inventory.

#### State Right to Know

California Proposition 65: Not subject to reporting requirements under Prop 65

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified. Pennsylvania: Hazardous substances must be identified.

California SCAQMD Rule 443.1 (VOC's): <2%

**Chemical Weapons Convention: No** TSCA 12(b): No CDTA: No SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Mixture / Liquid) Australian Hazchem Code: 2R **Poison Schedule: S6** 

#### WHMIS.

This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

CANADA INVENTORY (DSL/NDSL): All components of this product are listed on the DSL.

### **SECTION 16. OTHER INFORMATION:**

**Revision Summary: All Sections: New GHS Format** 

SDS Date revised: 10/09/2015

HMIS III Ratings HMIS III

Health	1
Physical Hazard	0
Personal Protection	В

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

SDS# Pro-Red+ Date: October 2015

DIVERSITECH Total Pages: 6 CL Pro Red

## Pro-Red+<sup>™</sup>

#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Pro-Red+ Coil Cleaner Catalog Number: Pro-Red+ Manufactured by: DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA, 30097 Information Phone No.: 1 +678.542.3600 EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies) PREPARED BY: V. Leone

#### SECTION 2. HAZARDOUS INGREDIENTS INFORMATION

**GHS Classification:** 

Skin Irritation Category 1B Eye Irritation Category 1

Label Elements:



Signal Word Dangerl

Hazard Statement(s)

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Precautionary statement(s)

- P102 Keep out of reach of children.
- P103 Read label before use.
- P260 Do not breathe mist or spray.
- P264 Wash thoroughly after handling.

P280 Wear rubber, neoprene or nitrile gloves and protective clothing, and safety goggle or a face shield to protect eyes and face.

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

- P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse SKIN with water or shower.
- P363 Wash contaminated clothing before reuse.
- P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor.
- P405 Store locked up.
- P501 Dispose of contents and container to appropriate facility in accordance with Federal, State, and local regulations.

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#### SECTION 3. HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS No.	EINECS No.	% or Range	<b>GHS Classification</b>	
Water	7732-18-5	231-791-2	85-95	Not classified	
Sodium hydroxide	1310-73-2	215-185-5	15-20	H314: Skin Corrosion H318: Eye Damage H402: Aquatic Acute	Category 1A Category 1 Category 3
Sodium Carbonate	497-19-8	207-838-8	1-3	H315: Skin Irritant H319: Eye Irritant	Category 2 Category 2A
Sodium Gluconate	527-07-1	208-407-7	1-3	H515: Skin Irritant H319: Eye Irritant	Category 3 Category 2B

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#### **SECTION 4. FIRST AID MEASURES**

#### 4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately. Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician: Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, consider the use of therapeutic doses of steroids. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

#### 4.2. Signs and Symptoms of Exposure:

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

#### **SECTION 5. FIREFIGHTING MEASURES**

#### Suitable and Unsuitable Extinguishing Media:

This product is not flammable. However, sodium hydroxide solutions can react with non-ferrous metals to generate flammable hydrogen gas. Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increase fire intensity.

#### Special Equipment and Precautions for Fire-Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment and clothing during clean-up.

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#### **SECTION 6. ACCIDENTAL RELEASE MEASURES (cont.)**

Methods and Material for Containment and Clean-Up: Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, then neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. do not use aluminum tools to collect absorbed material or aluminum containers to store collected waste. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities (700 gallons) of this product. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Remove contaminated clothing immediately.

#### SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep in a tightly closed container. Protect from physical damage. Keep this and all chemicals out of the reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapors and mists. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues. Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Observe all warnings and precautions listed for the product.

#### **SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Airborne Exposure Limits: Sodium Hydroxide: OSHA Permissible Exposure Limit (PEL): 15 mg/m3 Ceiling ACGIH Threshold Limit Value (TLV): 15 mg/m3 Ceiling

#### Appropriate Engineering Controls:

A system of local and/or general exhaust is recommended to keep employee exposures below the Alrborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <u>Industrial Ventilation. A Manual of Recommended Practices</u>, most recent edition, for details.

Personal Respirators: If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear rubber, neoprene, nitrile, Saranex® boots, gloves, lab coat, apron or coveralls, as necessary and appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using the bathroom.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark Red liquid Odor: Odorless Odor Threshold: Not established pH @ 25°C: 14 Metting Point (Pour Point): <25°F Boiling Point: >200°F Flash Point: Not established Evaporation Rate (Water = 1): >1 Flammable Limits: Not established LEL: N/A UEL: N/A Vapor pressure (mm Hg): Same as water Vapor Density (Alr = 1): Same as water Specific gravity (H2O = 1): 1.190 Solubility in water: Water miscible Octanol/Water Partition Coefficient: Not available Autoignition Temperature: Not available Decomposition Temperature: Not available

DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA 30097 Chemical Emergency: P 800-255-3924 P 678.542.3600 F 678.542.3700

## SALENY DATA SHEET

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#### SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat, incompatibles.

Incompatible Materials: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitro methane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide.

**NIVFRSI** 

Hazardous Decomposition Products: Sodium oxide. Decomposition by reaction with non-ferrous metals releases flammable and explosive hydrogen gas.

#### SECTION 11. TOXICOLOGICAL INFORMATION

#### **Potential Health Effects:**

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur. Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure. Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue. Carcinogenic effects: Not classified

Teratogenicity/Reproductive toxicity: Not classified

Mutagenic effects: Not classified

**Numerical Measures of Toxicity:** 

#### Sodium hydroxide (irritation data): Skin, rabbit: 500 mg/24H severe; Eye rabbit: 50 ug/24H severe.

Sodium Carbonate (acute toxicity): Oral, LD50, rat: >2,000 mg/kg Inhalation, rat: 2.3 mg/l 2h (chronic toxicity): Inhalation, rat, target organ: lungs, 0.07 mg/l, observed effect. No effect on reproduction. Irritation: Rabbit, non-imitant (skin). Rabbit, irritant (eyes).

Sodium Gluconate:

ivn-rbt LDLo: 7630 mg/kg

#### SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Sodium hydroxide: Fish: Carp: 180ppm (LC100); 24H; Aquatic: This product is toxic to Aquatic Life. Toxicity is primarily associated with pH. Persistence and Degradability: Biodegradable Bioaccumulative Potential: No data available Mobility in Soil: No data available. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers. Other Adverse Effects: None known Other: For more information, see <u>"HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."</u>

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

Dispose of spill clean- up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Treat empty containers as hazardous. Dispose of container and unused contents in accordance with federal, state and local requirements. RCRA Hazard Class (if discarded): CORROSIVE D002.

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#### **SECTION 14. TRANSPORTATION INFORMATION**

US DOT: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII DOT Proper Shipping Name: Corrosive liquid, basic inorganic, N.O.S. (contains sodium hydroxide) DOT Hazard Class: 8 UN Number: UN3266 Packing Group: II IMO: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII Limited Quantity: No Marine Pollutant: No ADR/RID Class: 8 ADR/RID Packing Group: [] **IMDG Hazard Class: 8** IMDG Packing Group: II ADNR Class: 8 ADNR Item: UN3266 IATA Hazard Class: 8 IATA Packing Group: II Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

#### SECTION 15. REGULATORY INFORMATION

#### **US EPA**

**Comprehensive Environmental Response Compensation and Liability** 

Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds. Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

DIVERSITECH

Toxic Substances Control Act (TSCA) Status: The ingredients of this product is not listed on the TSCA inventory.

#### State Right to Know

California Proposition 65: This product does not contain any materials on the Proposition 65 List of Chemicals Known to Cause Cancer or Reproductive Toxicity.

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified. Pennsylvania: Hazardous substances must be identified. California SCAQMD Rule 443.1 (VOC's): None

#### Chemical Inventory Status

Canada									
Ingredient	TSCA	EC	Japan	Aust	ralia	Korea	DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes		Yes	Yes	No	Yes
Federal, State & International Regulatio	ns								
	SARA	302	SARA	313	TSCA	CE	RCLA 26	51.33 8(d)	
Ingredient	RQ TF	PQ C	hemical	RCRA	List -				
Sodium Hydroxide (1310-73-2)	No I	No	No	1000	No		lo		

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Mixture / Liquid) Australian Hazchem Code: 2R Poison Schedule: S6

#### WHMIS:

This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

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#### **SECTION 16. OTHER INFORMATION:**

Revision Summary: All Sections: New GHS Format SDS DATE REVISED: 10/09/2015

HMIS III Ratings HMIS III®

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This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

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SDS# Pro-Yellow Date: October 2015

DIVERSITECH

6 PAKES Total Pages: 6 CK Pro yellow

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## **Pro-Yellow**<sup>™</sup>

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Pro-Yellow Catalog Number: Pro-Yellow Manufactured by: DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA, 30097 Information Phone No.: 1+678.542.3600 EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies) PREPARED BY: V. Leone

#### SECTION 2. HAZARDOUS INGREDIENTS INFORMATION

#### **GHS Classification:**

Skin Irritation Category 1B Eye Irritation Category 1

Label Elements:



Signal Word Danger!

#### Hazard Statement(s)

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

#### Precautionary statement(s)

P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe mist or spray.
P264	Wash thoroughly after handling.
P280	Wear rubber, neoprene or nitrile gloves and protective clothing, and safety goggle or a face shield to protect eyes and face.

#### Response

P301+330+33	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse SKIN with water or shower.
P363	Wash contaminated clothing before reuse.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338	B IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P405	Store locked up.
P501	Dispose of contents and container to appropriate facility in accordance with Federal, State, and local regulations.

## SALENY DAVA SHEET

## **Pro-Yellow**<sup>™</sup>

#### SECTION 3. HAZARDOUS INGREDIENTS INFORMATION

INGREDIENT	CAS No.	EINECS No.	% or Range	<b>GHS Classification</b>	
Water	7732-18-5	231-791-2	60-80	Not classified	
Sodium hydroxide	1310-73-2	215-185-5	15-20	H314: Skin Corrosion H318: Eye Damage H402: Aquatic Acute	Category 1A Category 1 Category 3

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#### **SECTION 4. FIRST AID MEASURES**

#### 4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately. Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician: Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, consider the use of therapeutic doses of steroids. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

#### 4.2. Signs and Symptoms of Exposure:

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe initiation, sneezing, sore throat or runny nose. Severe pneumonitis may occur. Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure. Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe imitation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

#### SECTION 5. FIREFIGHTING MEASURES

#### Suitable and Unsuitable Extinguishing Media:

This product is not flammable. However, sodium hydroxide solutions can react with non-ferrous metals to generate flammable hydrogen gas. Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increase fire intensity.

#### Special Equipment and Precautions for Fire-Fighters:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment and clothing during clean-up.

Methods and Material for Containment and Clean-Up: Contain and recover liquid when possible. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, then neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal. Do not use aluminum tools to collect absorbed material or aluminum containers to store collected waste. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities (700 gallons) of this product. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Remove contaminated clothing immediately.

**Pro-Yellow**<sup>\*\*</sup>

#### SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Keep in a tightly closed container. Protect from physical damage. Keep this and all chemicals out of the reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapors and mists. Wash thoroughly after handling.

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Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues. Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Observe all warnings and precautions listed for the product.

#### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits: Sodium Hydroxide:

OSHA Permissible Exposure Limit (PEL): 15 mg/m3 Ceiling ACGIH Threshold Limit Value (TLV): 15 mg/m3 Ceiling

Appropriate Engineering Controls:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation. A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators: If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear rubber, neoprene, nilinie, Saranex® boots, gloves, lab coat, apron or coveralls, as necessary and appropriate, to prevent skin contact. Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities or a source of running water in the work area.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using the bathroom.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Odor: **Odor Threshold:** pH @ 25°C: Metting Point (Pour Point) : **Boiling Point :** Flash Point: Evaporation Rate (Water = 1): Flammable Limits: LEL: UEL: Vapor pressure (mm Hg): Vapor Density (Air = 1): Specific gravity (H2O = 1): Solubility in water: **Octanol/Water Partition Coefficient:** Autoignition Temperature: Decomposition Temperature:

Odorless Not established 14 <25°F > 220°F Not established >1 Not established N/A N/A Same as water Same as water 1.150 Water miscible Not available Not available Not available

Yellow liquid

#### SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Will not occur. Conditions to Avoid: Extreme heat, incompatibles.

conditions to Avoid. Extreme near, incompatible:

Incompatible Materials: Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may cause violent reactions. Contact with nitro methane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium hydroxide, even in fairly dilute solution, reacts readily with various sugars to produce carbon monoxide.

Hazardous Decomposition Products: Sodium oxide. Decomposition by reaction with non-ferrous metals releases flammable and explosive hydrogen gas.

## SALENY DAVA SHEET

## **Pro-Yellow**<sup>™</sup>

#### SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Inhalation: Effects from inhalation of mist and spray may cause serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may vary from mild to severe irritation, sneezing, sore throat or runny nose. Severe pneumonitis may occur. Ingestion: Symptoms may include burns of mouth, throat, and stomach bleeding, vomiting, diarrhea, fall in blood pressure.

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Skin Contact: Contact with skin can cause redness, irritation or severe burns and scarring with greater exposures.

Eye Contact: Contact with mist, spray or liquid causes redness, severe irritation or burning in eyes. Prolonged exposures can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or mists has a destructive effect upon tissue.

Carcinogenic effects: Not classified

Teratogenicity/Reproductive toxicity: Not classified

Mutagenic effects: Not classified

Numerical Measures of Toxicity:

Sodium hydroxide (irritation data): Skin, rabbit: 500 mg/24H severe; Eye rabbit: 50 ug/24H severe.

Sodium Carbonate (acute toxicity): Oral, LD50, rat: >2,000 mg/kg Inhalation, rat: 2.3 mg/l 2h (chronic toxicity): Inhalation, rat, target organ: lungs, 0.07 mg/l, observed effect. No effect on reproduction. Irritation: Rabbit, non-irritant (skin). Rabbit, irritant (eves).

Sodium Gluconate: lvn-rbt LDLo: 7630 mg/kg

#### SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Sodium hydroxide: Fish: Carp: 180ppm (LC100); 24H; Aquatic: This product is toxic to Aquatic Life. Toxicity is primarily associated with pH. Persistence and Degradability: Biodegradable Bioaccumulative Potential: No data available Mobility in Soil: No data available. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers. Other Adverse Effects: None known Other: For more information, see <u>"HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."</u>

#### SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of spill clean- up and other wastes in accordance with Federal, State, and local regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Treat empty containers as hazardous. Dispose of container and unused contents in accordance with federal, state and local requirements. RCRA Hazard Class (if discarded): CORROSIVE D002.

#### SECTION 14. TRANSPORTATION INFORMATION

US DOT: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII DOT Proper Shipping Name: Corrosive liquid, basic inorganic, N.O.S. (contains sodium hydroxide) DOT Hazard Class: 8 UN Number: UN3266 Packing Group: II IMO: UN3266, Corrosive liquid, basic, inorganic, N.O.S. (contains sodium hydroxide), 8, PGII Limited Quantity: No Marine Pollutant: No ADR/RID Class: 8

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#### **SECTION 14. TRANSPORTATION INFORMATION (cont.)**

ADR/RID Packing Group: II IMDG Hazard Class: 8 IMDG Packing Group: II ADNR Class: 8 ADNR Item: UN3266 IATA Hazard Class: 8 IATA Packing Group: II Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

#### **SECTION 15. REGULATORY INFORMATION**

#### **US EPA**

**Comprehensive Environmental Response Compensation and Liability** 

Act of 1980 (CERCLA) requires notification of the National Response Center of release quantities of Hazardous Substances is not required for this material.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312) is not required for quantities below 250 pounds. Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This material is not subject to reporting requirements.

**UIVERSITECH** 

Toxic Substances Control Act (TSCA) Status: The ingredients of this product is not listed on the TSCA inventory.

#### State Right to Know

California Proposition 65: This product does not contain any materials on the Proposition 65 List of Chemicals Known to Cause Cancer or Reproductive Toxicity.

Massachusetts: Hazardous substances and extraordinarily hazardous substances must be identified. Pennsylvania: Hazardous substances must be identified. California SCAQMD Rule 443.1 (VOC's): None

#### Chemical Inventory Status

Canada									
Ingredient	TSCA	EC	Japan	Aust	tralia K	orea	DSL	NDSL	Phil.
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes	Y	35	Yes	No	Yes
Federal, State & International Regulation	S								
	SARA	302	SARA	313	TSCA	CE	RCLA 26	61.33 8(d)	
Ingredient	RQ		TPQ		Chemica	R	CRA	List -	
Sodium Hydroxide (1310-73-2)	No		No		No	1	000	No	

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: Yes (Mixture / Liquid) Australian Hazchern Code: 2R Poison Schedule: S6

#### WHMIS:

This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.

#### **SECTION 16. OTHER INFORMATION:**

Revision Summary: All Sections: New GHS Format

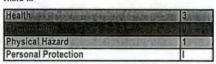
SDS DATE REVISED: 10/12/2015

RCRA Hazard Class (if discarded): CORROSIVE D002.

## **Pro-Yellow**<sup>™</sup>

**SECTION 16. OTHER INFORMATION (cont.)** 

HMIS III Ratings HMIS III®



This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

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SDS# VP68-01, VP68-32 Date: November 2015



CK VP68-VP68-32

DIVERSITECH

## Vacuum Pump Oil

#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Vacuum Pump Oil Catalog Number: VP68-01, VP68-32 Manufactured by: DiversiTech Corporation 6650 Sugarloaf Parkway Duluth, GA, 30097 Information Phone No.: 1+678.542.3600 EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies) PREPARED BY: V. Leone

### SECTION 2. HAZARDOUS IDENTIFICATION

#### **GHS Classification:**

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

5 P95

#### Label Elements:

The product does not require a hazard warning label in accordance with GHS criteria.

Hazard Statement(s)

No known significant effects or critical hazards.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS No.	EINECS No.	% or Range	GHS Classification
Hydrocarbon Petroleum	64742-65-0	265-169-7	100	Not Classified
Distillates, heavy				

Refined parrafinic oil

#### SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

Ingestion: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

Skin Contact: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the effected person should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.

Eye Contact: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention. 4.2. Signs and Symptoms of Exposure:

Inhalation: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

Ingestion: Low toxicity if swallowed.

Skin Contact: Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/ folliculitis.

Eye Contact: May cause slight irritation to eyes.

Other Information: High-pressure injection under the skin may cause serious damage including local necrosis. Used oil may contain harmful impurities. Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection. Ingestion may result in nausea, vomiting and/or diarrhea.

Aggravated Medical Condition: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.

## Vacuum Pump Oil

#### SECTION 5. FIREFIGHTING MEASURES

Suitable and Unsuitable Extinguishing Media:

Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray or firefighting foam.

#### Special Equipment and Precautions for Fire-Fighters:

Firefighters should wear NIOSH/MSHA-approved pressure-demand self-contained breathing apparatus with full face piece and full protective clothing. Isolate area around container involved in fire. Burning fluid may evolve irritating/noxious fumes, smoke carbon monoxide, and minor amounts of sulfur and nitrogen. Water may cause frothing or splattering when used as an extinguishing agent.

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#### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Avoid contact with spilled or released material. For guidance on selection of personal protective equipment. See <u>Exposure Controls/Personal Protection Section</u> of this MSDS. See <u>Disposal Considerations</u>. Section for information on disposal. Observe all relevant local and international regulations.

Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent.

Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

#### SECTION 7, HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with skin, eyes, and clothing. Keep this and all chemicals out of the reach of children.

Conditions for Safe Storage, Including any Incompatibilities: Store in a dry, cool, well-ventilated area. Empty containers retain residue and can be dangerous. All containers should be disposed of in an environmentally safe manner, and in accordance with all governmental regulations. Empty drums should be consigned to a licensed drum reconditioner. Storage Temperature: 0 - 50 °C / 32 - 122 °F.

Recommended Materials: For containers or container linings, use mild steel or high density polyethylene.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Limits:

White Mineral Oil: OSHA: 5 mg/m3, 8hr (oil mist) ACGIH: 10 mg/m3, 8hr (oil mist)

Appropriate Engineering Controls: Local exhaust is recommended when used in enclosed areas. Use in a well-ventilated area. If mist is being generated and exceeds the TLV, a respiratory program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed.

Skin Protection: Neoprene or nitrile gloves recommended to minimize skin contact. Other materials may be used if there is documented evidence of compatibility.

Eye Protection: Safety glasses (ANSI Z87.1) or approved equivalent.

Other Protective Clothing: Neoprene aprons, overshoes, oversleeves or other impervious clothing as necessary to minimize exposure.

Work Hyglenic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating, smoking or using the bathroom.

## Vacuum Pump Oil

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Light yellow liquid Odor: Petroleum oil odor Odor Threshold: Not established pH @ 25°C: Not applicable Melting Point (Pour Point): Not applicable Bolling Point: >260°C (176°F) Flash Point: 165°C (330°F) COC Freezing Point: Not applicable Evaporation Rate (Water = 1): >10 Flammable Limits: LEL: 0.9% by volume UEL: 7.0% by volume UEL: 7.0% by volume Vapor pressure (mm Hg): <0.01 mm Hg Vapor Density (Air = 1): <5 Viscosity: 6.76 mm 2/s @ 100 C Solubility in water: Insoluble in water Octanol/Water Partition Coefficient: Not available Autoignition Temperature: 224 C (COC) Decomposition Temperature: Not available

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#### SECTION 10. STABILITY AND REACTIVITY

**Chemical Stability: Stable** 

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Excessive heat; formation of oil mist

Incompatible Materials: Strong oxidizers, strong alkalis, strong acids, and compressed oxygen

Hazardous Decomposition Products: Analogous compounds evolve carbon monoxide, carbon dioxide, and other unidentified fragments when burned.

#### SECTION 11. TOXICOLOGICAL INFORMATION

**Potential Health Effects:** 

Inhalation: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

Ingestion: Not expected to be toxic.

Skin Contact: Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/ folliculitis.

Eye Contact: May cause slight irritation to eyes.

Other Information: High-pressure injection under the skin may cause serious damage including local necrosis. Used oil may contain harmful impurities. Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection. Ingestion may result in nausea, vomiting and/or diarrhea.

Aggravated Medical Condition: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.

Carcinogenic effects: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.

Teratogenicity/Reproductive toxicity: Not expected to be a hazard.

Mutagenic effects: Not considered a mutagenic hazard.

**Numerical Measures of Toxicity:** 

Acute Oral Toxicity: Not expected to be toxic: LD50 > 5000 mg/kg, Rat

Acute Dermal Toxicity: Not expected to be toxic: LD50 > 5000 mg/kg, Rabbit

Acute Inhalation Toxicity: Not considered to be an inhalation hazard under normal conditions of use.

## Vacuum Pump Oil

#### SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Aquatic: Not available.

Persistence and Degradability: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

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Bioaccumulative Potential: Contains components with the potential for bioaccumulation.

Mobility in Soil: Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile

Other Adverse Effects: Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone potential or global warming potential.

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste collection and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or water courses.

Container Disposal: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

#### **SECTION 14. TRANSPORTATION INFORMATION**

UN Number: None UN Proper Shipping Name: None Transport Hazard Class(es): Packing group: None Environmental Hazards: Not environmentally Hazardous Substance of Marine Pollutant ADR/RID Transport Information: Not dangerous for transport under ADR/RID, IMO and IATA/ICAO regulations. ADR/RID Class: None Allocated ADR/RID Packing Group: None Allocated IMDG Hazard Class: None Allocated IMDG Packing Group: None Allocated ADNR Class: None Allocated ADNR Class: None Allocated IATA Hazard Class: None Allocated IATA Hazard Class: None Allocated IATA Packing Group: None Allocated

#### SECTION 15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material. EINECS: Not listed. TSCA: Not listed. DSL: Not listed. SARA Hazard Categories (311/312/313) SARA 311/312: No Hazards. Section 313: Emissions and release reporting may be required for users of this product within the manufacturing sector. This does not apply to service companies. State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## Vacuum Pump Oil

#### **SECTION 16. OTHER INFORMATION:**

Revision Summary: All Sections: New GHS Format SDS DATE REVISED: 11/4/2015 NFPA/HMIS III Ratings: Health: 1 Flammability: 1 Reactivity: 0

Refer to NFPA 704 'Identification of the Fire Hazards of materials" for further information HMIS III®



This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

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HEALTH

FLAMMABILITY

PHYSICAL HAZARD

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OEM/Mechanical - CT10101-5

CertainTeed

### Safety Data Sheet

### Section 1: Identification

Product identifier	
Product Name	<ul> <li>OEM/Mechanical - CT10101-5</li> </ul>
Synonyms	<ul> <li>Commercial Blanket Insulation; HT Blanket; CertaPro<sup>™</sup> Board; Crimp Wrap<sup>™</sup>; Insulation for Flex Duct; Metal Building Insulation 202 -96; Canadian Metal Building Insulation; Soft Touch<sup>™</sup> Duct Wrap; Quickwrap Ductwrap; Marine Ductwrap; ToughGard® Duct Board; ToughGard® BMC Liner Board; ToughGard® R Duct Liner (1/2"); ToughGard® Rigid Liner Board; ToughGard® T Duct Liner; Ultra* Duct<sup>™</sup> Black Duct Board; ToughGard® Ultra*Round Spiral Duct Liner; Universal Blanket</li> </ul>
Product Code	. 30-36-045
Relevant identified use	es of the substance or mixture and uses advised against
Recommended use	Acoustical & Thermal Insulation
Details of the supplier	of the safety data sheet
Manufacturer	CertainTeed Corporation
	P.O. Box 860 Valley Forge, PA 19482-0101 United States www.certainteed.com CertainTeed - EHS@saint-gobain.com
	ral) 610-341-7000
Telephone (Technic	cal) 。(610) 341-7000 - 9 AM – 5 PM (Eastern Time – USA)
Telephone (Gene	ral) 。 (800) 274-8530 - Main Number
Emergency telephone	number
Manufacturer	• 800-527-3887
Manufacturer	• (800) 424-9300 - Chemtrec
Manufacturer	• (703) 527-3887 - Outside of the U.S. Chemtrec
Key to abbreviations	

Key to abbreviations

‡=HMIS is a registered trademark of the American Coatings Associati

## Section 2: Hazard Identification

#### United States (US) According to OSHA 29 CFR 1910.1200 HCS

### Classification of the substance or mixture

## • Carcinogenicity 2 - H351

Label elements

OSHA HCS 2012	
	WARNING
Hazard statements	<ul> <li>Suspected of causing cancer H351</li> </ul>
Precautionary statements	5
Prevention	<ul> <li>Obtain special instructions before use P201</li> <li>Do not handle until all safety precautions have been read and understood P202</li> <li>Wear protective gloves/protective clothing/eye protection/face protection P280</li> </ul>
Response	<ul> <li>IF exposed or concerned: Get medical advice/attention P308+P313</li> </ul>
Storage/Disposa	<ul> <li>Store locked up P405         Dispose of content and/or container in accordance with local, regional, national, and/or international regulations P501     </li> </ul>
Other hazards	
OSHA HCS 2012	<ul> <li>Under United States Regulations (29 CFR 1900.1200 - Hazard Communication Standard) this product is considered Hazardous.</li> </ul>
Canada According to WHMIS	
Classification of the sub	stance or mixture
WHMIS	Other Toxic Effects - D2A
Label elements WHMIS	$\overline{\mathbf{T}}$
	• Other Toxic Effects - D2A
Other hazards	
WHMIS	<ul> <li>In Canada, the product mentioned above is considered Hazardous under the Workplace Hazardous Materials Information System (WHMIS).</li> </ul>

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients

### Substances

Material does not meet the criteria of a substance.

### Mixtures

the state of the s	and stants	Hazardo	us Components	TO GO PALA LOID ME DAVARA	Thest
Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive	Comments
Glass, oxide, chemicals	CAS:65997- 17-3	60% TO 93%	NDA	OSHA HCS 2012: Data Lacking	See footnote "a"

Preparation Date: 26/July/2007 Revision Date: 04/June/2013

Phenol, polymer with formaldehyde	CAS:25104-	10% TO	Ingestion/Oral-Rat LD50 • 7 g/kg	OSHA HCS 2012: Data Lacking	See footnote "b"
and urea	55-6 NDA	30% 1% TO 5%	NDA	OSHA HCS 2012: Not Hazardous	See footnote "c"
Cured polymer adhesive	NDA	0% TO 5%	Ingestion/Oral-Rat	OSHA HCS 2012: Data Lacking	See footnote "d"
Acetic acid, vinyl ester, polymer		0% TO 5%	LD50 • >25 g/kg	OSHA HCS 2012: Data Lacking	See footnote "e"
Acrylic-based polymer	NDA CAS:1309-	0% TO 5%	Ingestion/Oral-Rat	OSHA HCS 2012: Carc 2; Eye Irrit 2B	See footnote
Antimony oxide (Sb2O3)	64-4	0% TO 5%	LD50 • >34 g/kg	OSHA HCS 2012: Data Lacking	See footnote "g"
Latex textile rubber polymer Poly(oxy-1,2-	NDA		NDA	OSHA HCS 2012: Data Lacking	See footnote
ethanediyloxycarbonyl-1,4- phenylenecarbonyl)	NDA	0% TO 5%	NDA	OSHA HCS 2012: Data Lacking	See footnote
Phenolic resin binder (cured)	NDA	< 25%	NDA		"i" See footnote
Hydrocarbon polymer	NDA	< 2%	NDA	OSHA HCS 2012: Data Lacking	njn
Carbon Black	CAS:1333- 86-4	< 0.04%	Ingestion/Oral-Rat LD50 • >15400 mg/kg	OSHA HCS 2012: Workplace exposure limit	See footnote "k"

#### Key to abbreviations

Contained in: Commercial Blanket Insulation; HT Blanket; CertaPro™ Board (Plain,FSK, ASJ, PSK); Crimp Wrap™ (ASJ, Foil Scrim); Insulation for Flex Duct; Metal Building Insulation 202-96; Canadian Metal Building Insulation; Soft Touch™ Duct Wrap (Plain, FSK, PSK); Quickwrap

Ductwrap; Marine Ductwrap; ToughGard® Rigid Liner Board; ToughGard® R Duct Liner (1/2"); Universal Blanket (Plain, FSK); ToughGard® Duct Board; ToughGard® T Duct Liner; ToughGard® Ultra\*Round Spiral Duct Liner; ToughGard® BMC Liner Board Contained in: Commercial Blanket Insulation; HT Blanket; CertaPro™ Board (Plain,FSK, ASJ, PSK); Crimp Wrap™ (ASJ, Foil Scrim); Insulation for Flex Duct; Metal Building Insulation 202-96; Canadian Metal Building Insulation; Soft Touch™ Duct Wrap (Plain, FSK, PSK); Quickwrap

Ductwrap; Marine Ductwrap; ToughGard® Rigid Liner Board; ToughGard® R Duct Liner (1/2"); b = Universal Blanket (Plain, FSK); ToughGard® Duct Board; ToughGard® T Duct Liner; ToughGard® Ultra\*Round Spiral Duct Liner; ToughGard® BMC Liner Board

c = Contained In: ToughGard® BMC Liner Board

Contained in: CertaPro™ Board(FSK, ASJ, PSK); ToughGard® Duct Board; ToughGard® d = Ultra\*Round Spiral Duct Liner

e = Contained in: ToughGard® R Duct Liner (1/2")

Contained in: CertaPro<sup>™</sup> Board (FSK, ASJ, PSK); Crimp Wrap<sup>™</sup> (ASJ); Soft Touch<sup>™</sup> Duct Wrap (FSK, PSK); Quickwrap Ductwrap (FSK); Marine Ductwrap (FSK); ToughGard Rigid Liner Board with f = Enhanced Surface; ToughGard® Rigid Liner Board; ToughGard® R Duct Liner (1/2"); Universal

Blanket (FSK); ToughGard® Duct Board; ToughGard® T Duct Liner; ToughGard® Ultra\*Round Spiral **Duct Liner** 

See Section 11 for Toxicological Information.

Section 4: First-Aid Measures

Preparation Date: 26/July/2007	WHMIS, OSHA HCS 2012
Eye	medical attention .     Do not rub or scratch your eyes. Immediately flush eyes with plenty of water for at     Format: GHS Language: English (US)
Skin	<ul> <li>After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of soap and water. If irritation develops and persists, get medical attention.</li> </ul>
Description of first aid	<ul> <li>Remove to fresh air immediately and notify medical percent percen</li></ul>

#### Contained in: ToughGard® T Duct g Liner

Contained in: CertaPro™ Board (ASJ); Crimp Wrap (ASJ);

- ToughGard® Duct Board; h = ToughGard® T Duct Liner;
- ToughGard® Ultra\*Round Spiral **Duct Liner**
- I = Contained in: ToughGard® T
- Contained in: ToughGard® BMC Liner Board
- Contained in: ToughGard® BMC k = Liner Board

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least 15 minutes and notify medical personnel and supervisor. If eye irritation persists: Get medical advice/attention.

Ingestion

 Consult a physician if unusual reaction is noted. Product is not intended nor is it likely to be ingested or eaten.

## Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

## Indication of any immediate medical attention and special treatment needed

Notes to Physician

 All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

-	-	and the film of	Manauran
Section	5: Fire	-Fighting	Measures

Extinguishing media	
Suitable Extinguishing Media	<ul> <li>Use any media suitable for the surrounding fires.</li> </ul>
Unsuitable Extinguishing Media	None known.
Special hazards arising	from the substance or mixture
Unusual Fire and Explosion Hazards	<ul> <li>Does not support combustion. These products contain a cured binder and various facings which contain retardant systems to reduce the possibility of fire. Use of plasma or other type of cutting tool may cause the release of toxic fumes and smoke. Facings on these products may burn. Do not leave facing exposed when working close to an open flame. If burned, the materials could release toxic fumes.</li> </ul>
Hazardous Combustion Products	<ul> <li>Does not support combustion. If burned, the materials could release toxic fumes and smoke. Combustion products may include oxides of carbon, sulfur and other potentially volatile organic compounds, oxides of arsenic, oxides of nitrogen, hydrogen chloride, antimony, bromide gas, hydrogen bromide, formaldehyde, and trace hydrogen cyanide.</li> </ul>
Advice for firefighters	
	<ul> <li>Fire fighters should avoid inhaling any combustion products.</li> <li>Fire fighters should wear full-face, self contained breathing apparatus and impervious protective clothing.</li> </ul>

### Section 6 - Accidental Release Measures

## Personal precautions, protective equipment and emergency procedures

Personal Precautions	<ul> <li>Avoid contact with skin and eyes during clean-up. Take proper precautions to minimize exposure by using appropriate personal protective equipment.</li> </ul>
<b>Emergency Procedures</b>	<ul> <li>Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed. Ventilate the contaminated area.</li> </ul>
Environmental precau	tions
	<ul> <li>Avoid run off to waterways and sewers.</li> </ul>
Methods and material	for containment and cleaning up
Containment/Clean-up	<ul> <li>Containment of this material should not be necessary. Remove sources of ignition.</li> </ul>

 Containment of this material should not be necessary. Remove sources of ignition Collect dust or particulates using a vacuum cleaner with a HEPA filter. Avoid the generation of dusts during clean-up.

### Section 7 - Handling and Storage

Measures

### Precautions for safe handling

Handling

Do not breathe dust from this material. Keep this product from heat, sparks, or open flame. Use this product with adequate ventilation. Always wash work clothes separately from other clothing. Wipe out the washer or sink to prevent loose glass fibers from getting on other clothing. Wash thoroughly after handling. Use personal protective equipment as described in Section 8. .

### Conditions for safe storage, including any incompatibilities Store in a dry place and under cover to protect product.

Storage

Hydrofluoric acid.

### Incompatible Materials or **Ignition Sources**

Section 8 - Exposure Controls/Personal Protection

### **Control parameters**

The second second	0	ne	Exposure Limits		Canada New	<b>Canada Northwest</b>
	Result	ACGIH	Canada British Columbia	Canada Manitoba	Brunswick	Territories
Antimony oxide Sb2O3) as	TWAs	sb) as Antimony	production, exposure by all routes should be carefully controlled to levels as low as possible	0.5 mg/m3 TWA (as Sb) as Antimony compounds	0.5 mg/m3 TWA (as Sb) as Antimony compounds	0.5 mg/m3 TWA (production, handling and use, as Sb)
Antimony compounds	STELs	compounds Not established	Not established	Not established	Not established	1.5 mg/m3 STEL (production, handling and use, as Sb)
Carbon Black	TWAs	3 mg/m3 TWA (inhalable fraction)	3 mg/m3 TWA (inhalable)	3 mg/m3 TWA (inhalable fraction)	3.5 mg/m3 TWA	3.5 mg/m3 TWA
(1333-86-4)	STELS	Not established	Not established	Not established	Not established	7 mg/m3 STEL
Glass, oxide, chemicals as Glass wool fiber	TWAs	1 fiber/cm3 TWA (respirable fibers: length >5 μm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination, listed under Synthetic vitreous fibers) as Glass wool fiber	1 fibre/cm3 TWA (fibres >5 µm, with an aspect ratio of >=3:1, as determined by the membrane filter method at 400- 450 times magnification (4 mm objective), using phase-contrast illumination, listed under Synthetic vitreous fibres) as Glass wool fiber	1 fiber/cm3 TWA (respirable fibers: length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination, listed under Synthetic vitreous fibers) as Glass wool fiber	1 fibre/cm3 TWA (fibres >5 μm with a diameter <3 μm, aspect ratio >5:1) as Glass wool fiber	3 fibre/cm3 TWA (with a diameter <=3.5 μm and a length >=10 μm); 5 mg/m3 TWA (total mass) as Glass wool fiber
	- 1 3	ST TOWNERS IN THE	xposure Limits/Gu	uidelines (Con't.)	L Canada Quahaa	Canada Yukon
	Resul	t Canada Nova Scoti	a Canada Nunavut	Canada Ontario	Canada Quebec	0.5 mg/m3 TWA (as
Antimony oxide	TWAs	0.5 mg/m3 TWA (as Sb) as Antimony compounds	0.5 mg/m3 TWA (production, handling and use, as Sb)	exposure by all routes should be carefully controlled to levels as low as possible	0.5 mg/m3 TWAEV (as Sb)	Sb) as Antimony compounds
(Sb2O3) as Antimony compounds		Compositor	1.5 mg/m3 STEL			0.75 mg/m3 STEL ( Sb)

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	STELs	Not establishe	ed	(production, handling and use, as Sb)	Not established	Not establish	ed	as Antimony compounds	
arbon Black	TWAs	3 mg/m3 TW/ (inhalable fra	(	3.5 mg/m3 TWA	3.5 mg/m3 TWA	3.5 mg/m3 T	WAEV	3.5 mg/m3 TWA	
1333-86-4)	OTTLA			7 mg/m3 STEL	Not established	Not establish	hed	7 mg/m3 STEL	
Glass, oxide, chemicals as Glass wool fiber	TWAs	1 fiber/cm3 TWA (respirable fibers: length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X		7 mg/m3 STEL       1 fibre/cm3 TWA         1 fibre/cm3 TWA       (length >5 µm, asperatio >=3:1, as determined by the membrane filter         3 fibre/cm3 TWA       membrane filter         (with a diameter       method at 400-450         <=3.5 µm and a		1 fibre/cm3 TWAEV (respirable, listed under Fibres - Artificial vitreous mineral fibres) as Glass wool fiber an s))		30 mppcf TWA; 10 mg/m3 TWA (respirable mass) as Glass wool fiber	
_		10 0.00		Exposure Limits/G	A REAL PROPERTY AND ADDRESS OF THE OWNER.	Ell wind		Street Street	
	1	Result		Mexico	NIOSH			OSHA	
Antimony oxide (Sb2O3) as Antimony compounds		TWAs	0.5 mg/ PPT (ha as Sb);	m3 TWA LMPE- andling and use, 1 mg/m3 TWA PT (production)	0.5 mg/m3 TWA (as Sb) as Antimony compounds		0.5 mg/n Sb) as Antin compou		
		STELS	STELS 7 mg/m3 STEL [LMPE- CT]		Not established	Not established		blished	
Carbon Black		/m3 TWA LMPE-	mg/m3 TWA (Carbo black in presence of			3.5 mg/m3 TWA			
Glass, oxide, chemicals		TWAs	Not es	tablished	3 fiber/cm3 TWA (fibers <= 3.5 µm ir diameter and >= 10 in length); 5 mg/m3 TWA (total)	) µm	Not est	ablished	
					as Glass wool fiber				

	<ul> <li>Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. Avoid spread of fiber glass dust.</li> </ul>
Personal Protective Equipment Respiratory	A properly fitted NIOSH approved in object to be defined with the properly fitted NIOSH approved in object to be defined with the properly fitted NIOSH approved in the provident of the properly fitted NIOSH approved in the provident of the properly fitted NIOSH approved in the provident of the properly fitted NIOSH approved in the provident of the properly fitted NIOSH approved in the provident of the provident
Eye/Face	<ul> <li>exceeds the occupational exposure ninte, or internet, or inte</li></ul>
Skin/Body	• Work clothing sufficient to prevent an skin contact ended Format: GHS Language: English (US) wHMIS, OSHA HCS 2012

	long sleeves and cap.	
General Industrial Hygiene Considerations	<ul> <li>Use good industrial hygiene wash fountains are recomm handling and before eating,</li> </ul>	practices in handling this material. Availability of eye ended. Wash thoroughly with soap and water after drinking, or using tobacco.
Controls engineered to prevent relea		management and disposal of waste. Controls should be se to the environment, including procedures to prevent and release to waterways.
Key to abbreviations		
STEL = Short Term Exposure Limits	are based on 15-minute exposures	ACGIH = American Conference of Governmental Industrial Hygiene
TWAEV = Time-Weighted Average Exp	oosure Value	NIOSH = National Institute of Occupational Safety and Health
TWA = Time-Weighted Averages are exposures	e based on 8h/day, 40h/week	OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

### Information on Physical and Chemical Properties

Physical Form	Solid	Appearance/Description	Yellow solid with a faint resin odor.
Color	Yellow or black.	Odor	Faint resin odor.
Odor Threshold	Data lacking		
General Properties		·	
Boiling Point	> 2550 F(> 1398.8889 C)	Melting Point	2550 F(1398.8889 C)
Decomposition Temperature	Data lacking	pН	Data lacking
Bulk Density	8 lb(s)/ft <sup>3</sup>	Water Solubility	Slightly Soluble
Viscosity	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking	*	
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

Section 10: Stability and Reactivity				
Reactivity				
	<ul> <li>No dangerous reaction known under conditions of normal use.</li> </ul>			
Chemical stability				
	<ul> <li>Stable under normal conditions of use.</li> </ul>			
Possibility of hazardou	us reactions			
	<ul> <li>Hazardous polymerization not indicated.</li> </ul>			
Conditions to avoid				
	<ul> <li>Keep away from heat, ignition sources and incompatible materials.</li> </ul>			
Preparation Date: 26/July/2007	Format: (			

### Incompatible materials

Hydrofluoric acid.

## Hazardous decomposition products

 Hazardous decomposition products may include oxides of carbon, sulfur and other potentially volatile organic compounds, oxides of arsenic, oxides of nitrogen, hydrogen chloride, antimony, bromide gas, hydrogen bromide, formaldehyde, and trace hydrogen cyanide.

## Section 11 - Toxicological Information

### Information on toxicological effects

	Component Name		Data				
henol, polymer with formaldehyde and urea (10% TO 30%)		25104-55-6	Acute Toxicity: Ingestion/Oral-Rat LD50 • 7 g/kg				
		9003-20-7	Acute Toxicity: ori-rat LD50:>25 gm/kg				
Acetic acid, vinyl ester, polymer (6% 10 6%) Antimony oxide (Sb2O3) (0% TO 5%)		1309-64-4	Acute Toxicity: orl-rat LD50:>34 gm/kg; Irritation: eye-rbt 100 mg MLD				
HS Properties	Classifica						
OSHA HC			ification criteria not met				
	OSHA HO	CS 2012 . Class	ification criteria not met				
Aspiration Hazard		CS 2012 • Carcinogenicity 2					
Acute toxicityOSHA HCSAspiration HazardOSHA HCSCarcinogenicityOSHA HCSGerm Cell MutagenicityOSHA HCSRespiratory sensitizationOSHA HCSSerious eye damage/IrritationOSHA HCSSkin corrosion/IrritationOSHA HCSOSHA HCSOSHA HCS		A HCS 2012 • Classification criteria not met A HCS 2012 • Classification criteria not met					
							enol, polymer with formaldehyde and urea (10% TO 30%) etic acid, vinyl ester, polymer (0% TO 5%) timony oxide (Sb2O3) (0% TO 5%) AS Properties ( sute toxicity ( spiration Hazard ( arcinogenicity erm Cell Mutagenicity espiratory sensitization erious eye damage/Irritation
Respiratory sensitization OS							
			sification criteria not met				
		SHA HCS 2012 • Classification criteria not met					
	OSHA H	CS 2012 . Clas	sification criteria not met				
	OSHA H	CS 2012 . Clas	sification criteria not met				
			sification criteria not met				
Toxicity for Reproduction							

Aggravated by Exposure Potential Health Effects

Chronic (Delayed)

Inhalation Acute (Immediate)

Temporary irritation of nose and throat may occur.

Temporary irritation of the skin may occur in some individuals.

 Use of these products has not been shown to cause cancer in humans. Fiber glass wool is a possible cancer hazard. Fiber glass wool has caused cancer in animals but has not produced cancer by inhalation in humans.

- Skin
- Acute (Immediate) Chronic (Delayed)

Eye

Acute (Immediate) Chronic (Delayed) Temporary irritation or redness may occur.

No data available.

No data available.

Ingestion Acute (Immediate) Chronic (Delayed) Carcinogenic Effects

- Ingestion of this product unlikely.
- No data available
  - This product contains antimony trioxide which may cause cancer based on sufficient animal data. This product contains glass wool insulation fibers. Following a thorough review of all the medical-scientific data available at a meeting in October 2001, the IARC panel lowered the classification for glass wool insulation fibers from a Group 2B classification ("possibly carcinogenic to humans") to a Group 3 classification ("not classifiable as to carcinogenicity to humans"). According to IARC, there is "no evidence of increased risks of lung cancer or of mesothelioma from occupational exposures during manufacturing of these materials, and inadequate evidence overall of any cancer risk." U.S., California and international authorities have all agreed that biosoluble and inhalable glass fibers should not be labeled as a possible cancer hazard. The U.S. National Toxicology Program ("NTP") and the California Office of Environmental Health Hazard Assessment ("OEHHA") actions mean that a cancer warning label for biosoluble fiber glass is no longer required under Federal or California Law.

A THE SHADDED	1120 61	Carcinogenic Effects	NTD
and the second second	CAS	IARC	NTP
Antimony oxide (Sb2O3)		Group 2B-Possible Carcinogen	Not established
Glass, oxide, chemicals		Group 3-Not Classifiable	Reasonably Anticipated to be Human Carcinoger
as Glass wool fiber			

Key to abbreviations

LD = Lethal Dose MLD = Mild

Section 12 - Ecological	Information
Toxicity	<ul> <li>Binder-coated fiber glass is hydrophobic, therefore, no adverse environmental effects would be expected if this product were accidentally released in the water or soil. No harm to fish or wildlife would be caused by this product.</li> </ul>
Persistence and degrad	<ul> <li>No information available for the product.</li> </ul>
Bioaccumulative potent	<ul> <li>No information available for the product.</li> </ul>
Mobility in Soil	• No information available for the product.
Other adverse effects Potential Environmental Effects	No environmental effects expected.

## Section 13 - Disposal Considerations

### Waste treatment methods

- Product waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

#### Packaging waste

 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
	NDA	Not Regulated	NDA	NDA	NDA
DOT			NDA	NDA	NDA
TDG	NDA	Not Regulated		NDA	NDA
ATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

Special precautions for user . None known.

Transport in bulk according • Not relevant. to Annex II of MARPOL 73/78 and the IBC Code

Section 15 - Regulatory Information

# Safety, health and environmental regulations/legislation specific for the substance or mixture SARA Hazard Classifications . Chronic

CONTRACTOR OF HERE	ALT ALL AND ALL	State Right	To Know	
Component	CAS	MA	NJ	PA
Glass, oxide, chemicals	65997-17-3	Yes	No	Yes
Phenol, polymer with formaldehyde and urea	25104-55-6	Ňo	No	No
Cured polymer adhesive	NDA	No	No	No
Acetic acid, vinyl ester, polymer	9003-20-7	No	No	No
Acrylic-based polymer	NDA .	No	No	No
			Yes	Yes
Antimony oxide (Sb2O3)	1309-64-4	Yes	Yes	Yes
Latex textile rubber polymer	NDA	No	No	No
Poly(oxy-1,2- ethanediyloxycarbonyl -1,4- phenylenecarbonyl)	25038-59-9	No	No	No
Phenolic resin binder (cured)	NDA	No	No	No
Hydrocarbon polymer	NDA	No	No	No
Carbon Black	1333-86-4	Yes	Yes	Yes

A MARTIN CONTRACTOR	2' *	Inven	tory	
Component	CAS	Canada DSL	Canada NDSL	TSCA
	65997-17-3	Yes	No	Yes
Phenol, polymer with formaldehyde and urea	25104-55-6	Yes	No	Yes
Cured polymer adhesive	NDA	No	. No	No
Acetic acid, vinyl ester, polymer	9003-20-7	Yes	No	Yes
Acrylic-based polymer	NDA	No	No	No
Antimony oxide (Sb2O3)	1309-64-4	Yes	No	Yes
Latex textile rubber polymer	NDA	No	No	No
Poly(oxy-1,2- ethanediyloxycarbonyl -1,4- phenylenecarbonyl)	25038-59-9	Yes	No	Yes
Phenolic resin binder (cured)	NDA	No	No	No
Hydrocarbon polymer	NDA	No	No	No
Carbon Black	1333-86-4	Yes	No	Yes

### Canada

		'	
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Uncontrolled product according to WHMIS classification criteria (listed under Glass wool); D2A (listed under Mineral wool fiber)
<ul> <li>Phenol, polymer with ormaldehyde and urea</li> </ul>	25104-55-6	10% TO 30%	Not Listed
<ul> <li>Poly(oxy-1,2- ethanediyloxycarbonyl-1,4- phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed
Carbon Black	1333-86-4	< 0.04%	D2A (In certain cases, this classification does not apply. For more information, consult the section Substance Specific Issues - Carbon Black non-respirable on Health Canada's WHMIS Division website.)
<ul> <li>Antimony oxide (Sb2O3)</li> </ul>	1309-64-4	0% TO 5%	D2A
<ul> <li>Antimony oxide (Sb2O3) as</li> <li>Antimony compounds</li> </ul>		0% TO 5%	Not Listed
<ul> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> </ul>		0% TO 5%	Not Listed
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed

Canada - WHMIS - Ingredient Disclosure List

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		0001 TO 0001	Might Links of	
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	1 %	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	1 %	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	1 %	
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	
Glass, Oxide, Orientouio				

## Environment Canada - 2004 NPRI (National Pollutant Release Inventory)

Glass, oxide, chemicals as Glass wool fiber	•	60% TO 93%	Not Listed
<ul> <li>Phenol, polymer with formaldehyde and urea</li> </ul>	25104-55-6	10% TO 30%	Not Listed
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed
Carbon Black	1333-86-4	< 0.04%	Not Listed
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed
Antimony oxide (ob200)     Antimony oxide (ob200)     Antimony compounds		0% TO 5%	Part 1, Group 1 Substance
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed
Antimony oxde (00200) do national process     Actetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed

### Canada - 2005 NPRI (National Pollutant Release Inventory)

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> </ul>	25104-55-6 ) 25038-59-9 1333-86-4 1309-64-4	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5%	
<ul> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	9003-20-7 65997-17-3	07010070	Not Listed

## Canada - CEPA - Greenhouse Gases Subject to Mandatory Reporting

• P • P • C • A • A	lass, oxide, chemicals as Glass wool fiber henol, polymer with formaldehyde and urea oly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl) arbon Black ntimony oxide (Sb2O3) ntimony oxide (Sb2O3) as Antimony compounds ntimony oxide (Sb2O3) as Antimony oxides cetic acid, vinyl ester, polymer	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed	
• A	cetic acid, vinyl ester, polymer ilass, oxide, chemicals	9003-20-7 65997-17-3	0% TO 5% 60% TO 93%		

Canada - CEPA - Priority Substances List

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
· Poly(oxy-1,2-Buildifeditioxyodibority 11,1 prostyterio	1333-86-4	< 0.04%	Not Listed	
Carbon Black	1309-64-4	0% TO 5%	Not Listed	
<ul> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> </ul>		0% TO 5%	Not Listed	
		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides	9003-20-7	0% TO 5%	Not Listed	
<ul> <li>Acetic acid, vinyl ester, polymer</li> </ul>	65997-17-3	60% TO 93%	Not Listed	
<ul> <li>Glass, oxide, chemicals</li> </ul>	00007-11-0	0070 10 0070		

### Canada British Columbia

anada - British Columbia - Ozone Depleting Substances				
Glass, oxide, chemicals as Glass wool fiber	•	60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	,
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	2
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

### Canada Manitoba

Glass, oxide, chemicals as Glass wool fiber		60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Action of the start of the star	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>	05404 55 0	60% TO 93% 10% TO 30%		
Phenol Dolymer will formation you and drou			NOL LISLEU	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	

<ul> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	9003-20-7 65997-17-3	0% TO 5%	Not Listed Not Listed Not Listed Not Listed	
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### Canada Nova Scotia

Environment Canada - Nova Scotia - Ozone Layer Protection Regulatio	ns	_	,	
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Actinony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7 65997-17-3	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5% 60% TO 93%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed	

### Canada Ontario

vironment Canada - Ontario - Airborne Contaminant Reporting - Tab	le 2A		
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vínyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7 65997-17-3	60% TO 93% 10% TO 30% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5% 60% TO 93%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed
Canada - Ontario - Airborne Contaminant Reporting - Tab	le 2B		
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5%	

Canada - Ontario - Ozone Depleting Substances and Other Halocarbons - Class 1 Substances

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Actic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7 65997-17-3	0% TO 5% 0% TO 5%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed	
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Canada - Ontario - Ozone Depleting Substances and Other Halocarbons - Class 2 Substances

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%		
Glass, oxide, chemicals as clace theory includes and unease the formal debude and unease thebude and unease the formal debude and unease the formal debude a	25104-55-6	10% TO 30%	Not Listed	
Phenol, polymer with formaldehyde and urea	25038-59-9	0% TO 5%	Not Listed	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	1333-86-4	< 0.04%	Not Listed	
Carbon Black	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3)	1000 01 1	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
<ul> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> </ul>	9003-20-7	0% TO 5%	Not Listed	
<ul> <li>Acetic acid, vinyl ester, polymer</li> </ul>			Not Listed	
<ul> <li>Glass, oxide, chemicals</li> </ul>	65997-17-3	00% 10 30%	HOT LIDIOU	

Canada - Ontario - Ozone Depleting Substances and Other Halocarbons - Halocarbons

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Actic acid, vinyl ester, polymer</li> </ul>	1333-86-4 1309-64-4 9003-20-7	0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed	
Acetic acid, vinyi ester, polyiner     Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

### Canada Yukon

vironment Canada - Yukon - Ozone Depleting Substances and Other			
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5%	

Preparation Date: 26/July/2007 Revision Date: 04/June/2013 Format: GHS Language: English (US) WHMIS, OSHA HCS 2012 · Glass, oxide, chemicals

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### Mexico Other -

Other Mexico - Hazard Classifications			
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> </ul>	25104-55-6	60% TO 93% 10% TO 30%	Not Listed
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	25038-59-9 1333-86-4 1309-64-4 9003-20-7 65997-17-3	0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5% 60% TO 93%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed
Mexico - Regulated Substances			
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5%	
<ul> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	9003-20-7 65997-17-3	0% TO 5% 0% TO 5% 0% TO 5% 60% TO 93%	Not Listed Not Listed Not Listed

### **United States**

abor U.S OSHA - Process Safety Management - Highly Haza	rdous Chemi	cals		
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Not Listed	
<ul> <li>Phenol, polymer with formaldehyde and urea</li> </ul>	25104-55-6	10% TO 30%	Not Listed	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

### U.S. - OSHA - Specifically Regulated Chemicals

· Glass, oxide, chemicals as Glass wool fiber

60% TO 93% Not Listed

#### OEM/Mechanical - CT10101-5

<ul> <li>Printol, polynel with formately to and dreat</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7 65997-17-3	10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5% 60% TO 93%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed
<ul> <li>Glass, oxide, chemicals</li> </ul>	65997-17-3	00% 10 93%	NUL LISLEU

#### Environment U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

#### (including mineral fiber emissions from facilities manufacturing or 60% TO 93% processing glass, rock, or slag fibers [or other mineral derived fibers] of Glass, oxide, chemicals as Glass wool fiber average diameter 1 µm or less) · Phenol, polymer with formaldehyde 25104-55-6 10% TO 30% Not Listed and urea · Poly(oxy-1,2-25038-59-9 0% TO 5% Not Listed ethanediyloxycarbonyl-1,4phenylenecarbonyl) Not Listed 1333-86-4 < 0.04% Carbon Black 0% TO 5% Not Listed 1309-64-4 Antimony oxide (Sb2O3) (including any unique chemical substance that contains Antimony as part · Antimony oxide (Sb2O3) as 0% TO 5% of its infrastructure) Antimony compounds Antimony oxide (Sb2O3) as Not Listed 0% TO 5% Antimony oxides Not Listed 0% TO 5% · Acetic acid, vinyl ester, polymer 9003-20-7 65997-17-3 60% TO 93% Not Listed · Glass, oxide, chemicals

### U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5%	
<ul> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	9003-20-7 65997-17-3	0% TO 5% 60% TO 93%	Not Listed

### U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> </ul>	25038-59-9 1333-86-4	60% TO 93% 10% TO 30% 0% TO 5% < 0.04%	Not Listed Not Listed Not Listed	
Carbon Black     Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	

OEM/Mechanical - CT10101-5

<ul> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	9003-20-7 0% T 65997-17-3 60%	O 5% Not Listed TO 93% Not Listed
	EDCPA	POs

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Phenol, polymer with formaldenyde and use	25104-55-6	< 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed
---	------------	---	--

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

	25104-55-6	0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed	

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Glass, oxide, chemicals as Glass wool fiber     With formeldebyde and urea	25104-55-6	60% TO 93% 10% TO 30%	Not Listed Not Listed	
<ul> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
phenylenecarbonyl) • Carbon Black • Antimony oxide (Sb2O3)	1000 00 .	0% TO 5%	Not Listed Not Listed 1.0 % de minimis concentration (Chemical Category	
<ul> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> </ul>		0% TO 5%	N010) Not Listed Not Listed	
<ul> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	9003-20-7 65997-17-3	0% TO 5% 60% TO 93%		

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

<ul> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25104-55-6	0% TO 5% < 0.04% 0% TO 5%	
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- Antimony oxide (Sb2O3) as Antimony oxides
- Acetic acid, vinyl ester, polymer
- · Glass, oxide, chemicals

## United States - California

Environment U.S. - California - Proposition 65 - Carcinogens List

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> </ul>	25104-55-6	60% TO 93% 10% TO 30%	carcinogen, initial date 7/1/90 (inhalable and biopersistent) Not Listed
<ul> <li>Phenol, polymer with formation yes and an analysis</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-</li> </ul>	25038-59-9		Not Listed
<ul><li>Phenylenecarbonyl)</li><li>Carbon Black</li></ul>	1333-86-4	< 0.04%	carcinogen, initial date 2/21/03 (airborne, unbound particles of respirable size)
	1309-64-4	0% TO 5%	carcinogen, initial date 10/1/90
<ul> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony</li> </ul>		0% TO 5%	Not Listed
compounds <ul> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> </ul>	9003-20-7 65997-17-3	0% TO 5% 0% TO 5% 60% TO 93%	Not Listed Not Listed Not Listed

9003-20-7

Not Listed

Not Listed

0% TO 5%

0% TO 5%

65997-17-3 60% TO 93% Not Listed

Glass, oxide, chemicals

U.S. - California - Proposition 65 - Developmental Toxicity

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Actetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7 65997-17-3	< 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed	
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U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> <li>Phenol, polymer with formaldehyde and urea</li> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> <li>Carbon Black</li> <li>Antimony oxide (Sb2O3)</li> <li>Antimony oxide (Sb2O3) as Antimony compounds</li> <li>Antimony oxide (Sb2O3) as Antimony oxides</li> <li>Acetic acid, vinyl ester, polymer</li> <li>Glass, oxide, chemicals</li> </ul>	25104-55-6 25038-59-9 1333-86-4 1309-64-4 9003-20-7 65997-17-3	60% TO 93% 10% TO 30% 0% TO 5% < 0.04% 0% TO 5% 0% TO 5% 0% TO 5% 0% TO 5% 60% TO 93%	Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed Not Listed	
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U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

OEM/Mechanical - CT10101-5

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
· Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
<ul> <li>Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)</li> </ul>	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	
Citerol stand strength				

## United States - Pennsylvania

			_	
Glass, oxide, chemicals as Glass wool fiber		60% TO 93%	Not Listed	
Phenol, polymer with formaldehyde and urea	25104-55-6	10% TO 30%	Not Listed	
Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)	25038-59-9	0% TO 5%	Not Listed	1
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%		
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%		
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed	
Acetic acid, vinyl ester, polymer	9003-20-7	0% TO 5%	Not Listed	
Glass; oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

### U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Not Listed	
<ul> <li>Phenol, polymer with formaldehyde and urea</li> </ul>	25104-55-6	10% TO 30%	Not Listed	
· Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)	25038-59-9	0% TO 5%	Not Listed	
Carbon Black	1333-86-4	< 0.04%	Not Listed	
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Not Listed	
Antimony oxide (Sb2O3) as Antimony oxides	· ,	0% TO 5%	Not Listed	
<ul> <li>Acetic acid, vinyl ester, polymer</li> </ul>	9003-20-7	0% TO 5%	Not Listed	
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed	

## **United States - Rhode Island**

Labor U.S Rhode Island - Hazardous Substance List			· ·
<ul> <li>Glass, oxide, chemicals as Glass wool fiber</li> </ul>		60% TO 93%	Toxic
<ul> <li>Phenol, polymer with formaldehyde and urea</li> </ul>	25104-55-6	10% TO 30%	Not Listed
· Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl)	25038-59-9	0% TO 5%	Not Listed
Carbon Black	1333-86-4	< 0.04%	Toxic
Antimony oxide (Sb2O3)	1309-64-4	0% TO 5%	Toxic
Antimony oxide (Sb2O3) as Antimony compounds		0% TO 5%	Toxic
Antimony oxide (Sb2O3) as Antimony oxides		0% TO 5%	Not Listed
<ul> <li>Acetic acid, vinyi ester, polymer</li> </ul>	9003-20-7	0% TO 5%	Not Listed
Glass, oxide, chemicals	65997-17-3	60% TO 93%	Not Listed

## Section 16 - Other Information

Last Revision Date

- 04/June/2013
- **Preparation Date**
- Disclaimer/Statement of Liability
- 26/July/2007
- Reasonable care has been taken in the preparation of this information, but the supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product.

Key to abbreviations NDA = No Data Available



DD WIT-	5	
HEALTH	1	1
FLAMMABILITY	0	6 PCG
REACTIVITY	0	15

## SAFETY DATA SHEET Prepared by Duro Dyne January 30, 2014

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade name: Product Identifier: Item #: Supplier Details: DURO DYNE WATER BASED ADHESIVE WIT-1, WIT-5, WIT-55 5056, 5057, 5058 DURO DYNE CORPORATION 81 Spence Street Bay Shore, NY 11706

Information Phone No: Emergency Phone No:

800-899-3876

800-424-9300 (CHEMTREC)

### 2. HAZARDS IDENTIFICATIONS

Emergency Overview: Physical State: Color: Odor: Relevant Routes of Exposure:

**CAUTION:** 

Potential Health Effects Inhalation:

**Skin Contact:** 

Eye Contact: Ingestion:

Existing Conditions Aggravated by Exposure:

Not classified as hazardous. Liquid White Slight Skin, Eyes, Inhalation

## MAY CAUSE SLIGHT EYE,SKIN, OR RESPIRATORY TRACT IRRITATION ON REPEATED CONTACT

Inhalation of vapors or mists of the product may be irritating to the respiratory system. Prolonged and/or repeated skin contact may result in mild irritation or redness. May cause slight irritation to eyes on contact.

May cause gastrointestinal tract irritation if swallowed. Not expected under normal conditions of use.

None known.

This material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200). See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components: CAS #: %:

4. FIRST-AID MEASURES

Inhalation:

**Skin Contact:** 

Eye Contact: -

Ingestion:

5. FIRE FIGHTING MEASURES

Flash Point: Auto ignition Temperature: Flammable/Explosive Limits-Lower: Flammable/Explosive Limits-Upper: Extinguishing Media:

**Special Fire Fighting Procedures:** 

**Unusual Fire and Explosion Hazards:** 

**Hazardous Combustion Products:** 

#### 6. ACCIDENTAL RELEASE MEASURE

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

None None None

Move to fresh air. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention. Wash with soap and water. If symptoms develop and persist, get medical attention.

If irritation develops, flush eye immediately with large amounts of water. If irritation persists, seek medical attention or advice.

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting. If symptoms develop and persist, get medical attention. Never give anything by mouth to an unconscious person.

>100.00°C (>212°F) Closed cup Not applicable Not applicable

Not applicable

Use extinguishing measures appropriate to local circumstances and the surrounding environment. Water spray or fog. Foam. Carbon dioxide. Dry chemical. Fire fighters should wear full-face; self- contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a moderate fire hazard. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. **Environmental Precautions:** 

**Clean Up Methods:** 

## No special environmental precautions required. Do not allow material to contaminate ground water system. Take up with liquid-absorbing material (sand). Wash spillage site thoroughly with soap and water or detergent solution. Dispose of according to Federal, State and local government regulations.

### 7. HANDLING AND STORAGE

Handling:

Storage:

Avoid extreme temperatures. Protect from freezing. This material should not be spilled, discharged, or flushed into sewers or public waterways. Product contains low level of organic volatiles, which could accumulate in the unvented headspace of drums of bulk storage vessels. Open drums in well ventilated area. Avoid breathing vapors. Do not wear contact lenses. For safe storage, store between 1.0°C (33.8°F) and 37°C (98.6°F). Below temperature, limit the product will be irreversibly damaged and no longer usable. Above temperature, limit the product properties change. For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

ГНЕР	(	AIHA WEEL	OSHA PEL	ACGIH TLV	HAZARDOUS COMPONENTS
None		None	None	None	None
1	-	None	None	None	None

**Engineering Controls:** 

**Respiratory Protection:** 

Handle in accordance with good industrial hygiene and safety practice. General room ventilation is usually adequate.

Under normal conditions, respirator is not normally required. If ventilation is not sufficient to effectively prevent buildup of vapor/mist/fume/dust, appropriate NIOSH/MSHA respiratory protection must be provided. **Eye/Face Protection:** 

Wear safety glasses with side shields. Do not wear contact lenses.

Skin Protection:

Use of protective coveralls and long sleeves is recommended.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Color: Odor: **Odor Threshold:** PH: Vapor Pressure: **Boiling Point/Range: Melting Point/Range:** Solubility in Water: Partition Coefficient (n-octanol/water): **Specific Gravity:** Vapor Density: **Flash Point:** Flammable/Explosive Limits-Lower: Flammable/Explosive Limits-Upper: Auto Ignition Temperature: **Evaporation Rate:** Solubility in Water: Partition Coefficient (n-octanol/water): **VOC Content:** 

Liquid. White Slight. Not available 4.0 - 6.017.5000000 mm hg (20.0°C (68°F) >100.00° C (>212°F) 0.0°C (32°F)(Freezing Point) Miscible Not Determined 1.1800 >1.0000 (Air=1) >100.00°C (>212°F) Closed Cup Not applicable Not applicable Not applicable Same as water Miscible Not Determined <3.0% (by weight)

### **10. STABILITY AND REACTIVITY**

Stability:

**Hazardous Reactions:** 

Hazardous Decomposition Products: Will not occur.

Stable.

Under decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular hydrocarbons.

**Incompatible Materials:** 

**Conditions to Avoid:** 

This product may react with strong oxidizing agents.

Freezing. Product may be unstable if frozen.

## 11. TOXICOLOGICAL INFORMATION

Hazardous Components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
None	None	None	None

Hazardous Components	Health Effects / Target Organs
None	None

### 12. ECOLOGICAL INFORMATION

**Ecological Information:** 

No data available.

## 13. DISPOSAL CONSIDERATIONS

**Recommended Method of Disposal:** 

Information provided is for unused product only. Follow all local, state, federal and provincial regulations for disposal. This product is not a RCRA hazardous waste when discarded. Processing, use, or contamination of this product may change the hazard classification and waste management options. None identified.

Hazardous Waste Number:

## 14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)		
Proper Shipping Name:	Not regulated	
Hazard Class or Division:	None	
<b>Identification Number:</b>	None	
Packing Group:	None	

### International Air Transportation (ICAO/IATA)

Proper Shipping Name: Hazard Class or Division: Identification Number: Packing Group: Not regulated None None None

## Water Transportation (IMO/IMDG)

Proper Shipping Name: Hazard Class or Division: Identification Number: Packing Group:

Not regulated None None None

## **15. <u>REGULATORY INFORMATION</u>**

### <u>United States Regulatory Information</u> TSCA 8 (b) Inventory Status:

TSCA 12 (b) Export Notification: CERCLA/SARA Section 302 EHS: CERCLA/SARA Section 311/312: CERCLA/SARA Section 313: California Proposition 65:

<u>Canada Regulatory Information</u> CEPA DSL/NDSL Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory. None above reporting minimus None above reporting minimus None above reporting minimus No California Proposition 65 listed chemicals are

Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Records as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details. Not controlled

### WHMIS Hazard Class:

## 16. OTHER INFORMATION

Date SDS Prepared: Hazard Rating: February 14, 2013 Health: 1 Flammability: 0 Reactivity: 0

known to be present.

THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE. BECAUSE SOME OF THE INFORMATION IS DERIVED FROM INFORMATION PROVIDED TO DURO DYNE CORPORATION FROM ITS SUPPLIERS, DURO DYNE CORPORATION MAKES NO WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SINCE THE USE OF THIS INFORMATION AND THE CONDITIONS AND USE OF THIS PRODUCT ARE CONTROLLED BY THE USER, IT IS THE USER'S OBLIGATION TO DETERMINE THE CONDITIONS OF SAFE USE OF THE PRODUCT. THE INFORMATION IS SUPPLIED FOR YOUR INFORMATION AND CONSIDERATION AND DURO DYNE CORPORATION ASSUMES NO RESPONSIBILITY FOR USE OR RELIANCE THEREON. IT IS THE RESPONSIBILITY OF THE USER OF DURO DYNE CORPORATION PRODUCTS TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.



DW5,45 HEALTH FLAMMABILITY 0 REACTIVITY 0

SAFETY DATA SHEET Prepared by Duro Dyne June 11, 2014

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade name:	DURO DYNE WATER BASED ADHESIVE
Product Identifier:	WSA-5, WSA-55
Item #:	5036, 5037
Supplier Details:	DURO DYNE CORPORATION
	81 Spence Street
	Bay Shore, NY 11706

InformationPhone No:800-899-3876EmergencyPhone No:800-424-9300 (CHEMTREC)

### 2. HAZARDS IDENTIFICATIONS

### EMERGENCY OVERVIEW

CAUTION: May cause slight eye, skin or respiratory irritation on repeated contact. This product is not considered hazardous by the OSHA Hazard Communication Standard under 29 CFR 1910.1200 See Section 11 for Additional Toxicological information.

Physical State: Color: Odor: Personal Protection:	Liquid. White Slight See SDS Section 8
Relevant routes of exposure:	Skin, Eyes, Inhalation
Potential Health Effects:	
Inhalation:	Inhalation of vapors or mists of the product may be
	irritating to the respiratory system.
Skin Contact:	Prolonged and/or repeated skin contact may result in
	mild irritation or redness.
Eye Contact:	May cause slight irritation to eyes on contact.
Ingestion:	May cause gastrointestinal tract irritation if swallowed. Not expected under normal conditions of use.

### Existing Conditions Aggravated by Exposure:

None known

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components	CAS Number	%
None	None	None

### 4. FIRST-AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
Skin Contact:	Wash skin with soap and water. If symptoms develop and persist, get medical attention.
Eye Contact:	If irritation develops, flush eyes immediately with large amounts of water. If irritation persists, seek medical attention or advice.
Ingestion:	Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting. If symptoms develop and persist, get medical attention. Never give anything by mouth to an

unconscious person.

#### FIRE-FIGHTING MEASURES 5.

Flash Point: Autoignition Temperature: Flammable/Explosive Limits-Lower:	>100.00°C (>212°F) Closed cup Not applicable. Not applicable.
Flammable/Explosive Limits-Upper:	Not applicable.
Extinguishing Media:	Use extinguishing measures appropriate to local circumstances and the surrounding environment. Water spray or fog, foam carbon dioxide, dry chemical.
Special Firefighting Procedures:	Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.
Unusual Fire or Explosion Hazards:	This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a moderate fire hazard. Closed containers may rupture (due to build up pressure) when exposed to extreme heat.
Hazardous Combustion Products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

### 6. ACCIDENTAL RELEASE MEASURE

### Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental Precautions: Clean-Up Methods:	No special environmental precautions required. Do not allow material to contaminate ground water system. Take up with liquid-absorbing material (sand). Wash spillage site thoroughly with soap and water or detergent solution. Dispose of according to Federal, State and local governmental regulations
7. HANDLING AND STORAGE	
Handling:	Avoid extreme temperatures. Protect from freezing. This material should not be spilled, discharged, or flushed into sewers or public waterways. Product contains low level of organic volatiles which could accumulate in the unvented headspace of drums or bulk storage vessels. Open drums in well ventilated area. Avoid breathing vapors. Do not wear contact lenses.
Storage:	For safe storage, store between 1°C (33.8°F) and 37°C (98.6°F). Storage below temperature limit, product will be irreversibly damaged and no longer usable. Storage above temperature limit, the product properties change.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
None	None	None	None	None
Engineering Controls:			dance with good industrial hy General room ventilation is us	
Respiratory Protection:		not normally re effectively prev	onditions, respirator is quired. If ventilation is not suf ent buildup of vapor/mist/fum OSH/MSHA respiratory protec	e/dust,
Eye/Face Protection:		Wear safety gla contact lenses.	sses with side shields. Do not	wear
Skin Protection:		Use of protectiv recommended	ve coveralls and long sleeves i	S
		,		Pag

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Color: Odor: Odor Threshold: pH: Vapor Pressure: Boiling Point/Range: Melting Point/Range: Specific Gravity: Vapor Density: Flash Point: Flammable/Explosive Limits-Lower: Flammable/Explosive Limits-Upper: Autoignition Temperature: Evaporation Rate: Solubility in Water: Partition Coefficient (n-octano/water): VOC Content: 10. <u>STABILITY AND REACTIVITY</u>	Liquid. White Slight Not available 4.0-6.0 $17.5000000 \text{ mm hg} (20.0^{\circ}\text{C} (68^{\circ}\text{F}))$ $>100.0^{\circ}\text{C} (>212^{\circ}\text{F})$ $0.0^{\circ}\text{C} (32^{\circ}\text{F}) (Freezing point)$ 1.1800 >1.0000 (Air = 1) $>100.00^{\circ}\text{C} (>212^{\circ}\text{F}) Closed cup$ Not applicable Not applicable Not applicable Same as water Miscible Not determined <3.0% (by weight)
Stability:	Stable.
Hazardous Reactions:	Will not occur.
Hazardous Decomposition Products:	Under decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible Materials:	This product may react with strong oxidizing agents.
Conditions to Avoid:	Freezing. Product may be unstable if frozen.

## 11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	LARC Carcinogen	OSHA Carcinogen
None	None	None	(Specifically Regulated) None
Hazardous components None			s/Target Organs

## 12. ECOLOGICAL INFORMATION

No data available

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended Method of Disposal:** Follow all local, state, federal and provincial regulations for disposal. This product is not a RCRA hazardous waste when discarded. Processing, use, or contamination of this product may change the hazard classification and waste management options. Hazardous Waste Number: None identified. 14. TRANSPORT INFORMATION U.S. Department of Transportation Ground (49 CFR) **Proper Shipping Name:** Not regulated Hazard Class or Division: None **Identification Number:** None

None

Packing Group:

International Air Transportation (ICAO/IATA) Proper Shipping Name: Hazard Class or Division: Identification Number: Packing Group:

 Water Transportation (IMO/IMDG)

 Proper Shipping Name:

 Hazard Class or Division:

 Identification Number:

 Packing Group:

#### 15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:

TSCA 12 (b) Export Notification:

CERCLA/SARA Section 302 EHS:

CERCLA/SARA Section 311/312:

CERCLA/SARA 313:

**California Proposition 65:** 

**Canada Regulatory Information** 

**CEPA DSL/NDSL Status:** 

Not regulated None None

Not regulated None None None

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

None above reporting de minimus.

None above reporting de minimus.

None

None above reporting de minimus.

No California Proposition 65 listed chemicals are known to be present.

Contains one of more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environmental Canada. They may be imported into Canadá in limited quantities. Please contact Regulatory Affairs for additional details. Not controlled

WHMIS Hazard Class:

#### **16. OTHER INFORMATION**

This Safety Data Sheet contains changes from the previous version in sections: Reviewed SDS. Reissued with new date.

Hazard Rating:

Health: I Flammability: 0 Reactivity: 0

Date SDS Prepared:

February 14, 2013

THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE. BECAUSE SOME OF THE INFORMATION IS DERIVED FROM INFORMATION PROVIDED TO DURO DYNE CORPORATION FROM ITS SUPPLIERS, DURO DYNE CORPORATION MAKES NO WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SINCE THE USE OF THIS INFORMATION AND THE CONDITIONS AND USE OF THIS PRODUCT ARE CONTROLLED BY THE USER, IT IS THE USER'S OBLIGATION TO DETERMINE THE CONDITIONS OF SAFE USE OF THE PRODUCT. THE INFORMATION IS SUPPLIED FOR YOUR INFORMATION AND CONSIDERATION AND DURO DYNE CORPORATION ASSUMES NO RESPONSIBILITY FOR USE OR RELIANCE THEREON. IT IS THE RESPONSIBILITY OF THE USER OF DURO DYNE CORPORATION PRODUCTS TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.

Section 1 - Product an	d Company Identification
Material Name	- Black Jack All-Weather Roof Cement
Chemical Category	- Mixture
Product Code	- 6230-9-30
Product Description	<ul> <li>Black paste.</li> </ul>
Product Use	<ul> <li>Repair cracks, seams and holes in roofing materials.</li> </ul>
Synonyms	- Roof and Flashing cement
Manufacturer	- Gardner-Gibson
	4161 E. 7th Avenue
	Tampa, FL 33605
	United States
Telephone	
Technical	- 813-248-2101 - Customer Service: 8 AM - 5 PM M-F Eastern Standard Time
Emergency	- 800-424-9300 - CHEMTREC
Emergency	- 703-527-3887 - CHEMTREC (Outside US)
Last Revision Date	- 2-2-2015

Cardmar-Gibso

## Section 2 - Hazards Identification

### **GHS HAZARDS AND PRECAUTIONS**

### SIGNAL WORD: WARNING!

4.

Flammable liquid (paste) and Vapor. Contains Combustible Petroleum Distillates. Harmful or Fatal if swallowed. Keep away from heat, sparks, and open flame. Avoid prolonged breathing of vapor and use only in adequate ventilation. Repeated and prolonged overexposure to solvent vapor may cause brain and nervous system damage, respiratory tract irritation, dizziness, or loss of consciousness. May cause skin and eye irritation.

Avoid breathing dust, fume, gas, mist, vapors and/or spray. Do not handle until all safety precautions Prevention have been read and understood. Keep away from flames and hot surfaces. - No smoking. Use personal protective equipment as required. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and Response easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Store in a closed container. Store in a well-ventilated place. Dispose of content and/or container in Storage/Disposal accordance with local, regional, national, and/or international regulations.



Physical Form	- Liquid (PASTE)
Color	- Black
Odor	- Petroleum solvent odor.
Flash Point	- 105 F(40.5556 C)
OSHA HCS 2012	<ul> <li>Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A</li> </ul>
WHMIS	- Class B - Flammable and Combustible Materials - Division 3. Class D - Poisonous and

Infectious Materials - Division 2 - Subdivision A



GHS	<ul> <li>Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A</li> </ul>
Route Of Entry	<ul> <li>Inhalation, Skin, Eye, Ingestion/Oral</li> </ul>
Potential Health Effects Inhalation	
Acute (Immediate)	<ul> <li>May cause irritation. Excessive breathing of high vapor concentration can cause possible unconsciousness and even asphyxiation.</li> </ul>
Chronic (Delayed)	<ul> <li>Refer to other information found in Section 11-Toxicology.</li> </ul>
Skin	
Acute (Immediate)	- May cause irritation.
Chronic (Delayed)	<ul> <li>Repeated and prolonged exposure to the skin may cause dermatitis.</li> </ul>
Eye	
Acute (Immediate)	- May cause irritation.
Chronic (Delayed)	<ul> <li>Repeated and prolonged exposure may cause irritation.</li> </ul>
Ingestion	
Acute (Immediate)	<ul> <li>May be harmful or fatal if swallowed.</li> </ul>
Chronic (Delayed)	<ul> <li>Repeated and prolonged exposure may be harmful.</li> </ul>
Carcinogenic Effects	<ul> <li>This product or one of its ingredients present at 0.1% or more is listed as a carcinogen by NTP, IARC or OSHA. See Section 11 - Toxicological Information for more details.</li> </ul>

	E PAR PARTING	Carcinogenic Effects	
	CAS	IARC	NTP
Asphait	8052-42-4	Group 2B-Possible Carcinogen	Under Consideration

## Section 3 - Composition/Information on Ingredients

the state of the second	37.211		H I	lazardous Components	
Chemical Name	CAS	%(wt)	UN;EINECS	LD50/LC50	Classifications According to Regulation/Directive
Asphalt	8052-42-4	30% TO 40%	NA1999, 232-490-9	Ingestion/Oral-Rat LD50 · >5000 mg/kgInhalation-Rat LC50 · >94.4 mg/m <sup>3</sup>	WHMIS: Other Toxic Effects - D2A UN GHS: Carc. 2; Eye Irrit. 2A; Skin Irrit. 2 EU DSD/DPD:
Mineral spirits	8052-41-3	8% TO 15%	232-489-3		EU D5D/DPD: Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65
Cellulose	9004-34-6	2% TO 6%	232-674-9	Ingestion/Oral-Rat LD50 · >5 g/kgInhalation-Rat LC50 · >5800 mg/m <sup>3</sup> 4 Hour(s)Skin-Rabbit LD50 · >2 g/kg	WHMIS: Other Toxic Effects - D2B UN GHS: Eye Irrit. 2A; Skin Irrit. 2 EU DSD/DPD:
Bentonite	1302-78-9	1% TO 5%	215-108-5	NDA	WHMIS: Other Toxic Effects - D2A UN GHS: STOT RE 2
1,2,4- Trimethylbenzene	95-63-6	< 1%	202-436-9	Ingestion/Oral-Rat LD50 · 5 g/kginhalation-Rat LC50 · 18000 mg/m <sup>3</sup> 4 Hour(s)	UN GHS: Acute Tox. 4 (Inhalation); Aquatic Chronic 2; Flam. Liq. 3; Eye Irrit. 2A; Skin Irrit. 2; STOT RE 2; STOT SE 2 EU DSD/DPD: R10Xn; R20Xi; R36/37/38N; R51 R53
Benzene, 1,3,5- trimethyl	108-67-8	< 1%	UN2325, 203-604-4		R10 Xi; R37 N; R51 R53

		S 24 / 14	Non-Ha	azardous Components		· · · · · · · · · · · · · · · · · · ·
Chemical Name	CAS	%(wt)	UN;EINECS	LD50/LC50	EU R & S Phrases	Other
Water	7732-18-5	35% TO 45%	231-791-2		NDA	

This product is an encapsulated mixture which reduces the likelihood of exposure to hazardous particulates. Airborne exposures to hazardous dusts or mists may be generated by spraying, sanding or grinding.

See Section 11 for Toxicological Information.

Inhalation	<ul> <li>IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. Move victim to fresh air. If breathing is difficult, give oxygen.</li> </ul>
Skin	<ul> <li>IF ON SKIN: Wash with plenty of soap and water. If irritation develops and persists, get medical attention.</li> </ul>
Eye	<ul> <li>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.</li> </ul>
Ingestion	<ul> <li>If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.</li> </ul>

Extinguishing Media	<ul> <li>LARGE FIRE: Water spray, fog or regular foam.</li> <li>SMALL FIRES: Dry chemical, CO2, water spray or regular foam.</li> </ul>
Unsuitable Extinguishing Media	- Do not use direct stream of water.
Firefighting Procedures	<ul> <li>Fight advanced or massive fires from safe distance or protected location. Avoid water in a straight hose stream as the stream will cause splatter and spread fire. I product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and are ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release.</li> </ul>
Unusual Fire and Explosion Hazards	- Combustible liquid. May release irritating or toxic gases, fumes, or vapors.
Hazardous Combustion Products	- Carbon monoxide, carbon dioxide, hydrocarbons.
Protection of Firefighters	<ul> <li>Firefighters should wear self-contained breathing apparatus and full protective gear.</li> </ul>
Flash Point	- 105°F(40°C) CC (Closed Cup)
Explosion Limits	
Upper	- 6%
Lower	9 %
Autoignition Temperature	- 450 °F(232°C)

## Section 6 - Accidental Release Measures

Personal Precautions	-	Do not handle damaged containers or spilled material unless wearing appropriate protective clothing. Stay upwind and Ventilate the area before entry.
Emergency Procedures	-	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can without risk. Isolate the area and contain the spilled material. Persons not wearing the appropriate PPE should be removed from the
<b>Environmental Precautions</b>	-	area until the spill is cleaned up. Keep unauthorized personnel away. Prevent entry into waterways, sewers, basements or confined areas.

Containment/Clean-up Measures Prohibited Materials	<ul> <li>Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then pla suitable container. Do not use water to flush spill area.</li> <li>Use appropriate Personal Protective Equipment (PPE).</li> <li>Avoid contact with strong oxidizing agents.</li> </ul>			
Section 7 - Handling and	Storage			
Handling	- KEEP OUT OF THE REACH OF CHILDREN! Keep away from heat and ignition			
Storage	<ul> <li>sources – No Smoking. Use only with adequate ventilation.</li> <li>Store in a well-ventilated place. Keep container tightly closed. Keep container/package tightly closed in a cool, well-ventilated place. No open flames no sparks and no smoking.</li> </ul>			
Special Packaging Materials	- No data available			
Incompatible Materials or Ignition Sources	- Avoid contact with strong oxidizing agents and acids.			
Section 8 - Exposure Co	ntrols/Personal Protection			
Personal Protective Equipment	nt			
Pictograms				
Respiratory	<ul> <li>In case of insufficient ventilation, wear suitable respiratory equipment. If listed exposure limits are expected to be exceeded, use approved respiratory protection suitable for the hazard.</li> </ul>			
Eye/Face	<ul> <li>Wear ANSI approved safety glasses with side shields or safety goggles.</li> </ul>			
Hands	- Wear chemical protective gloves made of Nitrile or Neoprene.			
Skin/Body	- Wear clothing that covers the skin to prevent skin exposure.			
General Industrial Hygiene Considerations Engineering	<ul> <li>Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Avoid breathing vapors.</li> <li>Adequate ventilation systems as needed to control concentrations of airborne</li> </ul>			
Lingineering	antaminante balow aprilabile threshold limit values. Lise presention to protect			

- Measures/Controls
- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Use precaution to protect building intake from fumes and vapors created outdoors.

Exposure Limits/Guidelines							
	Result	ACGIH	Canada Ontario	OSHA	United States - California		
Cellulose (9004-34-6)	TWAs	10 mg/m3 TWA	10 mg/m3 TWAEV (paper fibre, total dust)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	10 mg/m3 PEL (total dust); 5 mg/m3 PEL (respirable fraction)		
mineral spirits (8052-41-3)	TWAs	100 ppm TWA	525 mg/m3 TWAEV	500 ppm TWA; 2900 mg/m3 TWA	100 ppm PEL; 525 mg/m3 PEL		
Asphalt (8052-42-4)	TWAs	0.5 mg/m3 TWA (as benzene soluble aerosol, fume, inhalable fraction)	0.5 mg/m3 TWAEV (fume, inhalable, as benzene- soluble aerosol)	Not established	5 mg/m3 PEL (fume)		

**Exposure Control Notations** 

ACGIH

- Asphalt (8052-42-4):Carcinogens:A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free)

Key to abbreviations

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

## Section 9 - Physical and Chemical Properties

### **Physical Form**

- Liquid

### Appearance/Description

- Thick block
- Thick black paste (semi-liquid)

Color: Black		Odor: Petroleum solvent odor		
Taste: NDA		Odor Threshold: NDA		
Boiling Point:	300 to 400 F(148.8889 to 204.4444 C)	Vapor Pressure:	= 2 mmHg (torr) @ 68 F(20 C)	
Melting Point:	NDA	Vapor Density:	= 1 Air=1	
Specific Gravity/Relative Density:	= 1.046 Water=1	Evaporation Rate:	NDA	
Density:	= 8.71 lbs/gal	VOC (Wt.):	= 1.66 lbs/gai	
Bulk Density:	NDA	VOC (Vol.):	< 250 g/L	
pH:	NDA	Volatiles (Wt.):	NDA	
Water Solubility:	NDA	Volatiles (Vol.):	= 60 %	
Solvent Solubility:	Yes	Flash Point:	>105° F(40°C)	
Viscosity:	NDA	Flash Point Test Type:	CC (Closed Cup)	
Coefficient of Water:	NDA	Autoignition:	450 F(232.2222 C)	

## Section 10 - Stability and Reactivity

Stability

- Stable under normal temperatures and pressures.

Hazardous Polymerization Conditions to Avoid Incompatible Materials Hazardous Decomposition Products

- Avoid contact with strong oxidizing agents and flame.
   Strong oxidizers and acids.
- Strong oxidizers and acids

- Carbon monoxide, carbon dioxide and hydrocarbons.

Hazardous polymerization will not occur.

## Section 11 - Toxicological Information

Component Name	Concentration	CAS	Data		
Water	35% TO 45% 7732-18-5		Acute Toxicity: ; orl-rat LD50:>90 mL/kg		
Asphalt	30% TO 40%	TO 40% 8052-42-4 Acute Toxicity: ; orl-rat LD50:>5000 mg/kg; ihl-rat LC50:>94.4 mg/m3 Tumorigen/Carcinogen: ; skn-mus TD :69 gm/kg/43W-l; skn-mus TDLo:90			
Cellulose	2% TO 6%	9004-34-6	Acute Toxicity: ; orl-rat LD50:>5 gm/kg; ihl-rat LC50:>5800 mg/m3/4H; skn-rbt LD50:>2 gm/kg		
Bentonite	1% TO 5%	1302-78-9	Acute Toxicity: ; orl-mus TDLo:14 gm/kg/7D-I		
1,2,4-Trimethylbenzene	<1%	95-63-6	Acute Toxicity: ; orl-rat LD50:5 gm/kg; ihl-rat LC50:18000 mg/m3/4H		

Other Component Information

IARC has concluded that the following chemicals in this product are carcinogenic to humans (Group 1): silica, quartz. ACGIH has designated the following chemicals in this product as suspected human carcinogens (A2): silica, quartz. NTP has listed the following chemicals in this product as known human carcinogens: silica, quartz. Risk of cancer depends on duration and level of exposure to this product as a dust or aerosol mist.

**Other Information** 

This product contains petroleum asphalt. Petroleum asphalt is not listed as a carcinogen by OSHA or NTP. The National Institute of Occupational Safety and Health (NIOSH), has concluded that at higher temperatures roofing asphalt fumes are a potential occupational carcinogen. If this product is heated or comes in contact with heated material, avoid breathing fumes. This product may contain small amounts of polycyclic aromatic hydrocarbons (PAH's) which are recognized carcinogens in humans and experimental animals. Mouse skin painting studies of roofing asphalt vapor concentrate have shown evidence of tumor formation associated with localized skin irritation in recent studies. Inhalation studies of high airbome concentrations of asphalt/bitumen fumes in rats and mice produced bronchitis, pneumonitis, and lung changes such as fibrosis and cell damage.

## Section 12 - Ecological Information

Ecological Fate	-	No data
Persistence/Degradability	-	No data
<b>Bioaccumulation Potential</b>		No data
Mobility in Soil	-	No data

- a available. a available.
- a available.
- a available.

-

## Section 13 - Disposal Considerations

Product

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transportation Information

DOT - Department of Transportation - Not Regulated when shipped in containers <119 gallons.

TDG Transportation Other Information -: Not Restricted under General Exemption for small container packaging.

TDG - Canada Transportation of Dangerous Goods: Tars, Liquids; UN1999; Hazard Class: 3; Packing Group: III 1.33 Class 3, Flammable Liquids

IMO/IMDG -International Maritime Transport - IMDG Code 2.3.2.5 - exempted from marking, labeling & testing of packages.

IATA - International Air Transport Association - TARS, LIQUID; UN1999; Hazard Class: 3; Packing Group: III.

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Section 15 - Regulatory Information		and the second second	
SARA Hererd Classifications Acute	Chronic		

SARA Hazard Classifications

**Risk & Safety Phrases** 

Acute, Chronic

California PROP 65: Asphalt and Asphalt Fumes may contain detectable amounts of chemicals known to the State of California to cause cancer or reproductive harm. .

State Right To Know							
Component	CAS	MA	MN	NJ	PA		
Water	7732-18-5	No	No	No	No		
Asphalt	8052-42-4	Yes	Yes	Yes	Yes		
mineral spirits	8052-41-3	Yes	Yes	Yes	Yes		
Cellulose	9004-34-6	Yes	Yes	Yes	Yes		
Bentonite	1302-78-9	No	No	No	No		
1,2,4-Trimethylbenzene	95-63-6	Yes	Yes	Yes	Yes		
Benzene, 1,3,5-trimethyl	108-67-8	Yes	No	No	No		

Inventory					
Component	CAS	EU EINECS	TSCA		
Water	7732-18-5	Yes	Yes		
Asphalt	8052-42-4	Yes	Yes		
mineral spirits	8052-41-3	Yes	Yes		
Cellulose	9004-34-6	Yes	Yes		
Bentonite	1302-78-9	Yes	Yes		

Component	CAS	EU EINECS	TSCA		
1,2,4-Trimethylbenzene	95-63-6	Yes	Yes		
Benzene, 1,3,5-trimethyl	108-67-8	Yes	Yes		

### **United States**

Environment

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Cellulose	9004-34-6	2% TO 6%	Not Listed
<ul> <li>Asphalt</li> </ul>	8052-42-4	30% TO 40%	Not Listed
1,2,4-Trimethylbenzerie	95-63-6	< 1%	1.0 % de minimis concentration
Bentonite	1302-78-9	1% TO 5%	Not Listed
Water	7732-18-5	35% TO 45%	Not Listed
<ul> <li>mineral spirits</li> </ul>	8052-41-3	8% TO 15%	Not Listed
<ul> <li>Benzene, 1,3,5-trimethyl</li> </ul>	108-67-8	< 1%	Not Listed

Section 16 - Other Information					
Last Revision Date	- 02/02/2015				
Prepared By	- GG Inc.				
Disclaimer/Statement of Liability	<ul> <li>This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness It is the user's responsibility to verify the suitability and completeness of suc information for particular use. Gardner-Gibson does not accept liability</li> </ul>				

for any loss or damage that may occur from the use of this information.



Diesel Fuel 18 pgs

## Safety Data Sheet

1. IDENTIFICATION OF THE SU	JBSTANCE/PREPARATION AND COMPANY/UNDERTAKING
Material Name Recommended Use / Restrictions of Use	<ul> <li>Diesel (ULSD/Gasoil)</li> <li>Fuel for on-road diesel-powered engines. Fuel for use in off- road diesel engines, boilers, gas turbines and other combustion equipment.</li> </ul>
Supplier	: Shell Eastern Trading (PTE) Ltd
	9 North Buona Vista Drive, #07-01, Tower 1, The Metropolis Singapore 138588 Singapore
Telephone	: +65-6384 8000
Emergency Telephone Number	: +44 (0) 151 350 4595
2. HAZARDS IDENTIFICATION	
GHS Classification	<ul> <li>Flammable liquids, Category 3         Aspiration hazard, Category 1         Acute toxicity, Category 4, Inhalation         Skin corrosion/irritation, Category 2         Carcinogenicity, Category 2         Specific target organ toxicity - repeated exposure, Category 2, Blood., Thymus., Liver         Hazardous to the aquatic environment - Long-term Hazard, Category 2         Acute hazards to the aquatic environment, Category 2     </li> </ul>
GHS Label Elements Symbol(s)	
Signal Words	: Danger
Hazard Statement	: PHYSICAL HAZARDS: H226: Flammable liquid and vapour.
	HEALTH HAZARDS:
Print Date 16.04.2014	1/18 00000038684 MSDS_SG

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H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H332: Harmful if inhaled.
H351: Suspected of causing cancer.
H373: May cause damage to organs or organ systems through prolonged or repeated exposure.

ENVIRONMENTAL HAZARDS: H411: Toxic to aquatic life with long lasting effects. H401: Toxic to aquatic life.

<b>GHS Precautionary Statem</b>	nts
Prevention	<ul> <li>P210: Keep away from heat/sparks/open flames/hot surfaces No smoking.</li> <li>P261: Avoid breathing dust/fume/gas/mist/vapours/spray.</li> <li>P280: Wear protective gloves/protective clothing/eye protection/face protection.</li> </ul>
Response	: P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do NOT induce vomiting.
Disposal:	: P501: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.
Other Hazards which do not result in classification	<ul> <li>Vapour in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature, where vapour concentrations are within the flammability range.</li> <li>May ignite on surfaces at temperatures above auto-ignition temperature.</li> <li>This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.</li> </ul>
Additional Information	: This product is intended for use in closed systems only.
3. COMPOSITION/INFORMATI	ON ON INGREDIENTS
<b>Mixture Description</b>	: Complex mixture of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons with carbon
And a state of the	2/18

Print Date 16.04.2014

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### Safety Data Sheet

numbers predominantly in the C9 to C25 range. May also contain several additives at <0.1% v/v each. May contain cetane improver (Ethyl Hexyl Nitrate) at <0.2% v/v.

May contain catalytically cracked oils in which polycyclic aromatic compounds, mainly 3-ring but some 4- to 6-ring species are present.

### Classification of components according to GHS

Chemical Identity	Synonyms	CAS	Hazard Class (category)	Hazard Statement	Conc.
Fuels, diesel	Fuels, diesel	68334-30-5	Flam. Liq., 3; Asp. Tox., 1; Acute Tox., 4; Skin Corr., 2; Carc., 2; STOT RE, 2; Aquatic Chronic, 2; Aquatic Acute, 2;	H226; H304; H332; H315; H351; H373; H411; H401;	60.00 - 100.00 %
Distillates (Fischer- Tropsch) C8-26 - Branched and Linear	Distillates (Fischer- Tropsch) C8- 26 - Branched and Linear	848301-67- 7	Asp. Tox., 1; Flam. Liq., 4;	H304; H227;	0.00 - 30.00 %
Kerosine (Fischer Tropsch), Full range, C8-C16 branched and linear alkanes	Kerosine (Fischer Tropsch), Full range, C8- C16 branched and linear alkanes	848301-66- 6	Asp. Tox., 1; Flam. Llq., 3;	H304; H226;	0.00 - 10.00 %

Additional Information

: Dyes and markers can be used to indicate tax status and prevent fraud. Contains Cumene, CAS# 98-82-8 Contains Naphthalene, CAS # 91-20-3.

Refer to Ch 16 for full text of H phrases.

4. FIRST-AID MEASURES		
Inhalation	: Remove to fresh air. If rapid recovery d to nearest medical facility for additional	
Skin Contact	: Remove contaminated clothing. Immediately flush skin with	
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Print Date 16.04.2014		00000038684
		MSDS_SG

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Eye Contact	<ul> <li>large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.</li> <li>Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.</li> </ul>
Ingestion	: If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing. Give nothing by mouth.
Most Important Symptoms/Effects, Acute & Delayed	: If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure. Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.
Immediate medical attention, special treatment	: Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Specific hazards arising from Chemicals Suitable Extinguishing Media Unsuitable Extinguishing Media	<ul> <li>Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Oxides of sulphur. Unidentified organic and inorganic compounds. Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. Flammable vapours may be present even at temperatures below the flash point. The vapour is heavier than air, spreads along the ground and distant ignition is possible.</li> <li>Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.</li> <li>Do not use direct water jets on the burning product as they could cause a steam explosion and spread of the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.</li> </ul>
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Protective Equipment & Precautions for Fire Fighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).
Additional Advice	:	Keep adjacent containers cool by spraying with water. If possible remove containers from the danger zone. If the fire cannot be extinguished the only course of action is to evacuate immediately. Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways.

## 6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations. Evacuate the area of all non-essential personnel. Ventilate contaminated area thoroughly. Take precautionary measures against static discharges.

Personal Precautions, Protective Equipment and Emergency Procedures	:	Do not breathe fumes, vapour. Do not operate electrical equipment. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area and evacuate all personnel. Attempt to disperse the gas or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas meter.	
Environmental Precautions	•	Take measures to minimise the effects on groundwater. Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.	
Methods and Material for Containment and Cleaning Up	:	Take precautionary measures against static discharges. For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate	

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absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.

#### **Additional Advice**

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Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Maritime spillages should be dealt with using a Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL Annex 1 Regulation 26.

### 7. HANDLING AND STORAGE

: Avoid breathing vapours or contact with material. Only use in **General Precautions** well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Air-dry contaminated clothing in a well-ventilated area before laundering. Prevent spillages. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Never siphon by mouth. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse. Maintenance and Fuelling Activities - Avoid inhalation of vapours and contact with skin. Avoid inhaling vapour and/or mists. Avoid prolonged or **Precautions for Safe** repeated contact with skin. When using do not eat or drink. Handling Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Earth all equipment. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Drum and small container storage: Drums should be stacked to **Conditions for Safe** a maximum of 3 high. Use properly labelled and closeable Storage containers. Tank storage: Tanks must be specifically designed for use with this product. Bulk storage tanks should be diked (bunded). Locate tanks away from heat and other sources of ignition. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Vapours from tanks should not be released to 6/18

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**Product Transfer** 

**Recommended Materials** 

Effective Date 10.03.2014 atmosphere. Breathing losses during storage should be controlled by a suitable vapour treatment system. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Keep container tightly closed and in a cool, wellventilated place. Keep in a cool place. Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.

Diesel (ULSD/Gasoil)

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Refer to section 15 for any additional specific legislation covening the packaging and storage of this product. Keep in a bunded area with a sealed (low permeability) floor, to provide containment against spillage. Prevent ingress of water. Avoid splash filling. Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes. Keep containers closed when not in use. Contamination resulting from product transfer may give rise to light hydrocarbon vapour in the headspace of tanks that have previously contained gasoline. This vapour may explode if there is a source of ignition. Partly filled containers present a greater hazard than those that are full, therefore handling, transfer and sampling activities need special care. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<= 1 m/s until fill pipe submerged to twice its diameter, then <= 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.

For containers, or container linings use mild steel, stainless steel. Aluminium may also be used for applications where it does not present an unnecessary fire hazard. Examples of suitable materials are: high density polyethylene (HDPE) and Viton (FKM), which have been specifically tested for compatibility with this product. For container linings, use

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Unsuitable Materials	<ul> <li>amine-adduct cured epoxy paint. For seals and gaskets use:</li> <li>graphite, PTFE, Viton A, Viton B.</li> <li>Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene. However, some may</li> </ul>
Container Advice	<ul> <li>be suitable for glove materials.</li> <li>Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.</li> </ul>
Other Advice	<ul> <li>similar operations on of hear contained.</li> <li>Ensure that all local regulations regarding handling and storage facilities are followed. See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77</li> <li>(Recommended Practices on Static Electricity). CENELEC CLC/TR 50404 (Electrostatics – Code of practice for the avoidance of hazards due to static electricity).</li> </ul>

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

## **Occupational Exposure Limits**

Cource	Type	ppm	mg/m3	Notation
ACGIH	IVVA	To ppin		
ACGIH	STEL	15 ppm		
				Can be absorbed
ACGIH	SKIN_DES			through the skin.
			50 malm3	
SG OEL	TWA	10 ppm	52 mg/m3	
		1.5	70 ma/m3	
SG OEL	STEL	15 ppm	79 mg/m5	
	ACGIH SG OEL	ACGIH TWA ACGIH STEL ACGIH SKIN_DES SG OEL TWA	ACGIH     TWA     10 ppm       ACGIH     STEL     15 ppm       ACGIH     SKIN_DES       SG OEL     TWA     10 ppm	Source     Type     Ppt       ACGIH     TWA     10 ppm       ACGIH     STEL     15 ppm       ACGIH     SKIN_DES

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Fuels, diesel	ACGIH	SKIN_DES(I nhalable fraction and vapor.)			Can be absorbed through the skin.as total hydrocarbons
	ACGIH	TWA(Inhala ble fraction and vapor.)		100 mg/m3	as total hydrocarbons
Cumene	ACGIH	TWA	50 ppm		
	SG OEL	TWA	50 ppm	246 mg/m3	

Additional Information

Skin notation means that significant exposure can also occur by absorption of liquid through the skin and of vapour through the eyes or mucous membranes.

**Biological Exposure Index (BEI)** 

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Material	Determinant	Sampling Time	BEI	Reference
Naphthalene	1-Naphthol, with hydrolysis + 2- Naphthol, with hydrolysis	Sampling time: End of shift.		ACGIH BEL (02 2013)

Appropriate Engineering Controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Eye washes and showers for emergency use. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls.

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Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Firewater monitors and deluge systems are recommended. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or for subsequent recycle. Personal protective equipment (PPE) should meet

recommended national standards. Check with PPE suppliers.

Individual Protection Measures

Respiratory Protection :

#### **Hand Protection**

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. All respiratory protection equipment and use must be in accordance with local regulations. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognise that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may be acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Select gloves tested to a relevant standard (e.g. Europe EN374, US F739). When prolonged or frequent repeated, contact occurs, Nitrile gloves may be suitable. (Breakthrough

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Eye Protection	time of > 240 minutes.) For incidental contact/splash protection Neoprene, PVC gloves may be suitable. Chemical splash goggles (chemical monogoggles). If a local risk assessment deems it so, then chemical splash goggles may not be required and safety glasses may provide adequate
Protective Clothing	eye protection. Chemical resistant gloves/gauntiets, boots, and apron (where risk of splashing).
Thermal Hazards Monitoring Methods Environmental Exposure Controls	<ul> <li>Not applicable.</li> <li>Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.</li> <li>National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/ Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/</li> <li>Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Information on accidental release measures are to be found in section 6. Take appropriate measures to fulfil the requirements of relevant environmental protection legislation. Avoid</li> </ul>
	contamination of the environment by following acterial from Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Odour Odour threshold pH Initial Boiling Point and Boiling Range Pour point Flash point Upper / lower Flammability or	<ul> <li>Colourless to yellowish. Liquid.</li> <li>May contain a reodorant</li> <li>Data not available</li> <li>Not applicable</li> <li>170 - 390 °C / 338 - 734 °F</li> <li>&lt;= 6 °C / 43 °F</li> <li>&gt; 55 °C / 131 °F</li> <li>1 - 6 %(V)</li> </ul>	
Flammability of	1,1/18	00

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Auto-Ignition temperature Vapour pressure Relative Density Density Water solubility Solubility in other solvents	<ul> <li>&gt; 220 °C / 428 °F</li> <li>1 hPa at 20 °C / 68 °F</li> <li>Data not available</li> <li>0.8 - 0.89 g/cm3 at 15 °C / 59 °F</li> <li>Data not available</li> <li>Data not available</li> <li>3 - 6</li> <li>3 - 6</li> <li>3 - 6</li> <li>Data not available</li> <li>1.5 - 6 mm2/s at 40 °C / 104 °F</li> <li>Data not available</li> <li>Low conductivity: &lt; 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000, pS/m., Whether a liquid is nonconductive or semi-conductive, pS/m., Whether a liquid is nonconductive or semi-conductive, static</li> </ul>
Evaporation rate (nBuAc=1) Decomposition Temperature Flammability	<ul> <li>considered semi-conductive of semi-conductive)</li> <li>pS/m., Whether a liquid is nonconductive of semi-conductive)</li> <li>pS/m., Whether a liquid is nonconductive of semi-conductive)</li> <li>the precautions are the same., A number of factors, for example</li> <li>iquid temperature, presence of contaminants, and anti-static</li> <li>additives can greatly influence the conductivity of a liquid.</li> <li>Data not available</li> <li>Data not available</li> <li>Not applicable.</li> </ul>
10. STABILITY AND REACTIVE Chemical stability Possibility of Hazardous Reactions Conditions to Avoid Incompatible Materials Hazardous Decomposition Products Sensitivity to Static Discharge	<ul> <li>Stable under normal use container when handled and stored</li> <li>No hazardous reaction is expected when handled and stored according to provisions.</li> <li>Avoid heat, sparks, open flames and other ignition sources.</li> <li>Strong oxidising agents.</li> <li>Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.</li> <li>Yes, in certain circumstances product can ignite due to static electricity.</li> </ul>
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#### 11. TOXICOLOGICAL INFORMATION Information on Toxicological effects : Information given is based on product data, a knowledge of the components and the toxicology of similar products. Unless **Basis for Assessment** indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s). Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion. Likely Routes of Low toxicity: LD50 > 5000 mg/kg , Rat Exposure Acute Oral Toxicity Low toxicity: LD50 >2000 mg/kg , Rabbit Acute Dermal Toxicity Harmful if inhaled. LC50 > 1.0 - <= 5.0 mg/l , 4 h, Rat High concentrations may cause central nervous system Acute Inhalation Toxicity depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death. Irritating to skin. Skin corroslon/irritation Expected to be slightly irritating. Inhalation of vapours or mists may cause irritation to the Serious eye damage/irritation **Respiratory Irritation** respiratory system. Not expected to be a sensitiser. Respiratory or skin Aspiration into the lungs when swallowed or vomited may sensitisation cause chemical pneumonitis which can be fatal. Aspiration Hazard Positive in in-vitro, but negative in In-vivo mutagenicity assays. Germ cell mutagenicity Limited evidence of carcinogenic effect. Repeated skin contact has resulted in irritation and skin cancer Carcinogenicity in animals. **Carcinogenicity Classification** ACGIH Group A4: Not classifiable as a human carcinogen. NTP: Reasonably Anticipated to be a Human Carcinogen. Material . Naphthalene IARC 2B: Possibly carcinogenic to humans. Naphthalene GHS / CLP: Carcinogenicity Category 2 Naphthalene Naphthalene 7879 A. 00000038684

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Fuels, diesel	: ACGIH Group A3: Confirmed animal carcinogen with unknown relevance to humans.
ueio, alee	: GHS / CLP: Carcinogenicity Category 2
Fuels, diesel	: GHS / CLP: Carcinogenicity classification ; GHS / CLP: No carcinogenicity classification
Lischer-	: GHS/OLP. NO CLASS
Tropsch) C8-26 - Branched	if stion
and Linear	: GHS / CLP: No carcinogenicity classification
Vision (Fischer	GHS/ CLI. NO CONTRACTOR
Turneh) Full range, Co-	
C16 branched and linear	humane
alkanes	: IARC 2B: Possibly carcinogenic to humans.
Cumene	IARC 2B: Possibly carcinogenie territory     GHS / CLP: No carcinogenicity classification

Reproductive and Developmental Toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure	<ul> <li>Not expected to impair fertility. Not expected to be a developmental toxicant.</li> <li>Not classified.</li> <li>May cause damage to organs or organ systems through prolonged or repeated exposure. Blood. Thymus. Liver.</li> <li>Classifications by other authorities under varying regulatory</li> </ul>
exposure Additional Information	rameworks may exist.

ON '	ne components
Information given is based initial products. Fuels and the ecotoxicology of similar products. Fuels made from blending several refinery streams. E studies have been carried out on a variety of hy blends and streams but not those containing a indicated otherwise, the data presented is repr indicated otherwise, the data presented is repr	ydrocarbon dditives. Unless esentative of the component(s).
Expected to be toxic: LL/EL/IL50 > 1 <= 10 organisms) LL/EL50 expressed as the no product required to prepare aqueous test extra product required to prepare aqueous test extra	minal amount of act.
Expected to be toxic: LL/EL/IL50 > 1 <= 10 r Expected to be practically non toxic: LL/EL/IL	ng/i 50 > 100 mg/l
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	<ul> <li>Information given is based on a knowledge of the and the ecotoxicology of similar products. Fuelse made from blending several refinery streams. E studies have been carried out on a variety of hyblends and streams but not those containing an indicated otherwise, the data presented is reproroduct as a whole, rather than for individual or organisms) LL/EL50 expressed as the non product required to prepare aqueous test extra Expected to be toxic: LL/EL/IL50 &gt; 1 &lt;= 10 m Expected to be toxic: LL/EL/IL50 &gt; 1 &lt;= 10 m Expected to be toxic: LL/EL/IL50 &gt; 1 &lt;= 10 m Expected to be toxic: LL/EL/IL50 &gt; 1 &lt;= 10 m Expected to be toxic: LL/EL/IL50 &gt; 1 &lt;= 10 m Expected to be practically non toxic: LL/EL/ILE/ILE/ILE/ILE/ILE/ILE/ILE/ILE/IL</li></ul>

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Aquatic crustacea Mobility	<ul> <li>modeled data)</li> <li>NOEC/NOEL expected to be &gt; 0.1 - &lt;= 1.0 mg/l (based on modeled data)</li> <li>Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day. If product enters soil, one or more constituents will be mobile and may contaminate groundwater. Large volumes may penetrate soil and could contaminate groundwater. Floats on water.</li> <li>Major constituents are inherently blodegradable. The volatile is modeled will oxidize rapidly by photochemical reactions in</li> </ul>	
Persistence/degradability	: Major constituents will oxidize rapidly by photochemical constituents will oxidize rapidly by photochemical to bioaccumulate. Log	
Bioaccumulative Potential Other Adverse Effects	<ul> <li>Contains constituents with the performance of the performance</li></ul>	

TONS	with of the
13. DISPOSAL CONSIDERATIONS	Recover or recycle if possible. It is the responsibility of the recover or recycle if possible. It is the responsibility of the the toxicity and physical
13. DISPOSITE	Recover or recycle if possible the toxicity and physical
Materiai Disposai	waste generated entertail generated to dote in compliance with properties of the material generated to dote in compliance with waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spiilage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a accordance with prevailing regulations, the competence of the
Container Disposal	<ul> <li>collector of contractoverer or metal rectament. Leaving the second recoverer or metal rectament. The second recoverer or metal rectament. The second recoverer or metal rectament. The second recoverer or metal rectament is service and fire. Residues may cause an explosion hazard if sparks and fire. Residues an explosion hazard if sparks and fire. Residues and fire. Residues an explosion hazard if sparks an ex</li></ul>
Local Legislation	<ul> <li>with the waste container equivalence with applicable regional,</li> <li>Disposal should be in accordance with applicable regional,</li> <li>Disposal should be in accordance with applicable regulations may national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be in compliance.</li> </ul>

 14. TRANSPORT INFORMATION
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Land (as per ADR classification Class Packing group Hazard indentification no. UN number Danger label (primary nsk) Proper shipping name Environmentally Hazardous	n): Regulated 3 III 30 1202 3 DIESEL FUEL Yes
IMDG Identification number Proper shipping name Class / Division Packing group Environmental hazards:	UN 1202 DIESEL FUEL 3 III Yes
IATA (Country variations m UN number Proper shipping name Class / Division Packing group	: Diesel fuel : 3
Transport in buik accordin Pollution Category Ship Type Product Name Special Precaution Additional Information	<ul> <li>in</li> &lt;</ul>
	TION is not intended to be comprehensive. Other regulations may apply to this

The regulatory information material.

	material.		1 1 . Abo	Act
	Local Regulations Workplace Safety and Health Act & Workplace	•	This product is subject to the requirement in the Regulations.	
	Safety and Health (Scholar Provision) Regulations Environmental Protection	:	This product is subject to the requirement in th Regulations.	e Act/
R.C.	Environmental Protection and Management	5.181	1056	000000038684 MSDS_SG

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(Hazardous Substances) Regulations Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations	<ul> <li>This product is subject to the requirement in the Act/ Regulations.</li> <li>This product is subject to the requirement in the Act/</li> </ul>
Fire Safety Act and Fire Safety (Petroleum & Flammable Materials) Regulations	Regulations.
Classification triggering components	: Contains fuels, diesel.
Other information	<ul> <li>IARC has classified diesel exhaust emissions as a Class 1 carcinogen - carcinogenic to humans. Steps should be taken to prevent personal exposure to diesel exhaust emissions.</li> </ul>
H227 Combustil H304 May be fa H315 Causes sl H332 Harmful if H351 Suspecte H373 May caus exposure	tal if swallowed and enters all ways. kin irritation. inhaled. d of causing cancer. e damage to organs or organ systems through prolonged or repeated

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**SDS Version Number** 

**Uses and Restrictions** 

**SDS Effective Date** 

**SDS Revisions** 

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from the previous version.

: A vertical bar (|) in the left margin indicates an amendment

This product must not be used in applications other than those
 recommended in Section 1, without first seeking the advice of

This product is not to be used as a solvent or cleaning agent;

1.1 :

:

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the supplier.

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		for lighting or b	rightening fires; as a skin cleanser.
SDS Distribution Key/Legend to Abbrevations used in this SDS	•		n in this document should be made available to indle the product. The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.
N		Flam. Liq. Asp. Tox. Acute Tox. Skin Corr. Carc. STOT RE	Flammable liquids Aspiration hazard Acute toxicity Skin corrosion/irritation Carcinogenicity Specific target organ toxicity - repeated exposure
Key Literature References	•	sources of info Services, mate	ta are from, but not limited to, one or more rmation (e.g. toxicological data from Shell Health erial suppliers' data, CONCAWE, EU IUCLID 1272 regulation, etc).
Disclaimer	:	intended to de safety and env	on is based on our current knowledge and is scribe the product for the purposes of health, rironmental requirements only. It should not onstrued as guaranteeing any specific property

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### SECTION 1 – COMPANY and PRODUCT IDENTIFICATION

MANUFACTURER GARDNER-GIBSON CORPORATION 4161 East 7<sup>th</sup> Avenue Tampa, FL 33605

EMERGENCY TELEPHONE NUMBER 1-800-424-9300 CHEMTREC

Product Class Acrylic Latex Sealant used in building construction.

Trade Name Black Jack Speed-Fill Blacktop Filler - Black Product Information 813-248-2101 gardner-gibson.com

> Product Code Number 6439-9-66

#### SECTION 2 – HAZARDS IDENTIFICATION

Product Classification: No need for classification according to GHS criteria.

#### Effects of acute toxicity:

EYES: Direct contact may cause irritation. SKIN: May cause irritation to sensitive skin or open wounds. INHALATION: May cause irritation to respiratory passages. INGESTION: May cause nausea.

#### Precautions:

Wear suitable protective clothing, gloves and eye protection. If the product adheres to exposed skin, irritation may occur when the product dries. Use with local exhaust ventilation. Do not take internally. Wash hands before eating or drinking.

### SECTION 3 – COMPOSITION / INFORMATION on INGREDIENTS

INGREDIENT	Content (By Weight)	TLV PPM	PEL - TWA PPM
Diisononyl Phthalate (DINP) CAS # 28553-12-0	3.0 - 5.0%	N.E.	N.E.
Mineral Spirits (Stoddard solvent) CAS # 8052-41-3	0.5 - 1.0%	100	100
All other ingredients in this waterborne product are trade secret.	94.0 - 96.5%	N.A.	N.A.

There are no ingredients in this product of unknown acute toxicity.

N.E. = Not Established

N.A. = Not Applicable

### Black Jack Speed-Fill Blacktop Filler - Black

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### SECTION 4 - FIRST-AID MEASURES

Inhalation: If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If signs/symptoms of difficulty in breathing continue, get immediate medical attention.

Skin: Rinse skin immediately with plenty of clean water for 5 to 10 minutes. Remove contaminated clothing. If skin irritation occurs get medical advice/attention.

Eye(s): Rinse cautiously with water for several minutes. Remove contact lenses if present and if it is easy to do so. Continue rinsing. If eye irritation persists get medical advice/attention.

**Ingestion:** If swallowed, do not induce vomiting. If conscious, give 2 to 3 glasses of water and seek medical advice/attention immediately.

### SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media: Carbon dioxide, dry chemical, foam, or water spray

Unusual Fire and Explosion Hazards: None known

Special Fire Fighting Procedures: Water can be used to cool fire-exposed containers. Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Observe all personal protective equipment recommendations described in Section 8. Wipe up or scrape up spilled material and contain for disposal. Final cleaning may require use of hot water and/or detergents. Dispose of saturated absorbent or cleaning materials appropriately.

### SECTION 7 – HANDLING and STORAGE

**Precautions for safe handling:** Keep away from extreme heat. Do not get in eyes, on skin, on clothing. Do not swallow product. Wash thoroughly after handling. Use with adequate ventilation.

**Conditions for safe storage:** Store in a cool, dry place in the original container. Keep container closed when not in use. Store the product away from strong oxidizing chemicals. Avoid extreme heat. Store above 7 °C (45 °F). Product will freeze below 0 °C (32 °F).

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Use with adequate ventilation. Skin Protection: Chemical resistant gloves are recommended for prolonged exposure. Eye Protection: Wear safety glasses with side shields. OTHER PROTECTIVE EQUIPMENT: None required.

Black Jack Speed-Fill Blacktop Filler - Black

Page 3 of 5

### **SECTION 9 – PHYSICAL and CHEMICAL PROPERTIES**

Appearance (Physical state, color):	Thick fluid paste, black	
Odor:	Mild, acrylic-like	
Odor Threshold:	No information is available.	
pH:	7.5 - 8.5	
Melting point:	No data is available.	
Initial Boiling Point & Boiling Range:	100 °C to 244 °C (212 °F to 471 °F)	
Flash Point:	>94 °C (>201 °F)	
Evaporation Rate:	Slower than Ether	
Flammability:	Nonflammable	
Upper/Lower Flammability Limits:	No data is available.	
Vapor Pressure:	17.5 mm Hg @ 20 °C (68 °F)	
Vapor Density:	Heavier than air	
Density:	1.68 g/cm <sup>3</sup> (14.0 Lbs/gal) 21 °C (70 °F)	
Solubility (in water):	Dispersible in water	
Partition coefficient (n-octanol/water):	No data is available.	
Auto-ignition temperature:	No data is available.	
Decomposition temperature:	>250 °C (482 °F)	
Viscosity (Brookfield RV, 5 rpm):	300,000 cP ±90,000 @ 21 °C (70 °F)	
	- (·- · /	

#### SECTION 10 – STABILITY and REACTIVITY

Reactivity: No hazardous reactions if stored and handled as prescribed.

Chemical Stability: The product is stable if stored and handled as prescribed.

Hazardous decomposition products: Carbon dioxide, carbon monoxide, and hydrocarbons.

Hazardous polymerization: Will not occur. The product is chemically stable.

#### SECTION 11 - TOXICOLOGICAL INFORMATION

**Primary routes of exposure:** Routes of entry for the product into the human body are accidental ingestion, accidental eye contact, and prolonged skin contact. Inhalation of the vapor released from the product as it dries is dependent upon the absence of proper ventilation during use of the product.

#### Acute Toxicity/Effects:

EYES: Direct contact may cause irritation. SKIN: May cause irritation to sensitive skin or open wounds. INHALATION: May cause irritation to respiratory passages. INGESTION: May cause nausea/gastrointestinal distress.

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

#### Black Jack Speed-Fill Blacktop Filler - Black

#### SECTION 11 – TOXICOLOGICAL INFORMATION (continued from page 3)

No human toxicological studies (Oral, Inhalation or Dermal) have been conducted on this compounded product.

No animal toxicological studies (Oral, Inhalation or Dermal) have been conducted on this compounded product.

#### Chronic Toxicity/Effects:

EYES: No data available. SKIN: No data available. INHALATION: No data available. INGESTION: No data available.

#### SECTION 12 - ECOLOGICAL INFORMATION

Ecological Fate:	* No data available.
Persistence/Degradability:	* No data available.
<b>Bioaccumulation Potential:</b>	* No data available.
Mobility in Soil:	* No data available.

#### SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of unused product and/or empty containers in accordance with local, regional, national, and/or international regulations.

Do not discharge into drains, surface waters, groundwater, or open ground/soil.

#### **SECTION 14 – TRANSPORT INFORMATION**

DOT Proper Shipping Name: Not Regulated by D.O.T. DOT UN/NA Number: None DOT Hazard Class: None Packing Group: None

IMO/IMDG – International Maritime Transport Shipping Name: Not Regulated. IATA – International Air Transportation Association: Not Regulated.

Do not transport this product on passenger seats or inside the passenger compartment of any vehicle. Transport product in the cargo area of the vehicle and secure it on and under protective cloths or plastic wrap to prevent damage due to accidental spills.

#### **SECTION 15 – REGULATORY INFORMATION**

SARA Title III – No substances are contained in this product subject to the reporting requirements of EPCRA Section 313 of the Super Fund Amendments and Reauthorization Act, 40 CFR Part 372.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

California Proposition 65 Chemical Warning (California Health and Safety Code #25249.5 et seq): This product contains chemicals known to the state of California to cause cancer, birth defects or reproductive harm.

Black Jack Speed-Fill Blacktop Filler - Black

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### **SECTION 16 – OTHER INFORMATION**

### Hazardous Materials Identification System (HMIS)

Health	Flammability	Physical Hazard		Personal Protection Equipment (PPE)	
1	0	0		B – Safety glasses and gloves	
Legend: (	) = Insignificant	1 = Slight	2 = Moderat	te $3 = High$	

Other Precautions: Keep out of the reach of children. Protect from freezing.

#### Disclaimer/Statement of Liability:

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to verify the suitability and completeness of such information for a particular use. Gardner-Gibson does not accept liability for any loss or damage that may occur from the use of this information.

Prepared by: Morton Jones 3-24-15 Product # 6439-9-66



HERCULES'

# HR15811 TPAges

#### 1. Identification

1. Identification	
Product identifier	Hercules Megaloc
Other means of identification	
Product code	7305E
Synonyms	Part Numbers: 15802, 15804, 15806, 15808, 15811, 15814, 15816, 15818, 15821
Recommended use	Pipe thread sealant.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/	Distributor information
Company Name	HCC Holdings, Inc. an Oatey Affiliate
Address	4700 West 160th Street
Telephone	Cleveland, OH 44135 216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator
2. Hazard(s) identification	
Physical hazards	Not classified.
Health hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. The thermal decomposition vapors of fluorinated polymers may cause polymer fume fever.

#### 3. Composition/information on ingredients

#### Mixtures

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Chemical name	CAS number	%	
Petroleum-based Lubricating Oil	64741-88-4	30-60	
Kaolin	1332-58-7	10-30	
Talc	14807-96-6	10-30	
Magnesium carbonate	546-93-0	1-10	
Poly (P-phenylenediamine terephthalamide)	26125-61-1	1-5	
Titanium Dioxide	13463-67-7	1-5	
Silica, amorphous, fumed	112945-52-5	0.5-1.5	

Crystalline silica (Quartz)	14808-60-7	<1

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures	
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
6. Accidental release meas	sures
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water.
containinent and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

#### 8. Exposure controls/personal protection

#### Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3 15 mg/m3	Respirable fraction. Total dust.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Туре	Value	Form
PEL	5 mg/m3	Respirable fraction.
PEL	15 mg/m3 5 mg/m3	Total dust. Mist.
	2000 mg/m3	
	-	
PEL	15 mg/m3	Total dust.
·	Value	Form
		Total dust.
	·	
730/0	-	Respirable. Total dust.
IVVA	-	Respirable.
	-	neopilavie.
	••	Respirable.
nit Values	2.4 mppor	neopiiane.
Туре	Value	Form
TWA	0.025 mg/m3	Respirable fraction.
TWA	2 mg/m3	Respirable fraction
TWA	5 mg/m3	Inhalable fraction.
TWA	2 mg/m3	Respirable fraction.
TWA	10 mg/m3	
to Chemical Hazards		
to Chemical Hazards Type	Value	Form
	Value 0.05 mg/m3	Form Respirable dust.
Type TWA	0.05 mg/m3	Respirable dust.
Туре	0.05 mg/m3 5 mg/m3	Respirable dust. Respirable.
Type TWA TWA	0.05 mg/m3 5 mg/m3 10 mg/m3	Respirable dust. Respirable. Total
Type TWA	0.05 mg/m3 5 mg/m3	Respirable dust. Respirable.
Type TWA TWA	0.05 mg/m3 5 mg/m3 10 mg/m3	Respirable dust. Respirable. Total
Type TWA TWA	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3	Respirable dust. Respirable. Total Respirable.
Type TWA TWA TWA STEL	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3	Respirable dust. Respirable. Total Respirable. Total Mist.
Type TWA TWA TWA STEL TWA	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3 5 mg/m3	Respirable dust. Respirable. Total Respirable. Total Mist.
Type TWA TWA TWA STEL TWA TWA	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3 5 mg/m3 2 mg/m3	Respirable dust. Respirable. Total Respirable. Total Mist.
Type TWA TWA TWA STEL TWA TWA No biological exposure limits noted fo	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3 5 mg/m3 2 mg/m3 r the ingredient(s).	Respirable dust. Respirable. Total Respirable. Total Mist. Mist. Respirable.
Type TWA TWA TWA STEL TWA TWA	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3 10 mg/m3 r the ingredient(s). air changes per hour) should be oplicable, use process enclosure ain airborne levels below recom	Respirable dust. Respirable. Total Respirable. Total Mist. Mist. Respirable. e used. Ventilation rates es, local exhaust ventilation mended exposure limits. It
Type TWA TWA TWA STEL TWA TWA No biological exposure limits noted fo Good general ventilation (typically 10 should be matched to conditions. If an or other engineering controls to maint	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3 10 mg/m3 r the ingredient(s). air changes per hour) should be oplicable, use process enclosure ain airborne levels below recom shed, maintain airborne levels to	Respirable dust. Respirable. Total Respirable. Total Mist. Mist. Respirable. e used. Ventilation rates es, local exhaust ventilation mended exposure limits. It
Type TWA TWA TWA STEL TWA No biological exposure limits noted fo Good general ventilation (typically 10 should be matched to conditions. If ap or other engineering controls to maint exposure limits have not been established	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3 10 mg/m3 r the ingredient(s). air changes per hour) should be oplicable, use process enclosure ain airborne levels below recom shed, maintain airborne levels to ent	Respirable dust. Respirable. Total Respirable. Total Mist. Mist. Respirable. e used. Ventilation rates es, local exhaust ventilation mended exposure limits. If
Type TWA TWA TWA TWA STEL TWA No biological exposure limits noted fo Good general ventilation (typically 10 should be matched to conditions. If an or other engineering controls to maint exposure limits have not been establis s, such as personal protective equipment	0.05 mg/m3 5 mg/m3 10 mg/m3 5 mg/m3 10 mg/m3 10 mg/m3 10 mg/m3 r the ingredient(s). air changes per hour) should be oplicable, use process enclosure ain airborne levels below recom shed, maintain airborne levels to ent	Respirable dust. Respirable. Total Respirable. Total Mist. Mist. Respirable. e used. Ventilation rates es, local exhaust ventilation mended exposure limits. In
	PEL PEL PEL FR 1910.1000) Type TWA TWA TWA TWA TWA TWA TWA	PEL         5 mg/m3           PEL         15 mg/m3           PEL         2000 mg/m3           500 ppm         15 mg/m3           FR 1910.1000)         15 mg/m3           FFR 1910.1000)         TVVA           TVVA         0.3 mg/m3           0.1 mg/m3         0.1 mg/m3           TVVA         0.3 mg/m3           0.1 mg/m3         20 mppcf           2.4 mppcf         2.4 mppcf           TVVA         0.025 mg/m3           TVVA         2 mg/m3           TVVA         5 mg/m3

Other	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

#### 9. Physical and chemical properties

· · · ·	
Appearance	х •
Physical state	Liquid.
Form	Liquid paste.
Color	Blue.
Odor	Odoriess.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 212.0 °F (> 100.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.2 g/cm3
Solubility(ies)	
Solubility (water)	Slightly Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	30000 cP
Other information	
VOC (Weight %)	4 g/l

#### 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Acids.
Hazardous decomposition products	No hazardous decomposition products are known.

#### 11. Toxicological information

#### Information on likely routes of exposure

Inha	alation	Prolonged inhalation may be harmful.	
Hercules	Megaloc		
924536	Version #: 01	Revision date: -	Issue date: 05-February-2015

<b></b>			
Skin contact	No adverse effects due to skin contact are expected.		
Eye contact	Direct contact with eyes may cause temporary irritation.		
Ingestion	Expected to be a low ingestion hazard.		
Symptoms related to the physical, chemical and toxicological characteristics	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.		
Information on toxicological eff	fects		
Acute toxicity	Not available.		
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.		
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.		
Respiratory or skin sensitization			
Respiratory sensitization	Not a respiratory sensitizer.		
Skin sensitization	This product is not expected to cause skin sensitization.		
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity	In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)		
IARC Monographs. Overall	Evaluation of Carcinogenicity		
Crystalline silica (Quartz) Petroleum-based Lubrica Titanium Dioxide (CAS 1 NTP Report on Carcinogens	ating Oil (CAS 64741-88-4)3 Not classifiable as to carcinogenicity to humans.13463-67-7)2B Possibly carcinogenic to humans.		
Crystalline silica (Quartz) Petroleum-based Lubrica			
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.		
Specific target organ toxicity - single exposure	Not classified.		
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	Not an aspiration hazard.		
	Not an aspiration hazard.		
Chronic effects	Not an aspiration hazard. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.		
Chronic effects Further information			
	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. This product has no known adverse effect on human health.		
Further information	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. This product has no known adverse effect on human health.		
Further information 12. Ecological information	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. This product has no known adverse effect on human health. <b>n</b> The product is not classified as environmentally hazardous. However, this does not exclude the		
Further information 12. Ecological information Ecotoxicity	<ul> <li>Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.</li> <li>This product has no known adverse effect on human health.</li> <li>n</li> <li>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.</li> </ul>		
Further information <b>12. Ecological information</b> Ecotoxicity Persistence and degradability	<ul> <li>Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.</li> <li>This product has no known adverse effect on human health.</li> <li>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. No data is available on the degradability of this product.</li> </ul>		
Further information 12. Ecological information Ecotoxicity Persistence and degradability Bioaccumulative potential	<ul> <li>Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.</li> <li>This product has no known adverse effect on human health.</li> <li><b>n</b></li> <li>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. No data is available on the degradability of this product.</li> <li>No data available.</li> </ul>		
Further information <b>12. Ecological information</b> Ecotoxicity Persistence and degradability Bioaccumulative potential Mobility in soil	<ul> <li>Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. This product has no known adverse effect on human health.</li> <li><b>n</b></li> <li>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. No data is available on the degradability of this product. No data available.</li> <li>No data available.</li> <li>No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.</li> </ul>		
Further information <b>12. Ecological information</b> Ecotoxicity Persistence and degradability Bioaccumulative potential Mobility in soil Other adverse effects	<ul> <li>Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. This product has no known adverse effect on human health.</li> <li><b>n</b></li> <li>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. No data is available on the degradability of this product. No data available.</li> <li>No data available.</li> <li>No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.</li> </ul>		
Further information <b>12. Ecological information</b> Ecotoxicity Persistence and degradability Bioaccumulative potential Mobility in soil Other adverse effects <b>13. Disposal consideration</b>	<ul> <li>Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. This product has no known adverse effect on human health.</li> <li>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. No data is available on the degradability of this product. No data available. No data available. No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.</li> </ul>		
Further information 12. Ecological information Ecotoxicity Persistence and degradability Bioaccumulative potential Mobility in soil Other adverse effects 13. Disposal consideration Disposal instructions	<ul> <li>Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. This product has no known adverse effect on human health.</li> <li>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. No data is available on the degradability of this product. No data available. No data available. No data available. No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.</li> <li><b>ns</b> Collect and reclaim or dispose in sealed containers at licensed waste disposal site.</li> </ul>		

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

#### 14. Transport information

#### DOT

Not regulated as dangerous goods.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not established. Annex II of MARPOL 73/78 and the IBC Code

#### 15. Regulatory information

US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

На

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

zard categories	Immediate Hazard - No
Ū	Delayed Hazard - No
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous No

chemical

SARA 313 (TRI reporting) Not regulated.

#### Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated. (SDWA)

#### **US state regulations**

#### US. Massachusetts RTK - Substance List

Crystalline silica (Quartz) (CAS 14808-60-7) Kaolin (CAS 1332-58-7) Magnesium carbonate (CAS 546-93-0) Petroleum-based Lubricating Oil (CAS 64741-88-4) Talc (CAS 14807-96-6) Titanium Dioxide (CAS 13463-67-7)

#### US. New Jersey Worker and Community Right-to-Know Act

Crystalline silica (Quartz) (CAS 14808-60-7) Kaolin (CAS 1332-58-7) Magnesium carbonate (CAS 546-93-0) Talc (CAS 14807-96-6) Titanium Dioxide (CAS 13463-67-7)

#### US. Pennsylvania Worker and Community Right-to-Know Law

Crystalline silica (Quartz) (CAS 14808-60-7) Kaolin (CAS 1332-58-7) Talc (CAS 14807-96-6) Titanium Dioxide (CAS 13463-67-7)

US. Rhode Island RTK

Not regulated.

#### **US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

#### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Crystalline silica (Quartz) (CAS 14808-60-7) Di-"isononyl" phthalate (CAS 28553-12-0) Titanium Dioxide (CAS 13463-67-7)

#### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

Issue date	05-February-2015	
Revision date	-	
Version #	01	
HMIS® ratings	Health: 0 Flammability: 1 Physical hazard: 0	
	<b>A</b>	

NFPA ratings



#### Disclaimer

HCC Holdings Inc. an Oatey Affiliate cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

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Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

#### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name VG 181 Gray

Synonyms Sealant

Chemical Family Water based mastic

Product Use Duct sealant

**Restrictions on Use** For industrial use only.

Manufacturer Information

Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com

Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance - 972-442-6545 Technical Assistance - 888-229-2199 Customer Service - 888-229-0199Service - 888-229-0199

Section 2 - HAZARDS IDENTIFICATION

#### Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Reproductive Toxicity - Category 1B Specific Target Organ Toxicity - Single Exposure - Category 1 (body, central nervous system, systemic toxicity, eyes ) Specific Target Organ Toxicity - Repeated Exposure - Category 1 (eyes, central nervous system)

#### **GHS Label Elements**

Symbol(s)



Signal Word Danger







Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

Hazard Statement(s) May damage fertility or the unborn child Causes damage to organs Causes damage to organs through prolonged or repeated exposure

#### Precautionary Statement(s)

#### Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapours/spray Wash thoroughly after handling Do not eat, drink or smoke when using this product

#### Response

If exposed: Call a POISON CENTER or doctor/physician Get medical advice/attention if you feel unwell Specific treatment (see label)

#### Storage

Store locked up

#### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

#### Other Hazards

No additional information available.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	De-foaming agent	0.1-1
Trade Secret	Nonylphenol polyethylene glycol ether	0.1-1
Mixture	Polymer, ethyl acrylate and methacrylic acid	0.1-1
Mixture	Acrylic polymer	0.1-1
Mixture	Polycarboxylate salt	0.1-1
107-21-1	Ethylene glycol	0.1-1
Mixture	Fuller's earth	0.1-1
1317-65-3	Limestone	15-40







Material Name: VG 181 Gray

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67-56-1	Methanol 1-5	
Mixture	4,4-Dimethyloxazolidine 0.1-1	
7664-41-7	Ammonia 0.1-1	
Trade Secret	Aluminium trihydroxide 10-30	
Trade Secret	Polyester fibers 0.1-1	

#### Section 4 - FIRST AID MEASURES

#### **Description of Necessary Measures**

If exposed or concerned: Call a POISON CENTER or doctor/physician.

#### Inhalation

Remove person to fresh air and keep comfortable for breathing. Get medical attention, if needed.

#### Skin

Wash exposed skin with soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

#### Eves

Flush eyes with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

#### Ingestion

Do NOT induce vomiting. If swallowed, get medical attention.

#### Indication of any immediate medical attention and special treatment needed Treat symptomatically and supportively.

#### Most Important Symptoms/Effects

#### Acute

Causes damage to central nervous system, body, eyes, systemic toxicity.

#### Delayed

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

#### Note to Physicians

Contains. ethylene glycol, methanol

#### Section 5 - FIRE FIGHTING MEASURES

#### **Extinguishing Media**

#### Suitable Extinguishing Media

Use dry chemical, carbon dioxide, alcohol-resistant foam or water spray.







Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

Unsuitable Extinguishing Media None reported.

Special Hazards Arising from the Chemical Slight fire hazard. Sealed containers may rupture or explode if exposed to heat.

#### **Hazardous Combustion Products**

Oxides of carbon, oxides of nitrogen, hydrocarbons

#### Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Do not inhale any material or combustion by-products.

#### **Fire Fighting Measures**

Remove product from area of fire. Stay upwind and keep out of low areas.

#### Section 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

#### Methods and Materials for Containment and Cleaning Up

Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

#### **Environmental Precautions**

Avoid release to the environment.

#### Section 7 - HANDLING AND STORAGE

#### **Precautions for Safe Handling**

This product contains crystalline silica, which is a known carcinogen: Do not grind or sand. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

### Conditions for Safe Storage, Including any Incompatibilities

#### Store locked up

Store in a well-ventilated place. Store above 0 C. Store below 45 C. When not in use, keep containers tightly closed. Do not cut, puncture, or weld on or near this container. Keep away from incompatible materials.

#### **Incompatible Materials**

Strong acids, strong oxidizing agents







Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Component Exposure Limits** 107-21-1 Ethylene glycol 100 mg/m3 Ceiling aerosol only ACGIH: 40 ppm STEL; 104 mg/m3 STEL 20 ppm TWA; 52 mg/m3 TWA Europe: Possibility of significant uptake through the skin 100 mg/m3 Ceiling aerosol Mexico: 14808-60-7 Silica, crystalline 0.025 mg/m3 TWA respirable fraction ACGIH: 50 mg/m3 IDLH respirable dust 0.05 mg/m3 TWA respirable dust NIOSH: ((30)/(%SiO2 + 2) mg/m3 TWA) total dust; ((250)/(%SiO2 + 5) mppcf TWA) respirable fraction; ((10)/(%SiO2 + 2) mg/m3 TWA) respirable fraction OSHA (US): 0.1 mg/m3 TWA LMPE-PPT respirable fraction Mexico: 1317-65-3 Limestone 10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust NIOSH: 15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction OSHA (US): 20 mg/m3 STEL [LMPE-CT] 10 mg/m3 TWA LMPE-PPT Mexico: 67-56-1 Methanol 250 ppm STEL 200 ppm TWA ACGIH: Skin - potential significant contribution to overall exposure by the cutaneous route 250 ppm STEL; 325 mg/m3 STEL 200 ppm TWA; 260 mg/m3 TWA NIOSH: Potential for dermal absorption 6000 ppm IDLH 200 ppm TWA; 260 mg/m3 TWA Europe:







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	Possibility of significant uptake through the skin		
OSHA (US):	200 ppm TWA; 260 mg/m3 TWA		
Mexico:	200 ppm TWA LMPE-PPT; 260 mg/m3 TWA LMPE-PPT		
	250 ppm STEL [LMPE-CT]; 310 mg/m3 STEL [LMPE-CT]		
	Skin - potential for cutaneous absorption		
Ammonia	7664-41-7		
ACGIH:	25 ppm TWA 35 ppm STEL		
NIOSH:	25 ppm TWA; 18 mg/m3 TWA 35 ppm STEL; 27 mg/m3 STEL		
	300 ppm IDLH		
Europe:	20 ppm TWA; 14 mg/m3 TWA50 ppm STEL; 36 mg/m3 STEL		
OSHA (US):	50 ppm TWA; 35 mg/m3 TWA		
Mexico:	25 ppm TWA LMPE-PPT; 18 mg/m3 TWA LMPE-PPT		
	35 ppm STEL [LMPE-CT]; 27 mg/m3 STEL [LMPE-CT]		

#### **Biological limit value**

There are no biological limit values for any of this product's components.

#### **Engineering Controls**

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

### Individual Protection Measures, such as Personal Protective Equipment

#### **Eye/face protection**

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

#### **Skin Protection**

Wear appropriate work clothing.

#### **Respiratory Protection**

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

#### **Glove Recommendations**

Wear protective gloves. Recommended material: Hycron(R), neoprene, nitrile.







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Product #: 305057-1 gal 305058-2 gal 305056-11 oz

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	thick gray paste	Physical State	solid
Odor	Slight,ammonia	Color	gray
Odor Threshold	Not available	рН	8 - 9
Melting Point	Not available	<b>Boiling Point</b>	212 °F
Freezing point	Not available	Evaporation Rate	24 - 28 % volatile
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	17 mmHg (@ 20 °C)
Vapor Density (air=1)	<1	Specific Gravity (water=1)	Not available
Water Solubility	soluble	Partition coefficient: n- octanol/water	Not available
Viscosity	thixotropic (@ 77 °F)	Solubility (Other)	Not available
Density	1.39 (relative)	VOC	38 g/L (SCAQMD calculation method)

#### Other Information

No additional information available.

### Section 10 - STABILITY AND REACTIVITY

#### Reactivity

No reactivity hazard is expected.

#### **Chemical Stability**

Stable under normal conditions of use.

### Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

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Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

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**Conditions to Avoid** 

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

**Incompatible Materials** strong acids, strong oxidizing agents

Hazardous decomposition products Oxides of carbon, oxides of nitrogen, hydrocarbons

#### Section 11 - TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

#### Inhalation

May cause adverse effects on the central nervous system.

#### Skin Contact

May cause mild skin irritation.

#### **Eve Contact**

May cause mild eye irritation.

#### Ingestion

Methanol can produce blindness with onset of symptoms being delayed for 18-24 hours.

#### Acute and Chronic Toxicity

#### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published: Ethylene-vinyl acetate copolymer (Trade Secret) Oral LD50 Rat >2000 mg/kg

Epoxidized soybean oil (Trade Secret) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >20 mL/kg

De-foaming agent (Trade Secret) Oral LD50 >2000 mg/kg

Nonylphenol polyethylene glycol ether (Trade Secret) Oral LD50 Rat 2780 mg/kg Chlorinated paraffins (Trade Secret) Oral LD50 Rat >4000 mg/kg

Polymer, ethyl acrylate and methacrylic acid (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg

Acrylic polymer (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg







Material Name: VG 181 Gray

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Polycarboxylate salt (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >2000 mg/kg

Ethylene glycol (107-21-1) Oral LD50 Rat 4700 mg/kg Dermal LD50 Rat 10600 mg/kg Inhalation LC50 Rat >200 mg/m3 vapor 4 hr

Silica, crystalline (14808-60-7) Oral LD50 Rat 500 mg/kg

Limestone (1317-65-3) Oral LD50 Rat 6450 mg/kg

Methanol (67-56-1) Oral LD50 Rat 6200 mg/kg Inhalation LC50 Rat 22500 ppm 8 h

4,4-Dimethyloxazolidine (Mixture) Oral LD50 Rat 1037 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat 1.1 mg/L 4 hr

Ammonia (7664-41-7) Oral LD50 Rat 350 mg/kg Inhalation LC50 Rat 2000 ppm 4 hr

Aluminium trihydroxide (Trade Secret) Oral LD50 Rat >5000 mg/kg

#### **Immediate Effects**

Causes damage to central nervous system, body, eyes, systemic toxicity.

#### **Delayed Effects**

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

#### Irritation/Corrosivity Data

May cause mild skin irritation. May cause mild eye irritation.

**Respiratory Sensitization** No data available.

#### **Dermal Sensitization** No data available.

#### **Component Carcinogenicity**

Chlorinated	Trade Secret
paraffins	







Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

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IARC:	Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man)
OSHA:	Present
Ethylene glycol	107-21-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Silica, crystalline	14808-60-7
ACGIH:	A2 - Suspected Human Carcinogen
LARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen (respirable size)
DFG:	Category 1 (causes cancer in man, alveola fraction)
OSHA:	Present (respirable size)

### Germ Cell Mutagenicity

No data available.

**Reproductive Toxicity** May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure central nervous system, body, systemic toxicity, eyes

Specific Target Organ Toxicity - Repeated Exposure central nervous system, eyes

### Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure No data available.

Additional Data No additional information available.

Section 12 - ECOLOGICAL INFORMATION

#### Ecotoxicity

Avoid release to the environment.







Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

that one vinv acetale copulyment	Trade Secret
Fish:	LC50 96 hr Cyprinus carpio >1000 mg/kg
Cnoxidized soydean on	Trade Secret
Fish:	LC50 48 hr Fish 900 mg/L
Algae:	EC50 72 h Desmodesmus subspicatus 8 mg/L IUCLID
Invertebrate:	EC50 24 hr Daphnia >100 mg/L
Chlorinated paraffins	Trade Secret
Fish:	LC50 96 h Lepomis macrochirus >300 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.0109 mg/L [flow- through]; LC50 96 h Oncorhynchus mykiss 94.5 - 271 mg/L [static]; LC50 96 h Lepomis macrochirus >0.1 mg/L [flow-through] LC50 96 h Pimephales promelas >100 mg/L [static]
Invertebrate:	EC50 48 hr Daphnia magna 0.0059 mg/L
Polymer, ethyl acrylate and methacrylic acid	Mixture
Fish:	
Invertebrate	EC50 48 hr Daphnia magna >1000 mg/L
	107-21-1
Ethylene glycol Fish	LC50 96 h Oncorhynchus mykiss 41000 mg/L; LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static]; LC50 96 h Lepomis macrochirus 27540 mg/L [static]; LC50 96 h Oncorhynchus mykiss 40761 mg/L [static]; LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static]; LC50 96 h Poecilia reticulata 16000 mg/L [static]
Alga	e: EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L IUCLID







Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

Invertebrate:	EC50 48 h Daphnia magna 46300 mg/L IUCLID
Methanol	67-56-1
Fish:	LC50 96 h Pimephales promelas 28200 mg/L [flow- through]; LC50 96 h Pimephales promelas >100 mg/L [static]; LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static]; LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow through]
Ammonia	7664-41-7
Fish:	LC50 96 h Cyprinus carpio 0.44 mg/L; LC50 96 h Lepomis macrochirus 0.26 - 4.6 mg/L; LC50 96 h Lepomis macrochirus 1.17 mg/L [flow-through] LC50 96 h Pimephales promelas 0.73 - 2.35 mg/L; LC50 96 h Pimephales promelas 5.9 mg/L [static]; LC50 96 h Poecilia reticulata >1.5 mg/L; LC50 96 h Poecilia reticulata 1.19 mg/L [static]
Invertebrate:	LC50 48 h Daphnia magna 25.4 mg/L IUCLID

### Persistence and Degradability

No information available for the product.

### **Bioaccumulative Potential**

No information available for the product.

#### Mobility

No information available for the product.

#### **Other Toxicity**

No additional information available.

### Section 13 - DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with local/regional/national/international regulations.

Print date: 2016-02-17

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DYNAR NICT HARDWARE &

Safety Data Sheet

Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

### Section 14 - TRANSPORT INFORMATION

**US DOT Information:** UN/NA #: Not regulated

IATA Information: UN#: Not regulated

**TDG Information:** UN#: Not regulated

## Section 15 - REGULATORY INFORMATION

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ethylene glycol	107-21-1							
SARA 313:	1 % de minimis concentration							
CERCLA:	5000 lb final RQ; 2270 kg final RQ							
Methanol	67-56-1							
SARA 313:	1 % de minimis concentration							
CERCLA:	5000 lb final RQ; 2270 kg final RQ							
Ammonia	7664-41-7							
SARA 302:	500 lb TPQ							
SARA 313:	<ul> <li>500 lb TPQ</li> <li>1 % de minimis concentration (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)</li> </ul>							
CERCLA:	100 lb final RQ; 45.4 kg final RQ							
OSHA (safety):	10000 lb TQ anhydrous); 15000 lb TQ solution, >44% Ammonia by weight)							
SARA 304:	100 lb EPCRA RQ an 311/312 (40 CFR 370 Subparts B and C)							

SARA Section 311/312 (40 CFR 370 S Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No







Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

### **U.S. State Regulations**

mponents appear on one or more of the following state hazardous substances lists:

The following compone	mis appear on		[]			
Component	CAS	CA	MA	MN	NJ	PA
	Trade Secret	No	Yes	No	No	No
Chlorinated paraffins	l	 		Yes	Yes	Yes
Ethylene glycol	107-21-1	Yes	Yes	res	105	105
Silica, crystalline	14808-60-7	No	Yes	Yes	Yes	Yes
	1317-65-3	No	Yes	Yes	Yes	Yes
Limestone	1317-05-5				N.	Yes
Methanol	67-56-1	Yes	Yes	Yes	Yes	105
	7664-41-7	Yes	Yes	Yes	Yes	Yes
Ammonia	/00/		1		_ <u>_</u>	

The following statement(s) are provided under the California Safe Drinking Water and Toxic

Enforcement Act of 1986 (Proposition 65): WARNING! This product contains a chemical known to the state of California to cause cancer WARNING! This product contains a chemical known to the state of California to cause

productive/developmental effects

reproductive/ucvero	pineireir
Silica, crystalline	14808-60-7
Carc:	carcinogen, initial date 10/1/88 (airborne particles of respirable size)
Methanol	67-56-1
	initial date 3/16/12
Repro/Dev. Tox	Development

Canadian WHMIS Ingredient Disclosure List (IDL) Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present the threshold limits listed on the IDL

mints nated er
107-21-1
1 %
14808-60-7
1%
67-56-1
1 %
7664-41-7
1 %





DYNAIR DUCT HARDWARE & NEXUS FLANGE

### Safety Data Sheet

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

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Material Name: VG 181 Gray

Col	np	onent	Analys	sis - 11 ate coi	polym	er (Trade Se	cret)	T	<u> </u>			1
Em						JP -	JP -	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
U	5	CA	EU	AU	PH	ENCS	ISHL		No	Yes	Yes	Yes
Y	es	DSL	ELN	Yes	Yes	Yes	No	Yes	10	1105		<u> </u>

Enoxidized soybean	<b>ai1</b>	(Trade	Secret)
Enovidized sovbean	on	(IIauc	000100)

]	Epoxic	lized s	oybea	1011	Trade	50011)		KR -	KR -	CN	NZ	MX	
					DIT	JP -	JP -	KECI/KECL	TCCA	CI	112	1	
	US	CA	EU	AU	PH	ENCS	ISHL	KECI/KECL	1001		· · · · ·		1
					l 	l 		Yes	No	Yes	Yes	Yes	
	Yes	DSL	EIN	Yes	Yes	No	No	res		<u> </u>	<u> </u>		1
	100				1	1							

## Nonylphenol polyethylene glycol ether (Trade Secret)

TurnentoW

	CA		AU	PH	JP -	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
US	CA	БО	110		ENCS			27.	Yes	Yes	No	
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	103	100		]

Ch	lori	nated r	oaraffi	ns (Tr	ade Se	ecret)			KR -				
			EU	AU	PH	JP -		KR - KECI/KECL	TCCA	CN.	NZ	MX	ļ
U	S	CA	EU	AU		ENCS	ISHL		No	Yes	Yes	Yes	
Y	es	DSL	EIN	Yes	Yes	Yes	No	Yes			l	]	ł

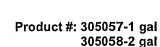
Poly	mer. eth	yl acı	ylate	and m	ethacrylic ac	id (Mixture	)	IVD.				
US	CA	EU		PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
03			 	1		No	Yes	No	Yes	Yes	Yes	
Ye	s DSL	No	Yes	Yes	Yes	NO	105	<u> </u>	<u>'</u>			

E	thyle	ne gly	col (10	)7-21-	1)			WD.	KR -	CNI	NZ	MX
Γ		CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	TCCA	CN	112	14121
				 	·		No	Yes	No	Yes	Yes	Yes
	Yes	DSL	EIN	Yes	Yes	Yes	INO	105	l	<u></u>		

Ful	ller'	s earth	(Mix	ture)	·			WD '	KR -	CNI	NZ	MX
U	c	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	TCCA	CN	182.	14121
	5				1		No	Yes	No	Yes	Yes	Yes
Y	es	DSL	No	Yes	Yes	No	INO	100	[			







Material Name: VG 181 Gray

305058-2 gal 305056-11 oz

Silica, crystalline (14808-60-7)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Limestone (1317-65-3)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Methanol (67-56-1)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### 4,4-Dimethyloxazolidine (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

#### Ammonia (7664-41-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Aluminium trihydroxide (Trade Secret)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Section 16 - OTHER INFORMATION

#### **HMIS** Rating

Health: 1\* Fire: 1 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard





Material Name: VG 181 Gray

Product #: 305057-1 gal 305058-2 gal 305056-11 oz

#### **NFPA Ratings**

Health: 1 Fire: 1 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes New SDS: May 15, 2015

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

#### **Other Information**

#### Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.





15 pg:

### Safety Data Sheet

#### Material Name: Sure-Grip 404

Product #: 302014

#### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name Sure-Grip 404 Synonyms Solvent-based mastic Chemical Family Mastic Product Use Duct sealant Restrictions on Use

For industrial use only

#### **Manufacturer Information**

Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com

#### Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545 Technical Assistance – 888-229-2199 Customer Service – 888-229-0199

#### Section 2 - HAZARDS IDENTIFICATION

#### Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2 Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Eye Irritation - Category 2A Reproductive Toxicity - Category 1A Specific Target Organ Toxicity - Repeated Exposure - Category 2

#### **GHS Label Elements**

Symbol(s)









Product #: 302014

### Safety Data Sheet

#### Material Name: Sure-Grip 404

Signal Word Danger

#### Hazard Statement(s)

Highly flammable liquid and vapor Causes skin irritation Causes serious eye irritation May damage fertility or the unborn child May cause damage to organs through prolonged or repeated exposure

#### **Precautionary Statement(s)**

#### Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Keep container tightly closed Keep away from heat/sparks/open flame/hot surfaces - No smoking Ground/Bond container and receiving equipment Use explosion-proof electrical/ventilating/lighting equipment Take precautionary measures against static discharge Use only non-sparking tools Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapours/spray Wash thoroughly after handling

#### Response

In case of fire: Use appropriate media to extinguish

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse

Specific treatment (see label)

#### Storage

Store in a well-ventilated place. Keep container tightly closed Keep cool Store locked up

#### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

#### **Other Hazards**

No additional information available.

Statement(s)







#### Material Name: Sure-Grip 404

Product #: 302014

#### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	Styrene butadiene polymer	5-10
Trade Secret	Polyphenol antioxidant	0.1-1
1314-13-2	Zinc oxide	1-5
21645-51-2	Aluminum hydroxide	5-10
108-88-3	Toluene	7-13
64742-89-8	Heptane	10-30

#### Section 4 - FIRST AID MEASURES

#### **Description of Necessary Measures**

IF exposed or concerned: Get medical advice/attention.

#### Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

#### Skin

Remove/Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs, get medical advice/attention.

#### Eyes

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

#### Ingestion

If swallowed, get medical attention. Do NOT induce vomiting.

#### **Indication of any immediate medical attention and special treatment needed** Treat symptomatically and supportively.

#### Most Important Symptoms/Effects

#### Acute

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause gastrointestinal irritation.

#### Delayed

May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure: kidney, liver.







#### Material Name: Sure-Grip 404

#### Note to Physicians

Contains organic solvents: heptane, toluene.

#### Section 5 - FIRE FIGHTING MEASURES

#### **Extinguishing Media**

#### Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective. Use water spray to keep containers cool.

**Unsuitable Extinguishing Media** Do not use high-pressure water streams.

#### Special Hazards Arising from the Chemical

Can burn and explode easily when exposed to open flames or high heat.

#### **Hazardous Combustion Products**

oxides of carbon, oxides of nitrogen

#### **Special Protective Equipment and Precautions for Firefighters**

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

#### **Fire Fighting Measures**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

#### **Personal Precautions, Protective Equipment and Emergency Procedures** Wear personal protective clothing and equipment, see Section 8.

#### Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Use non-sparking tools. Dike for later disposal.

#### **Environmental Precautions**

Avoid release to the environment.

#### Section 7 - HANDLING AND STORAGE

#### **Precautions for Safe Handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flame/hot surfaces - No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do

Product #: 302014







#### Material Name: Sure-Grip 404

Product #: 302014

not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

## Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Keep away from incompatible materials. Do not cut, puncture, or weld on or near this container.

### **Incompatible Materials**

Strong oxidizing agents, acids, bases

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

## **Component Exposure Limits**

Limestone	1317-65-3					
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust					
OSHA (US):	15 mg/m3 TWA total dust; 5 mg/m3 TWA	A respirable fraction				
Mexico:	10 mg/m3 TWA LMPE-PPT   20 mg/m3 STEL [LMPE-CT]					
Zinc oxide	1314-13-2					
ACGIH:	2 mg/m3 TWA respirable fraction	10 mg/m3 STEL respirable fraction				
NIOSH:	5 mg/m3 TWA dust and fume	10 mg/m3 STEL fume				
	15 mg/m3 Ceiling dust	500 mg/m3 IDLH				
OSHA (US):	5 mg/m3 TWA fume; 15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction					
Mexico:	5 mg/m3 TWA LMPE-PPT fume; 10 mg/m3 TWA LMPE-PPT dust					
	10 mg/m3 STEL [LMPE-CT] fume					
Clay	1332-58-7					
ACGIH:	2 mg/m3 TWA particulate matter containing no asbestos and <1% crystalline silica, respirable fraction					
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust					
OSHA (US):	15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction					

& HARDCAST

## Material Name: Sure-Grip 404

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al Name: Sure-Gri	p 404	Floudet #.				
Mexico:	10 mg/m3 TWA LMPE-PPT	20 mg/m3 STEL [LMPE-CT]				
		·····				
Silica gel	112926-00-8					
ACGIH:	10 mg/m3 TLV-TWA					
NIOSH:	6 mg/m3 TWA	3000 mg/m3 IDLH				
OSHA (US):	20 mppcf TWA; ((80)/(% SiO2) mg/m.	3 TWA)				
Mexico:	10 mg/m3 TWA LMPE-PPT					
Toluene	108-88-3					
ACGIH:	20 ppm TWA	150 ppm STEL				
NIOSH:	100 ppm TWA; 375 mg/m3 TWA	150 ppm STEL; 560 mg/m3 STEL				
	500 ppm IDLH					
Europe:	50 ppm TWA; 192 mg/m3 TWA	100 ppm STEL; 384 mg/m3 STEL				
-	Possibility of significant uptake through	h the skin				
OSHA (US):	200 ppm TWA	150 ppm STEL				
	300 ppm Ceiling					
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m3 TWA LMPE-PPT					
	Skin - potential for cutaneous absorptio	n				
Heptane	64742-89-8					
NIOSH:	85 ppm TWA	440 ppm STEL				
	500 ppm IDLH	· · · · · · · · · · · · · · · · · · ·				
OSHA (US):	400 ppm TWA	500 ppm STEL				

## **Biological limit value**

There are no biological limit values for any of this product's components.

**Engineering Controls** Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.







## Material Name: Sure-Grip 404

Product #: 302014

## Individual Protection Measures, such as Personal Protective Equipment

## **Eye/face** protection

Safety glasses or goggles are recommended when there is a potential for eye contact. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

## **Skin Protection**

Wear appropriate work clothing. Wear protective shoes. Recommended material: protective skin cream.

## **Respiratory Protection**

In case of inadequate ventilation wear respiratory protection. Appropriate respirator selection should be made by a qualified professional as part of a comprehensive respiratory protection program as described in 29 CFR 1910.134.

### **Glove Recommendations**

Wear protective gloves. Recommended material: nitrile.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

	T		
Appearance	gray mastic	Physical State	solid
Odor	mild,hydrocarbon odor	Color	gray
Odor Threshold	Not available	рН	Not available
Melting Point	-95 °C (-139 °F)	Boiling Point	90 - 111 °C (194-231 °F)
Freezing point	Not available	Evaporation Rate	3
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	230 °C (475 °F)	Flash Point	-7.2 °C (19 °F)
Lower Explosive Limit	1 %	Decomposition	Not available
Upper Explosive Limit	7 %	Vapor Pressure	45 mmHg
Vapor Density (air=1)	3.4	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n- octanol/water	Not available
Viscosity	450000 cps	Solubility (Other)	Hydrocarbons
Density	1 - 1.2 (relative)	VOC	395 g/L
Volatility by Weight	30 - 40 %		

## **Other Information**

No additional information available.







#### Material Name: Sure-Grip 404

Product #: 302014

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## Section 10 - STABILITY AND REACTIVITY

**Reactivity** No reactivity hazard is expected.

Chemical Stability Stable under normal conditions of use.

**Possibility of Hazardous Reactions** Hazardous polymerization will not occur.

**Conditions to Avoid** Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials Strong oxidizing agents, acids, bases

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

Section 11 - TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

### Inhalation

May cause respiratory irritation.

## Skin Contact

Causes skin irritation.

### **Eye Contact**

Causes serious eye irritation.

**Ingestion** May cause gastrointestinal irritation.

## Acute and Chronic Toxicity

## Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Polyphenol antioxidant (Trade Secret) Oral LD50 Rat >200 mg/kg Dermal LD50 Rabbit >5010 mg/kg Inhalation LC50 Rat >165 mg/L 1 h

Zinc oxide (1314-13-2) Oral LD50 Rat >5000 mg/kg

Aluminum hydroxide (21645-51-2) Oral LD50 Rat >5000 mg/kg







Product #: 302014

## Material Name: Sure-Grip 404

Toluene (108-88-3) Oral LD50 Rat 2600 mg/kg

Dermal LD50 Rabbit 12000 mg/kg Inhalation LC50 Rat 12.5 mg/L 4 h

Heptane (64742-89-8)

Oral LD50 Mouse 5000 mg/kg Dermal LD50 Rabbit 3000 mg/kg

## **Immediate Effects**

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause gastrointestinal irritation.

### **Delayed Effects**

May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure: kidney, liver.

## Irritation/Corrosivity Data

May cause skin irritation. Causes serious eye irritation. May cause respiratory irritation.

**Respiratory Sensitization** No data available.

### **Dermal Sensitization**

It may cause sensitization in some individuals.

### **Component Carcinogenicity**

component Carcinogenicity					
Clay	1332-58-7				
ACGIH: A4 - Not Classifiable as a Human Carcinogen					
DFG:	Category 3B (could be carcinogenic for man)				
Silica gel	112926-00-8				
IARC:	Monograph 68 [1997] (Group 3 (not classifiable))				
Toluene	108-88-3				
ACGIH:	A4 - Not Classifiable as a Human Carcinogen				
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))				

## Germ Cell Mutagenicity No data available.

Reproductive Toxicity May damage fertility or the unborn child.







Product #: 302014

Material Name: Sure-Grip 404

Specific Target Organ Toxicity - Single Exposure No data available.

Specific Target Organ Toxicity - Repeated Exposure May cause damage to organs through prolonged or repeated exposure: kidney, liver.

## Aspiration hazard No data available.

Medical Conditions Aggravated by Exposure No data available.

## Additional Data

No additional information available.

## Section 12 - ECOLOGICAL INFORMATION

## Ecotoxicity

Avoid release to the environment.

## Component Analysis - Aquatic Toxicity

Polyphenol antioxidant	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID







## Product #: 302014

## Material Name: Sure-Grip 404

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	Heptane	64742-89-8	
i	Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID	

## Persistence and Degradability

No information available for the product.

## **Bioaccumulative Potential**

No information available for the product.

## Mobility

No information available for the product.

## **Other Toxicity**

No additional information available.

# Section 13 - DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with local/regional/national/international regulations.

## Section 14 - TRANSPORT INFORMATION

**US DOT Information:** Shipping Name: Adhesives Hazard Class: 2 UN/NA #: UN1133 Required Label(s): Red caution label required (limited quantity if < 0.3 gal)

IATA Information: Shipping Name: ADHESIVES Hazard Class: 3 UN#: UN1133 Packing Group: II Required Label(s): 3

**TDG Information:** Shipping Name: ADHESIVES Hazard Class: 3 UN#: UN1133 Packing Group: II Required Label(s):







## Material Name: Sure-Grip 404

Product #: 302014

## Section 15 - REGULATORY INFORMATION

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

1001112(0);						
Toluene	108-88-3					
SARA 313:	1 % de minimis concentration					
CERCLA:	1000 lb final RQ; 454 kg final RQ					

## SARA Section 311/312 (40 CFR 370 Subparts B and C) Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactivity: No

## **U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

The following compensatory of the fo								
Component	CAS	CA	MA	MN	NJ	PA		
Limestone	1317-65-3	No	Yes	Yes	Yes	Yes		
Zinc oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes		
Clay	1332-58-7	No	Yes	Yes	Yes	Yes		
Silica gel	112926-00-8	No	Yes	Yes	Yes	Yes		
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes		

## The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

reproductive/development					
Toluene	108-88-3				
1 1					
	female reproductive toxicity, initial date 8/7/09				

## Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Zinc oxide	1314-13-2
	1 %







Product #: 302014

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## Material Name: Sure-Grip 404

Toluene	108-88-3		
	1 %		

Component Analysis - Inventory Polymber of antioxidant (Trade Secret)

Poly	phenol a	ntioxi	uant (	Tlaue	beeret)		WD.	KR -	an t	3.177	MX	
TTO		EU	AU	PH	JP -	JP - ISHL	KR - KECI/KECL	TCCA	CN	NZ	WIA	
US	CA	БŲ	no		ENCS	ISHL	ICDOD I I DO D			Yes	No	1
						No	Yes	No	Yes	Yes	INO	1
Yes	DSL	EIN	Yes	Yes	Yes	NO	100	1		·		-
-		1										

## Limestone (1317-65-3)

	i	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
	Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	
•	105		1	<u> </u>	1								

## Zinc oxide (1314-13-2)

U	[	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
Y	es	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	

## Clay (1332-58-7)

	1332-5 CA	8-7) EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
0.0					· · · · · · · · · · · · · · · · · · ·		Yes	No	Yes	Yes	Yes	
Yes	DSL	EIN	Yes	Yes	Yes	No	165		<u> </u>	1	<u> </u>	J

## Aluminum hydroxide (21645-51-2)

Γ	US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
							No	Yes	No	Yes	Yes	Yes	
	Yes	DSL	EIN	Yes	Yes	Yes			I	<u></u>			

## Silica gel (112926-00-8)

		CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
N	0	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	]

## Toluene (108-88-3)

5	Folue	ne(10)	5-00-5	/	·····-	I		***D	KR -		277	100	
- [			Ī			JP -	JP -	KR -		CN	NZ	MX	
	US	CA	EU	AU	PH	ENCS	ISHL	KECI/KECL	TCCA				
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Product #: 302014

## Safety Data Sheet

## Material Name: Sure-Grip 404

a namer eare enp			1			r	1	
Yes DSL EIN Yes Yes	Yes	No	Yes	No	Yes	Yes	Yes	

Heptane (64742-89-8)

US	CA		AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	МХ
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

## Section 16 - OTHER INFORMATION

### **NFPA Ratings**

Health: 2 Fire: 3 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## Summary of Changes

New SDS: May 20, 2015

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.







#### Material Name: Sure-Grip 404

Product #: 302014

## **Other Information**

### Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.







Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

## Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name Iron-Grip® 601 Synonyms Sealant Chemical Family Water based mastic Product Use Duct sealant Restrictions on Use

For industrial use only.

## **Manufacturer Information**

Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com

### Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545 Technical Assistance – 888-229-2199 Customer Service – 888-229-0199

## Section 2 - HAZARDS IDENTIFICATION

## Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Reproductive Toxicity - Category 1B Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system, eyes, body, systemic toxicity) Specific Target Organ Toxicity - Repeated Exposure - Category 1 (eyes, central nervous system)

#### **GHS Label Elements**

Symbol(s)



Signal Word Danger







## Material Name: Iron-Grip® 601

Hazard Statement(s)

May damage fertility or the unborn child Causes damage to organs Causes damage to organs through prolonged or repeated exposure

#### Precautionary Statement(s)

## Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapours/spray Wash thoroughly after handling Do not eat, drink or smoke when using this product

#### Response

If exposed: Call a POISON CENTER or doctor/physician Get medical advice/attention if you feel unwell Specific treatment (see label)

Storage Store locked up

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

### Statement of Unknown Toxicity

88.189% of the mixture consists of ingredient(s) of unknown acute toxicity.

### Other Hazards

No additional information available.

#### CAS **Component Name** Percent Trade Secret 0.1-1 De-foaming agent Trade Secret Nonylphenol polyethylene glycol ether 0.1-1 Polymer, ethyl acrylate and Mixture 0.1-1 methacrylic acid Mixture Acrylic polymer 0.1-1 141-43-5 Ethanolamine 0.1-1 Mixture Polycarboxylate salt 0.1-1 107-21-1 Ethylene glycol 0.1-1 Mixture Fuller's earth 1-5

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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Product #: 304135- 1 gal 304137- 11oz







#### Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

14808-60-7	Silica, crystalline	0.1-1
1317-65-3	Limestone	15-40
Trade Secret	Clay compound	1-5
67-56-1	Methanol	1-5
Mixture	4,4-Dimethyloxazolidine	0.1-1
Mixture	1,2-Propylene glycol	0.1-1

## Section 4 - FIRST AID MEASURES

### **Description of Necessary Measures**

If exposed or concerned: Call a POISON CENTER or doctor/physician.

#### Inhalation

Remove person to fresh air and keep comfortable for breathing. Get medical attention, if needed.

#### Skin

Wash exposed skin with soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

#### Eyes

Flush eyes with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

#### Ingestion

Do NOT induce vomiting. If swallowed, get medical attention.

## **Indication of any immediate medical attention and special treatment needed** Treat symptomatically and supportively.

#### Most Important Symptoms/Effects

#### Acute

Causes damage to central nervous system, body, eyes, systemic toxicity.

#### Delayed

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

#### Note to Physicians

Contains. ethylene glycol, methanol

## Section 5 - FIRE FIGHTING MEASURES

#### Extinguishing Media

## Suitable Extinguishing Media

Use dry chemical, carbon dioxide, alcohol-resistant foam or water spray.







Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

Unsuitable Extinguishing Media None reported.

Special Hazards Arising from the Chemical Slight fire hazard. Sealed containers may rupture or explode if exposed to heat.

## Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen, hydrocarbons

### Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Do not inhale any material or combustion by-products.

### Fire Fighting Measures

Remove product from area of fire. Stay upwind and keep out of low areas.

## Section 6 - ACCIDENTAL RELEASE MEASURES

## **Personal Precautions, Protective Equipment and Emergency Procedures** Wear personal protective clothing and equipment, see Section 8.

## Methods and Materials for Containment and Cleaning Up

Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

## **Environmental Precautions**

Avoid release to the environment.

## Section 7 - HANDLING AND STORAGE

### **Precautions for Safe Handling**

This product contains crystalline silica, which is a known carcinogen: Do not grind or sand. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

## Conditions for Safe Storage, Including any Incompatibilities

Store locked up

Store in a well-ventilated place. Store above 0 C. Store below 45 C. When not in use, keep containers tightly closed. Do not cut, puncture, or weld on or near this container.

## **Incompatible Materials**

Strong acids, strong oxidizing agents

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

## **Component Exposure Limits**







Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

3 ppm TWA	6 ppm STEL
3 ppm TWA; 8 mg/m3 TWA	6 ppm STEL; 15 mg/m3 STEL
30 ppm IDLH	· · ·
1 ppm TWA; 2.5 mg/m3 TWA	3 ppm STEL; 7.6 mg/m3 STEL
Possibility of significant uptake through	gh the skin
3 ppm TWA; 6 mg/m3 TWA	
3 ppm TWA LMPE-PPT; 8 mg/m3 T	WA LMPE-PPT
6 ppm STEL [LMPE-CT]; 15 mg/m3	STEL [LMPE-CT]
107-21-1	
100 mg/m3 Ceiling aerosol only	
20 ppm TWA; 52 mg/m3 TWA	40 ppm STEL; 104 mg/m3 STEL
Possibility of significant uptake throu	gh the skin
100 mg/m3 Ceiling aerosol	
14808-60-7	
0.025 mg/m3 TWA respirable fraction	1
0.05 mg/m3 TWA respirable dust	50 mg/m3 IDLH respirable dust
((30)/(%SiO2 + 2)  mg/m3 TWA) tota respirable fraction; $((10)/(\%SiO2 + 2))$	l dust; ((250)/(%SiO2 + 5) mppcf TWA) mg/m3 TWA) respirable fraction
0.1 mg/m3 TWA LMPE-PPT respiral	ble fraction
-	
1317-65-3	
10 mg/m3 TWA total dust; 5 mg/m3	ΓWA respirable dust
15 mg/m3 TWA total dust; 5 mg/m3 '	ΓWA respirable fraction
10 mg/m3 TWA LMPE-PPT	20 mg/m3 STEL [LMPE-CT]
х.	
	3 ppm TWA; 8 mg/m3 TWA 30 ppm IDLH 1 ppm TWA; 2.5 mg/m3 TWA Possibility of significant uptake throug 3 ppm TWA; 6 mg/m3 TWA 3 ppm TWA LMPE-PPT; 8 mg/m3 TV 6 ppm STEL [LMPE-CT]; 15 mg/m3 107-21-1 100 mg/m3 Ceiling aerosol only 20 ppm TWA; 52 mg/m3 TWA Possibility of significant uptake throug 100 mg/m3 Ceiling aerosol 14808-60-7 0.025 mg/m3 TWA respirable fraction 0.05 mg/m3 TWA respirable dust ((30)/(%SiO2 + 2) mg/m3 TWA) tota respirable fraction; ((10)/(%SiO2 + 2) 0.1 mg/m3 TWA LMPE-PPT respirable 1317-65-3 10 mg/m3 TWA total dust; 5 mg/m3 T 15 mg/m3 TWA total dust; 5 mg/m3 T







### Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

ACGIH:	200 ppm TWA	250 ppm STEL				
	Skin - potential significant contribution t	o overall exposure by the cutaneous route				
NIOSH:	200 ppm TWA; 260 mg/m3 TWA	250 ppm STEL; 325 mg/m3 STEL				
	Potential for dermal absorption	ential for dermal absorption				
	6000 ppm IDLH					
Europe:	00 ppm TWA; 260 mg/m3 TWA					
	Possibility of significant uptake through t	the skin				
OSHA (US):	200 ppm TWA; 260 mg/m3 TWA					
Mexico:	200 ppm TWA LMPE-PPT; 260 mg/m3 '	TWA LMPE-PPT				
	250 ppm STEL [LMPE-CT]; 310 mg/m3	0 ppm STEL [LMPE-CT]; 310 mg/m3 STEL [LMPE-CT]				
	kin - potential for cutaneous absorption					

## **Biological limit value**

There are no biological limit values for any of this product's components.

## Engineering Controls

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

## Individual Protection Measures, such as Personal Protective Equipment

## Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

## **Skin Protection**

Wear appropriate work clothing.

## **Respiratory Protection**

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

## **Glove Recommendations**

Wear protective gloves. Recommended material: Hycron(R), neoprene, nitrile.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	thick gray paste	Physical State	liquid
Odor	Slight,ammonia	Color	gray
Odor Threshold	Not available	рН	8.4 - 9.5
Melting Point	Not available	Boiling Point	212 °F
Freezing point	Not available	Evaporation Rate	30 - 40 % volatile
<b>Boiling Point Range</b>	Not available	Flammability (solid, gas)	Not available







### Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

Autoignition	Not available	Flash Point	Not available	
Lower Explosive Limit	Not available	Decomposition	Not available	
Upper Explosive Limit	Not available	Vapor Pressure	17 mmHg (@ 20.°C)	
Vapor Density (air=1)	>1	Specific Gravity (water=1)	Not available	
Water Solubility	soluble	Partition coefficient: n- octanol/water	Not available	
Viscosity	300 Kcps (@ 77 °F)	Solubility (Other)	Not available	
Density	1.32 (relative)	VOC	49 g/L (SCAQMD calculation method)	

### Other Information

No additional information available.

## Section 10 - STABILITY AND REACTIVITY

#### Reactivity

No reactivity hazard is expected.

#### **Chemical Stability**

Stable under normal conditions of use.

## **Possibility of Hazardous Reactions**

Hazardous polymerization will not occur.

### **Conditions to Avoid**

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

## **Incompatible Materials**

Strong acids, strong oxidizing agents

## Hazardous decomposition products

Oxides of carbon, oxides of nitrogen, hydrocarbons

## Section 11 - TOXICOLOGICAL INFORMATION

## Information on Likely Routes of Exposure

#### Inhalation

May cause adverse effects on the central nervous system.

### Skin Contact

May cause mild skin irritation.

## Eye Contact

May cause mild eye irritation.







Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

Ingestion

Methanol can produce blindness with onset of symptoms being delayed for 18-24 hours.

Acute and Chronic Toxicity Component Analysis - LD50/LC50 The components of this material have been reviewed in various sources and the following selected endpoints are published: Ethylene-vinyl acetate copolymer (Trade Secret) Oral LD50 Rat >2000 mg/kg

Epoxidized soybean oil (Trade Secret) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >20 mL/kg

De-foaming agent (Trade Secret) Oral LD50 >2000 mg/kg

Nonylphenol polyethylene glycol ether (Trade Secret) Oral LD50 Rat 2780 mg/kg

Chlorinated paraffins (Trade Secret) Oral LD50 Rat >4000 mg/kg

Polymer, ethyl acrylate and methacrylic acid (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg

Acrylic polymer (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg

Ethanolamine (141-43-5) Oral LD50 Rat 1515 mg/kg Dermal LD50 Rabbit 2504 mg/kg Inhalation LC50 Rat >1.3 mg/L vapor 6 hr

Polycarboxylate salt (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >2000 mg/kg

Ethylene glycol (107-21-1) Oral LD50 Rat 4700 mg/kg Dermal LD50 Rat 10600 mg/kg Inhalation LC50 Rat >200 mg/m3 vapor 4 hr

Silica, crystalline (14808-60-7) Oral LD50 Rat 500 mg/kg

Limestone (1317-65-3) Oral LD50 Rat 6450 mg/kg







#### Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

Methanol (67-56-1) Oral LD50 Rat 6200 mg/kg Inhalation LC50 Rat 22500 ppm 8 h

4,4-Dimethyloxazolidine (Mixture) Oral LD50 Rat 1037 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat 1.1 mg/L 4 hr

1,2-Propylene glycol (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg

### **Immediate Effects**

Causes damage to central nervous system, body, eyes, systemic toxicity.

#### **Delayed Effects**

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

### Irritation/Corrosivity Data

May cause mild skin irritation. May cause mild eye irritation.

**Respiratory Sensitization** No data available.

**Dermal Sensitization** No data available.

#### **Component Carcinogenicity**

Chlorinated paraffins	Trade Secret
IARC:	Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man)
OSHA:	Present
Ethylene glycol	107-21-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Silica, crystalline	14808-60-7
ACGIH:	A2 - Suspected Human Carcinogen
IARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen (respirable size)
DFG:	Category 1 (causes cancer in man, alveola fraction)







#### Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

OSHA:	Present (respirable size)
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Germ Cell Mutagenicity No data available.

**Reproductive Toxicity** May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure Central nervous system, body, systemic toxicity, eyes

Specific Target Organ Toxicity - Repeated Exposure Central nervous system, eyes

## Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure No data available.

## **Additional Data**

This product contains crystalline silica, which is a known carcinogen. However, this component is bound by the polymer portion of the sealant. The only way this component would be released is through incineration. Therefore, this product is not considered a carcinogen.

## Section 12 - ECOLOGICAL INFORMATION

### Ecotoxicity

Avoid release to the environment.

#### **Component Analysis - Aquatic Toxicity**

Ethylene-vinyl acetate copolymer	Trade Secret
Fish:	LC50 96 hr Cyprinus carpio >1000 mg/kg
Epoxidized soybean oil	Trade Secret
Fish:	LC50 48 hr freshwater fish 900 mg/L
Algae:	EC50 72 h Desmodesmus subspicatus 8 mg/L IUCLID
De-foaming agent	Trade Secret
Fish:	LC50 hr fish >100 mg/L
Chlorinated paraffins	Trade Secret
Fish:	LC50 96 h Lepomis macrochirus >300 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.0109 mg/L [flow-through];







## Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

	LC50 96 h Oncorhynchus mykiss 94.5 - 271 mg/L [static]; LC50 96 h Lepomis macrochirus >0.1 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]
Invertebrate:	EC50 48 hr Daphnia magna 0.0059 mg/L
Polymer, ethyl acrylate and methacrylic acid	Mixture
Fish:	LC50 96 hr Pimephales promelas >1000 mg/L
Ethanolamine	141-43-5
Fish:	LC50 96 h Pimephales promelas 227 mg/L [flow-through]; LC50 96 h Brachydanio rerio 3684 mg/L [static]; LC50 96 h Lepomis macrochirus 300 - 1000 mg/L [static]; LC50 96 h Oncorhynchus mykiss 114 - 196 mg/L [static]; LC50 96 h Oncorhynchus mykiss >200 mg/L [flow-through]
Algae:	EC50 72 h Desmodesmus subspicatus 15 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 65 mg/L IUCLID
Ethylene glycol	107-21-1
Fish:	LC50 96 h Oncorhynchus mykiss 41000 mg/L; LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static]; LC50 96 h Lepomis macrochirus 27540 mg/L [static]; LC50 96 h Oncorhynchus mykiss 40761 mg/L [static]; LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static]; LC50 96 h Poecilia reticulata 16000 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 46300 mg/L IUCLID
Limestone	1317-65-3
Fish:	LC50 hr fish >200 mg/L
	1
Methanol	67-56-1
Fish:	LC50 96 h Pimephales promelas 28200 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static];

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## Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

	LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static]; LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through]
1,2-Propylene glycol	Mixture
Fish:	LC50 96 h Oncorhynchus mykiss 51600 mg/L [static]; LC50 96 h Oncorhynchus mykiss 41 - 47 mL/L [static]; LC50 96 h Pimephales promelas 51400 mg/L [static]; LC50 96 h Pimephales promelas 710 mg/L
Algae:	EC50 96 h Pseudokirchneriella subcapitata 19000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L [static] EPA

## Persistence and Degradability

No information available for the product.

## **Bioaccumulative Potential**

No information available for the product.

### Mobility

No information available for the product.

## Other Toxicity

No additional information available.

## Section 13 - DISPOSAL CONSIDERATIONS

#### **Disposal Methods**

Dispose of contents/container in accordance with local/regional/national/international regulations.

## Section 14 - TRANSPORT INFORMATION

## US DOT Information: UN/NA #: Not regulated

IATA Information: UN#: Not regulated

**IMDG Information: UN#:** Not regulated

**TDG Information: UN#:** Not regulated







Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

## Section 15 - REGULATORY INFORMATION

## **U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ethylene glycol	107-21-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Methanol	67-56-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ

## SARA Section 311/312 (40 CFR 370 Subparts B and C) Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No

## **U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	Μ́N	NJ	PA
Chlorinated paraffins	Trade Secret	No	Yes	No	No	No
Ethanolamine	141-43 <b>-</b> 5	Yes	Yes	Yes	Yes	Yes
Ethylene glycol	107-21-1	Yes	Yes	Yes	Yes	Yes
Silica, crystalline	14808-60-7	No	Yes	Yes	Yes	Yes
Limestone	1317-65-3	No	Yes	Yes	Yes	Yes
Methanol	67-56-1	Yes	Yes	Yes	Yes	Yes
1,2-Propylene glycol	Mixture	No	No	Yes	Yes	Yes

# The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

reproducenter actes	
Silica, crystalline	14808-60-7
Carc:	carcinogen, initial date 10/1/88 (airborne particles of respirable size)
Methanol	67-56-1
Repro/Dev. Tox	Developmental toxicity, initial date 3/16/12







Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

## Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Ethanolamine	141-43-5
	1 %
Ethylene glycol	107-21-1
	1 %
Silica, crystalline	14808-60-7
	1 %
Methanol	67-56-1
	1%
1,2-Propylene glycol	Mixture
	1 %

## **Component Analysis - Inventory**

Ethylene-vinyl acetate copolymer (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	ELN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

## Epoxidized soybean oil (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	МΧ
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

## Nonylphenol polyethylene glycol ether (Trade Secret)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

## Chlorinated paraffins (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes







## Material Name: Iron-Grip® 601

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Polymer, ethyl acrylate and methacrylic acid (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	

## Ethanolamine (141-43-5)

U	s	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	МΧ
Y	es	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Ethylene glycol (107-21-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR <sup>°</sup> - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

## Fuller's earth (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

## Silica, crystalline (14808-60-7)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	МΧ
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

## Limestone (1317-65-3)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	МΧ
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Methanol (67-56-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes







## Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

## 4,4-Dimethyloxazolidine (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	МХ
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

## 1,2-Propylene glycol (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

## Section 16 - OTHER INFORMATION

## HMIS Rating

Health: 1\* Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## **NFPA Ratings**

Health: 1 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## Summary of Changes

New SDS: May 27, 2015

## Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.







Material Name: Iron-Grip® 601

Product #: 304135- 1 gal 304137- 11oz

## Other Information Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

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Material Name: Butyl Roll Sealants

Section 1 - PR	ODUCT AND COMPANY I	DENTIFICATION
Material Name Foil-Grip 1402 BRT 801 TPO 2265 Foil-Grip 1404-181BFX Trade Names	Aluma-Grip 701 * All-Purpose 1602 TGM-3300	Foil-Grip 1403-181BFX RMR 6325 TPO Line Set Wrap
Part Number(s): 304083, 304093, 304 304077, 304078, 304 309780, 309781, 322 304181, 304182, 304 304085, 304086, 304 304203, 304204, 304	079, 304080, 304081, 30408 832, 183, 304184, 304185, 30418 087, 304088, 304089, 205, 304206, 686, 310687, 310692, 261, 304262, 304983	2,
Synonyms Roll Sealant Chemical Family Butyl Adhesive Tape Product Use Duct sealant, construction tapes Restrictions on Use For industrial use only.	Medic CHEN MSDS Techni	Numbers: al Emergency: dTREC (USA): (800) 424-9300 Assistance – 972-442-6545 ical Assistance – 888-229-2199 ner Service – 888-229-0199
Manufacturer Information Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com		

Section 2 - HAZARDS IDENTIFICATION

The products listed above are considered "articles" as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered "manufactured articles" as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS. Under normal conditions of use, these products do not pose a hazard in the workplace or to the building occupants. Since these products or "articles" pose no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, "articles" are not included in the scope of the Globally

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Issue date: 2018-06-01

CARLISLE

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## Safety Data Sheet

#### Material Name: Butyl Roll Sealants

Harmonized System (GHS). For that reason, the GHS labeling elements are not included on this SDS. Although these products are not subject to the OSHA or Canadian standards or GHS labeling elements, Carlisle would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of the products. It is recommended that this SDS should be retained and made available to the users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

Classification in accordance with paragraph (d) of 29 CFR 1910.1200. None known **GHS Label Elements** Symbol(s) None Signal Word None Hazard Statement(s) None **Precautionary Statement(s)** Prevention None Wash thoroughly after handling Response Storage Store locked up Disposal Dispose of contents/container in accordance with local/regional/national/international regulations Other Hazards No additional information available. Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

	CAS
Pro	oprietary

Percent 100%

#### Section 4 - FIRST AID MEASURES

**Component Name** 

Butyl Roll Sealant

Description of Necessary Measures None known.

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Issue date: 2018-06-01



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Material Name: Butyl Roll Sealants

#### Inhalation

Cannot be inhaled under normal circumstances.

#### Skin

Repeated contact with skin may result in irritation due to adhesive nature of product. Protective creams may be useful. If skin irritation occurs, get medical advice/attention.

Eyes

Cannot get into eyes under normal circumstances.

#### Ingestion

Cannot be ingested under normal circumstances.

Indication of any immediate medical attention and special treatment needed Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute None known Delayed None known

Note to Physicians Nothing known to note

Section 5 - FIREFIGHTING MEASURES

#### **Extinguishing Media**

Suitable Extinguishing Media Use dry chemical, carbon dioxide, alcohol-resistant foam or water spray. Unsuitable Extinguishing Media None reported.

## Special Hazards Arising from the Chemical None known

Hazardous Combustion Products oxides of carbon, oxides of nitrogen, hydrocarbons

#### Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Do not inhale any material or combustion by-products.

#### **Firefighting Measures**

Remove product from area of fire. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures Wear personal protective clothing and equipment. see Section 8.

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Material Name: Butyl Roll Sealants

Methods and Materials for Containment and Cleaning Up Sweep up and dispose in accordance with all applicable regulations.

Environmental Precautions None known

None known

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling None known. Suggest wearing protective gloves. Wash thoroughly after handling. KEEP OUT OF REACH OF CHILDREN. Conditions for Safe Storage, Including any Incompatibilities

Store locked up Store in a well-ventilated place. Store above 6 C. Store below 45 C.

Incompatible Materials None known

#### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Component Exposure Limits No known exposure limits

Biological limit value There are no biological limit values for any of this product's components. Eugineering Controls Provide adequate ventilation. Ensure compliance with applicable exposure limits. Individual Protection Measures, such as Personal Protective Equipment Eye/face protection No special protection needed. Skin Protection Wear appropriate work clothing. Respiratory Protection None required. Glove Recommendations Wear protective gloves.

#### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Various backings with grey or black pressure	Physical State	solid	
	sensitive adhesive		. I	!

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Issue date: 2018-06-01

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#### Material Name: Butyl Roll Sealants

Odor	None	Color	Various color and construction base substrates with grey or black adhesive
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	<b>Boiling Point</b>	Not available
Freezing point	Not available	<b>Evaporation</b> Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Deusity (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Not soluble	Partition coefficient: n- octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	>1.00 (relative)	VOC	None

Other Information No additional information available.

## Section 10 - STABILITY AND REACTIVITY

#### Reactivity

No reactivity hazard is expected.

Chemical Stability Stable under normal conditions of use.

Possibility of Hazardous Reactions Hazardous polymerization will not occur.

Conditions to Avoid None known

Incompatible Materials None known

Hazardous decomposition products Oxides of carbon, oxides of nitrogen, hydrocarbons

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Issue date: 2018-06-01







#### Material Name: Butyl Roll Sealants

Section 11 - TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

Inhalation Unlikely under normal conditions Skin Confact May cause mild skin irritation with repeated contact. Eye Contact Unlikely under normal conditions Ingestion Unlikely under normal conditions.

Acute and Chronic Toxicity No acute or chronic effects known.

Immediate Effects No immediate effects known.

Delayed Effects No delayed effects known.

Irritation/Corrosivity Data My cause skin irritation with repeated contact. No other effects known.

**Respiratory Sensitization** No data available.

Dermal Sensitization No data available.

**Component Carcinogenicity** No data available

Germ Cell Mutagenicity No data available.

Reproductive Toxicity No data available..

Specific Target Organ Toxicity - Single Exposure No data available

Specific Target Organ Toxicity - Repeated Exposure No data available

Aspiration hazard No data available.

Medical Conditions Aggravated by Exposure No data available.

Additional Data No additional information available.

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Issue date: 2018-06-01



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#### Material Name: Butyl Roll Sealants

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity No data available

Component Analysis - Aquatic Toxicity No data available

Persistence and Degradability No information available for the product.

Bioaccumulative Potential No information available for the product.

Mobility No information available for the product.

Other Toxicity No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

#### **Disposal Methods**

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information: UN/NA #: Not regulated

IATA Information: UN#: Not regulated

TDG Information: UN#: Not regulated

Section 15 - REGULATORY INFORMATION

#### **U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan: None

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**Revision 3.0** 





DYNAIR

#### Safety Data Sheet

Material Name: Butyl Roll Sealants

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: No Chronic Health: No Fire: No Pressure: No Reactivity: No

#### U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists: None known

## The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): None known.

#### Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL:

### None known

Component Analysis - Inventory

Finished product is not hazardous. Component analysis not required.

US	CA EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	No No	No	No	No	No	No	No	No	No	No

Section 16 - OTHER INFORMATION

#### HMIS Rating

Health: 0 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

#### **NFPA** Ratings

Health: 0 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes Revision Date: June 1, 2018 Revision Note: General Update

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists: ADR - European Road Transport: AU - Australia: BOD - Biochemical Oxygen Demand; C - Celsius: CA - Canada: CAS - Chemical Abstracts Service: CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China: CPR - Controlled Products Regulations: DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation: DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances: EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit: LARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and

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Issue date: 2018-06-01

Revision 3.0







#### Material Name: Butyl Roll Sealants

Health: IMDG - International Maritime Dangerous Goods; JP - Japan: Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit: LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines: RCRA - Resource Conservation and Recovery Act: REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods: TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

#### Other Information

#### Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

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Issue date: 2018-06-01

Revision 3.0



#### Material Name: DT Tape

Product #'s: 304164, 304165

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name Hardcast DT Tape – 3 inch and 4 inch wide

Synonyms

DT Tape, Two Part Sealing System Chemical Family Gypsum coated fabric Product Use

Duct sealant system **Restrictions on Use** For industrial use only.

### **Manufacturer Information**

Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com

Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545 Technical Assistance – 888-229-2199 Customer Service – 888-229-0199

### Section 2 - HAZARDS IDENTIFICATION

The products listed above are considered "articles" as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered "manufactured articles" as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS. Under normal conditions of use, these products do not pose a hazard in the workplace or to the building occupants. Since these products or "articles" pose no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, "articles" are not included in the scope of the Globally Harmonized System (GHS). For that reason, the GHS labeling elements are not included on this SDS. Although these products are not subject to the OSHA or Canadian standards or GHS labelling elements, Carlisle would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of the products. It is recommended that this SDS should be retained and made







#### Material Name: DT Tape

Product #'s: 304164, 304165

available to the users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

Classification in accordance with paragraph (d) of 29 CFR 1910.1200. Not classified

**GHS Label Elements** 

Symbol(s) None required

Signal Word None required

Hazard Statement(s) None required

**Precautionary Statement(s)** None required

**Prevention** None Wash thoroughly after handling

Response

Storage Store locked up

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations

#### Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Proprietary,	Duct Sealant	100%

## Section 4 - FIRST AID MEASURES

## **Description of Necessary Measures**

None known.

## Inhalation

Cannot be inhaled under normal circumstances.







#### Material Name: DT Tape

#### Product #'s: 304164, 304165

#### Skin

Repeated contact with skin may result in irritation due to adhesive nature of product. Protective creams may be useful. If skin irritation occurs, get medical advice/attention.

#### Eyes

Cannot get into eyes under normal circumstances.

#### Ingestion

Cannot be ingested under normal circumstances.

**Indication of any immediate medical attention and special treatment needed** Treat symptomatically and supportively.

### Most Important Symptoms/Effects

Acute None known Delayed None known

Note to Physicians

Nothing known to note

### Section 5 - FIRE FIGHTING MEASURES

#### Extinguishing Media

#### Suitable Extinguishing Media

Use dry chemical, carbon dioxide, alcohol-resistant foam or water spray.

#### Unsuitable Extinguishing Media

None reported.

Special Hazards Arising from the Chemical None known

Hazardous Combustion Products oxides of carbon, oxides of nitrogen, hydrocarbons

#### Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Do not inhale any material or combustion by-products.

#### Fire Fighting Measures

Remove product from area of fire. Stay upwind and keep out of low areas.

## Section 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures** Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up Sweep up and dispose in accordance with all applicable regulations.







Material Name: DT Tape

Product #'s: 304164, 304165

Environmental Precautions None known

### Section 7 - HANDLING AND STORAGE

#### Precautions for Safe Handling

None known. Suggest wearing protective gloves. Wash thoroughly after handling. KEEP OUT OF REACH OF CHILDREN.

**Conditions for Safe Storage, Including any Incompatibilities** Store locked up Store in a well-ventilated place. Store above 6 C. Store below 45 C.

**Incompatible Materials** None known

None known

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**Component Exposure Limits** No known exposure limits

NO MIOWIT EXPOSUIC IIIIIIIS

#### **Biological limit value**

There are no biological limit values for any of this product's components.

**Engineering Controls** 

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eve/face protection

No special protection needed.

#### Skin Protection

Wear appropriate work clothing.

#### **Respiratory Protection**

None required.

**Glove Recommendations** 

Wear protective gloves.

			**************************************
Appearance	White coated fabric	Physical State	solid
Odor	None	Color	White
Odor Threshold	Not available	pH	Not available

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES







Material Name: DT Tape

Product #'s: 304164, 304165

I Name: DT Tape	1		Not available
Melting Point	Not available	Boiling Point	INOL AVAILABLE
Freezing point	Not available	<b>Evaporation Rate</b>	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Not soluble	Partition coefficient: n- octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	>1.00 (relative)	VOC	None

#### Other Information

No additional information available.

## Section 10 - STABILITY AND REACTIVITY

#### Reactivity

No reactivity hazard is expected.

Chemical Stability Stable under normal conditions of use.

## **Possibility of Hazardous Reactions** Hazardous polymerization will not occur.

Conditions to Avoid None known

Incompatible Materials None known

Hazardous decomposition products oxides of carbon, oxides of nitrogen, hydrocarbons







Material Name: DT Tape

Product #'s: 304164, 304165

## Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Unlikely under normal conditions Skin Contact

May cause mild skin irritation with repeated contact.

**Eye Contact** Unlikely under normal conditions

**Ingestion** Unlikely under normal conditions.

Acute and Chronic Toxicity

No acute or chronic effects known.

Immediate Effects No immediate effects known.

Delayed Effects No delayed effects known.

Irritation/Corrosivity Data My cause skin irritation with repeated contact. No other effects known.

**Respiratory Sensitization** No data available.

Dermal Sensitization No data available.

**Component Carcinogenicity** 

No data available

Germ Cell Mutagenicity No data available.

**Reproductive Toxicity** No data available..

Specific Target Organ Toxicity - Single Exposure No data available

Specific Target Organ Toxicity - Repeated Exposure No data available

Aspiration hazard No data available.

Medical Conditions Aggravated by Exposure No data available.

Additional Data No additional information available.







#### Material Name: DT Tape

Product #'s: 304164, 304165

## Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity No data available

## **Component Analysis - Aquatic Toxicity**

No data available

**Persistence and Degradability** No information available for the product.

**Bioaccumulative Potential** No information available for the product.

Mobility No information available for the product.

Other Toxicity No additional information available.

#### Section 13 - DISPOSAL CONSIDERATIONS

#### **Disposal Methods**

Dispose of contents/container in accordance with local/regional/national/international regulations.

## Section 14 - TRANSPORT INFORMATION

#### US DOT Information: UN/NA #: Not regulated

IATA Information: UN#: Not regulated

## TDG Information:

UN#: Not regulated

## Section 15 - REGULATORY INFORMATION

#### **U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan:







Material Name: DT Tape

Product #'s: 304164, 304165

None

#### SARA Section 311/312 (40 CFR 370 Subparts B and C) Acute Health: No Chronic Health: No Fire: No Pressure: No Reactivity: No

#### **U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

#### None known

## The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

None known.

#### Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL:

None known

#### **Component Analysis - Inventory**

Finished product is not hazardous. Component analysis not required.

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	No	No	No	No	No	No	No	No	No	No	No

### Section 16 - OTHER INFORMATION

#### HMIS Rating

Health: 0 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

#### **NFPA Ratings**

Health: 0 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### Summary of Changes

New SDS: December 15, 2015

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability







#### Material Name: DT Tape

#### Product #'s: 304164, 304165

Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

#### **Other Information**

#### Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

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Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

)

HF Buoth-Tack 20pgs

## Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name Booth-Tack Synonyms Water-based Adhesive Chemical Family Adhesive Product Use Water based Adhesive Restrictions on Use For industrial use only.

## Manufacturer Information Carlisle HVAC Products 900 Hensley Lane

Wylie, TX 75098 www.carlislehvac.com

### Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545 Technical Assistance – 888-229-2199 Customer Service – 888-229-0199

## Section 2 - HAZARDS IDENTIFICATION

## Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Reproductive Toxicity - Category 1B Specific Target Organ Toxicity - Single Exposure - Category 1 (respiratory system, body, central nervous system, systemic toxicity, eyes) Specific Target Organ Toxicity - Repeated Exposure - Category 1 (kidneys, respiratory system, eyes, central nervous system)

Print date: 2016-02-17







DYNAIR DUCT HARDWARE & NEXUS FLANGE

Product #: 308585- 5 gal

308587- 50 gal

## Safety Data Sheet

Material Name: Booth-Tack

**GHS Label Elements** 

Symbol(s)



Signal Word Danger

#### Hazard Statement(s)

May damage fertility or the unborn child Causes damage to organs Causes damage to organs through prolonged or repeated exposure

#### **Precautionary Statement(s)**

#### Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapours/spray Wash thoroughly after handling Do not eat, drink or smoke when using this product

#### Response

If exposed: Call a POISON CENTER or doctor/physician Get medical advice/attention if you feel unwell Specific treatment (see label)

#### Storage .

Store locked up

#### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

#### Other Hazards

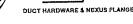
No additional information available.

x









#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Mixture	Polymer, ethyl acrylate and methacrylic acid	0.5-1.5
Trade Secret	De-foaming agent	0.1-1
7664-41-7	Ammonia	0.1-1
Mixture	Polymer, vinyl acetate and vinyl acrylic	10-30
Trade Secret	Clay compound	0.5-1.5
1317-65-3	Limestone 10-3	
67-56-1	Methanol	1-5
Mixture	4,4-Dimethyloxazolidine	0.1-1
Trade Secret	Carbamic acid mixture 0.1-1	
Mixture	Polycarboxylate salt 0.1-1	

## Section 4 - FIRST AID MEASURES

## **Description of Necessary Measures**

If exposed: Call a POISON CENTER or doctor/physician.

#### Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

#### Skin

Wash exposed skin with soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

Print date: 2016-02-17







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

#### Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

#### Ingestion

Do NOT induce vomiting. If swallowed, get medical attention.

**Indication of any immediate medical attention and special treatment needed** Treat symptomatically and supportively.

#### Most Important Symptoms/Effects

#### Acute

May cause mild eye irritation. Causes damage to respiratory system, body, central nervous system, systemic toxicity, eyes.

#### Delayed

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: kidneys, respiratory system, eyes, central nervous system.

#### Note to Physicians

Contains: ammonia, methanol.

## Section 5 - FIRE FIGHTING MEASURES

#### Extinguishing Media

#### Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water.

#### Unsuitable Extinguishing Media

None known.

#### Special Hazards Arising from the Chemical

Slight fire hazard. Sealed containers may rupture or explode if exposed to heat.

#### Hazardous Combustion Products

oxides of carbon, oxides of nitrogen, hydrocarbons

#### Fire Fighting Measures

Remove product from area of fire. Stay upwind and keep out of low areas.

### Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

## Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

#### **Environmental Precautions**

Avoid release to the environment.

## Section 7 - HANDLING AND STORAGE

#### **Precautions for Safe Handling**

This product contains crystalline silica, which is a known carcinogen: Do not grind or sand. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

#### Conditions for Safe Storage, Including any Incompatibilities

Store locked up

Store above 0 C. Store below 45 C. Do not cut, puncture, or weld on or near this container. Avoid contact with incompatible materials.

#### **Incompatible Materials**

Strong acids, strong oxidizing agents

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Component Exposure Limits**

Ammonia		7664-41-7			
	ACGIH:	25 ppm TWA	35 ppm STEL		
NIOSH:		25 ppm TWA; 18 mg/m3 TWA	35 ppm STEL; 27 mg/m3 STEL		
		300 ppm IDLH			

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Issue date: 2015-05-28 Revision 1.0

Print date: 2016-02-17







#### DYNAIR DUGT HARDWARE & NEXUS FLANGE

## Safety Data Sheet

### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Europe:	20 ppm TWA; 14 mg/m3 TWA	50 ppm STEL; 36 mg/m3 STEL			
-	50 ppm TWA; 35 mg/m3 TWA				
OSHA (US):					
Mexico:	25 ppm TWA LMPE-PPT; 18 mg/m3 T				
	35 ppm STEL [LMPE-CT]; 27 mg/m3 S	STEL [LMPE-CT]			
Clay compound	Trade Secret				
ACGIH:	0.025 mg/m3 TWA respirable fraction				
NIOSH:	0.05 mg/m3 TWA respirable dust	50 mg/m3 IDLH respirable dust			
OSHA (US):	((30)/(%SiO2 + 2)  mg/m3 TWA) total c respirable fraction; $((10)/(\%SiO2 + 2) \text{ n})$	lust; ((250)/(%SiO2 + 5) mppcf TWA) ng/m3 TWA) respirable fraction			
Mexico:	0.1 mg/m3 TWA LMPE-PPT respirable	fraction			
	· · · · · · · · · · · · · · · · · · ·	· · ·			
Carbon black	1333-86-4				
ACGIH:	3 mg/m3 TWA inhalable fraction				
' NIOSH:	3.5 mg/m3 TWA; 0.1 mg/m3 TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons) as PAH				
	1750 mg/m3 IDLH	, , , , , , , , , , , , , , , , , , ,			
OSHA (US):	3.5 mg/m3 TWA	<u> </u>			
Mexico:	3.5 mg/m3 TWA LMPE-PPT	7 mg/m3 STEL [LMPE-CT]			
Limestone	1317-65-3				
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TV	VA respirable dust			
OSHA (US):	15 mg/m3 TWA total dust; 5 mg/m3 TV	VA respirable fraction			
Mexico:	10 mg/m3 TWA LMPE-PPT	20 mg/m3 STEL [LMPE-CT]			
		· · · · · · · · · · · · · · · · · · ·			







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Methanol	67-56-1				
ACGIH:	200 ppm TWA	250 ppm STEL			
	Skin - potential significant contribution route	to overall exposure by the cutaneous			
NIOSH:	200 ppm TWA; 260 mg/m3 TWA	250 ppm STEL; 325 mg/m3 STEL			
	Potential for dermal absorption				
	6000 ppm IDLH				
Europe:	200 ppm TWA; 260 mg/m3 TWA				
	Possibility of significant uptake through	the skin			
OSHA (US):	200 ppm TWA; 260 mg/m3 TWA				
Mexico:	200 ppm TWA LMPE-PPT; 260 mg/m2	3 TWA LMPE-PPT			
	250 ppm STEL [LMPE-CT]; 310 mg/m	13 STEL [LMPE-CT]			
	Skin - potential for cutaneous absorptio	n			

#### **Biological limit value**

There are no biological limit values for any of this product's components.

## **Engineering Controls**

Ensure adequate ventilation. Ensure compliance with applicable exposure limits.

## Individual Protection Measures, such as Personal Protective Equipment

### **Eye/face protection**

Wear safety glasses or safety goggles, with a faceshield, as appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

### **Skin Protection**

Wear appropriate work clothing.

## **Respiratory Protection**

A NIOSH approved respirator with a dust, mist, and fume filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits or when symptoms have been observed that are indicative of overexposure.

## **Glove Recommendations**

Wear appropriate gloves. Recommended material type: Hycron(R), neoprene, nitrile.

Print date: 2016-02-17







### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	gray latex	Physical State	liquid
Odor	Slight,ammonia	Color	gray
Odor Threshold	Not available	рН	8 - 9
Melting Point	Not available	Boiling Point	100°C (212 °F)
Freezing point	Not available	Evaporation Rate	44 - 46 % volatile
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	17 mmHg (@ 20 °C)
Vapor Density (air=1)	<1	Specific Gravity (water=1)	Not available
Water Solubility	Soluble	Partition coefficient: n- octanol/water	Not available
Viscosity	8500 - 9500 cps	Solubility (Other)	Not available
Density	1.2 (relative)	VOC	72 g/L (water excluded)

#### **Other Information**

No additional information available.

Section 10 - STABILITY AND REACTIVITY

#### Reactivity

No reactivity hazard is expected.

Chemical Stability Stable under normal conditions of use.

**Possibility of Hazardous Reactions** 

Print date: 2016-02-17







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Strong acids, strong oxidizing agents

### Hazardous decomposition products

Oxides of carbon, oxides of nitrogen, hydrocarbons

### Section 11 - TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

### Inhalation

May cause respiratory irritation.

Skin Contact May cause mild skin irritation.

Eye Contact May cause mild eye irritation.

**Ingestion** Methanol can produce blindness with onset of symptoms being delayed for 18-24 hours.

Acute and Chronic Toxicity

#### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published: Polymer, ethyl acrylate and methacrylic acid (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg De-foaming agent (Trade Secret) Oral LD50 >2000 mg/kg Chlorinated paraffins (Trade Secret)] Oral LD50 Rat >4 g/kg Ammonia (7664-41-7) Oral LD50 Rat 350 mg/kg Inhalation LC50 Rat 2000 ppm 4 h Polymer, vinyl acetate and vinyl acrylic (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rat >2000 mg/kg Clay compound (Trade Secret)







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Oral LD50 Rat 500 mg/kg Ethoxylated nonylphenol (Trade Secret) Oral LD50 Rat 2590 mg/kg Dermal LD50 Rabbit 1780 µL/kg Carbon black (1333-86-4) Oral LD50 Rat >15400 mg/kg Limestone (1317-65-3) Oral LD50 Rat 6450 mg/kg Methanol (67-56-1) Oral LD50 Rat 6200 mg/kg Inhalation LC50 Rat 22500 ppm 8 h 4,4-Dimethyloxazolidine (Mixture) Oral LD50 Rat 1037 mg/kg Dermal LD50 Rat >2000 mg/kg Inhalation LC50 Rat 1.1 mg/L 4 hr Carbamic acid mixture (Trade Secret) Oral LD50 Rat >2000 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat >2.04 mg/L 4 hr Polycarboxylate salt (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat >5.1 mg/L mist Octylphenol ethoxylate (Trade Secret) Oral LD50 Rat 2800 mg/kg

#### **Immediate Effects**

May cause mild eye irritation. Causes damage to respiratory system, body, central nervous system, systemic toxicity, eyes.

#### **Delayed Effects**

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: kidneys, respiratory system, eyes, central nervous system.

#### Irritation/Corrosivity Data

May cause respiratory irritation. May cause mild skin irritation. May cause mild eye irritation.

#### **Respiratory Sensitization** No data available.

**Dermal Sensitization** No data available.

#### **Component Carcinogenicity**







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Chlorinated paraffins	Trade Secret
IARC:	Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man)
OSHA:	Present
Clay compound	Trade Secret
ACGIH:	A2 - Suspected Human Carcinogen
IARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen (respirable size)
DFG:	Category 1 (causes cancer in man, alveola fraction)
OSHA:	Present (respirable size)
Carbon black	1333-86-4
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 93 [2010]; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man, inhalable fraction)
OSHA:	Present

#### Germ Cell Mutagenicity No data available.

**Tumorigenic Data** No data available

**Reproductive Toxicity** May damage fertility or the unborn child.

## Specific Target Organ Toxicity - Single Exposure

Respiratory system, body, central nervous system, systemic toxicity, eyes







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Specific Target Organ Toxicity - Repeated Exposure Respiratory system, central nervous system, kidneys, eyes

## Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure No data available.

#### Additional Data

This product contains crystalline silica, which is a known carcinogen. However, this component is bound by the polymer portion of the sealant. The only way this component would be released is through incineration. Therefore, this product is not considered a carcinogen.

## Section 12 - ECOLOGICAL INFORMATION

#### **Ecotoxicity**

Avoid release to the environment.

#### **Component Analysis - Aquatic Toxicity**

Mixture
LC50 96 hr Pimephales promelas >1000 mg/L
EC50 48 hr Daphnia magna >1000 mg/L
Trade Secret
LC50 96 h Lepomis macrochirus >300 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.0109 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 94.5 - 271 mg/L [static]; LC50 96 h Lepomis macrochirus >0.1 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]
EC50 48 hr Daphnia magna 0.0059 mg/L







### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

LANGE

Ammonia	7664-41-7					
Fish:	,C50 96 h Cyprinus carpio 0.44 mg/L; ,C50 96 h Lepomis macrochirus 0.26 - 4.6 mg/L; ,C50 96 h Lepomis macrochirus 1.17 mg/L [flow-through]; ,C50 96 h Pimephales promelas 0.73 - 2.35 mg/L; ,C50 96 h Pimephales promelas 5.9 mg/L [static]; ,C50 96 h Poecilia reticulata >1.5 mg/L; ,C50 96 h Poecilia reticulata 1.19 mg/L [static]					
Invertebrate:	LC50 48 h Daphnia magna 25.4 mg/L IUCLID					
Polymer, vinyl acetate and vinyl acrylic	Mixture					
Fish:	LC50 96 hr Oncorhynchis mykiss >1000 mg/L					
Invertebrate:	EC50 48 hr Daphnia magna >100 mg/L					
Hydrocarbon defoamer	Trade Secret					
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L					
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID					
L	-					
Methanol	67-56-1					
Fish:	LC50 96 h Pimephales promelas 28200 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]; LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static]; LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through]					
)						
4,4-Dimethyloxazolidine	Mixture					
Fish:	LC50 96 hr Rainbow trout 95 mg/L [flow-through]					

**Persistence and Degradability** No information available for the product.







Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

**Bioaccumulative Potential** No information available for the product.

Mobility No information available for the product.

**Other Toxicity** No additional information available.

## Section 13 - DISPOSAL CONSIDERATIONS

#### **Disposal Methods**

Dispose of contents/container in accordance with local/regional/national/international regulations.

## Section 14 - TRANSPORT INFORMATION

**US DOT Information:** UN/NA #: Not regulated

**IATA Information:** UN#: Not regulated

**TDG Information:** UN#: Not regulated

## **IMDG Information:**

UN#: Not regulated

## Section 15 - REGULATORY INFORMATION

## **U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ammonia	7664-41-7
SARA 302:	500 lb TPQ







## Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

SARA 313:	1 % de minimis concentration (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)
CERCLA:	100 lb final RQ; 45.4 kg final RQ
OSHA (safety):	10000 lb TQ anhydrous); 15000 lb TQ solution, >44% Ammonia by weight)
SARA 304:	100 lb EPCRA RQ
Ethoxylated nonylphenol	Trade Secret
TSCA 12b:	Section 5, 1 % de minimus concentration
Methanol	67-56-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Carbamic acid mixture	Trade Secret
CERCLA:	10 lb final RQ; 4.54 kg final RQ

## SARA Section 311/312 (40 CFR 370 Subparts B and C) Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No

## **U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

				3.77	D.A
CAS	CA	MA	MN	NJ	PA
Trade Secret	No	Yes	No	No	No
7664-41-7	Yes	Yes	Yes	Yes	Yes
Trade Secret	No	Yes	Yes	Yes	Yes
1333-86-4	Yes	Yes	Yes	Yes	Yes
[	No	Yes	Yes	Yes	Yes
		Ves	Yes	Yes	Yes
67-50-1	105		+		N-
Trade Secret	No	No	No	Yes	No
	CAS Trade Secret 7664-41-7 Trade Secret 1333-86-4 1317-65-3 67-56-1	CAS     CA       Trade Secret     No       7664-41-7     Yes       Trade Secret     No       1333-86-4     Yes       1317-65-3     No       67-56-1     Yes	CASCAMATrade SecretNoYes7664-41-7YesYesTrade SecretNoYes1333-86-4YesYes1317-65-3NoYes67-56-1YesYes	CASCAMAMNTrade SecretNoYesNo7664-41-7YesYesYesTrade SecretNoYesYes1333-86-4YesYesYes1317-65-3NoYesYes67-56-1YesYesYes	CASCAMAMNNJTrade SecretNoYesNoNo7664-41-7YesYesYesYesYesTrade SecretNoYesYesYesYes1333-86-4YesYesYesYesYes1317-65-3NoYesYesYesYes67-56-1YesYesYesYesYes

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Print date: 2016-02-17







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

# The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Topro ano mana	
Clay compound	Trade Secret
Caro:	carcinogen, 10/1/1988 (airborne particles of respirable size)
Carbon black	1333-86-4
Carc:	carcinogen, 2/21/2003 (airborne, unbound particles of respirable size)
Methanol	67-56-1
Repro/Dev. Tox	developmental toxicity, 3/16/2012

## Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Ammonia	7664-41-7
	1 %
Clay compound	Trade Secret
	1 %
Carbon black	1333-86-4
	1 %
Methanol	67-56-1
	1 %
Octylphenol ethoxylate	Trade Secret
	1 %

## **Component Analysis - Inventory**

Polymer, ethyl acrylate and methacrylic acid (Mixture)







### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

- 1-

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	МΧ
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

## Chlorinated paraffins (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Ammonia (7664-41-7)

I	ZIIIII	, inter ( )		· · /				1					1
	US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
	Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	

## Clay compound (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

## Ethoxylated nonylphenol (Trade Secret)

US	CA	EU.	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX	
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	

#### Carbon black (1333-86-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ ,	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes







### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Hydrocarbon defoamer (Trade Secret)

U	S	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Y	es	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

#### Limestone (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Methanol (67-56-1)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

## 4,4-Dimethyloxazolidine (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

### Carbamic acid mixture (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

### Octylphenol ethoxylate (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

1.3-Pentadiene, polymer with 2-methyl-2-butene (26813-14-9)

US	CA			PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	No	No	Yes	No	Yes	Yes	No

## Section 16 - OTHER INFORMATION

#### **HMIS Rating**

Health: 1\* Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

#### **NFPA Ratings**

Health: 1 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### **Summary of Changes**

New SDS: May 21, 2015

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation,







#### Material Name: Booth-Tack

Product #: 308585- 5 gal 308587- 50 gal

Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

#### **Other Information**

#### **Disclaimer:**

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.





Coil TACK

Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Coil-Tack W (White)

Synonyms Water-based Adhesive

Chemical Family Adhesive

Product Use Water based Adhesive

Restrictions on Use For industrial use only.

#### **Manufacturer Information**

Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com

#### Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545 Technical Assistance – 888-229-2199 Customer Service – 888-229-0199

### Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200. Reproductive Toxicity - Category 1B

#### GHS Label Elements

Symbol(s)



Signal Word Danger

Hazard Statement(s) May damage fertility or the unborn child







Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

#### **Precautionary Statement(s)**

#### Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection

#### Response

IF exposed or concerned: Get medical advice/attention

#### Storage

Store locked up

#### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

#### Other Hazards

No additional information available.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Mixture	Polymer, ethyl acrylate and methacrylic acid	1-5
Trade Secret	De-foaming agent	0.1-1
7664-41-7	Ammonia	0.1-1
107-21-1	Ethylene glycol	0.1-1
Mixture	Polymer, vinyl acetate and vinyl acetate-acrylic	5-10
Trade Secret	Clay compound	0.1-1
1317-65-3	Limestone	10-30
67-56-1	Methanol	0.1-1
Mixture	4,4-Dimethyloxazolidine	0.1-1
Trade Secret	Carbamic acid mixture	0.1-1
Mixture	Polycarboxylate salt	0.1-1
Mixture	Titanium dioxide	0.1-1







Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

### Section 4 - FIRST AID MEASURES

### **Description of Necessary Measures**

If exposed: Call a POISON CENTER or doctor/physician.

#### Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

#### Skin

Wash exposed skin with soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

#### Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

#### Ingestion

Do NOT induce vomiting. If swallowed, get medical attention.

### **Indication of any immediate medical attention and special treatment needed** Treat symptomatically and supportively.

#### Most Important Symptoms/Effects

Acute

May cause mild eye irritation.

### Delayed

May damage fertility or the unborn child.

### Note to Physicians

Contains: ethylene glycol, ammonia, methanol.`

### Section 5 - FIRE FIGHTING MEASURES

#### Extinguishing Media

### Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water.

### Unsuitable Extinguishing Media

None known.

### Special Hazards Arising from the Chemical

Slight fire hazard. Sealed containers may rupture or explode if exposed to heat.

### **Hazardous Combustion Products**

Oxides of carbon, oxides of nitrogen, hydrocarbons

### Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.







Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

### **Fire Fighting Measures**

Remove product from area of fire. Stay upwind and keep out of low areas.

### Section 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

#### Methods and Materials for Containment and Cleaning Up

Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

### **Environmental Precautions**

Avoid release to the environment.

### Section 7 - HANDLING AND STORAGE

#### **Precautions for Safe Handling**

This product contains crystalline silica, which is a known carcinogen: Do not grind or sand. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

### Conditions for Safe Storage, Including any Incompatibilities

#### Store locked up

Store above 0 C. Store below 45 C. Do not cut, puncture, or weld on or near this container. Avoid contact with incompatible materials.

#### Incompatible Materials

Strong acids, strong oxidizing agents

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Component Exposure Limits**

Ammonia	7664-41-7		
ACGIH:	25 ppm TWA	35 ppm STEL	
NIOSH:	25 ppm TWA; 18 mg/m3 TWA	35 ppm STEL; 27 mg/m3 STEL	
	300 ppm IDLH		
Europe:	20 ppm TWA; 14 mg/m3 TWA	50 ppm STEL; 36 mg/m3 STEL	
	1		

Print date: 2016-02-17





DYNAIR DUCT HARDWARE & NEXUS FLANG

Safety Data Sheet

### Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

OSHA (US):	50 ppm TWA; 35 mg/m3 TWA			
Mexico:	25 ppm TWA LMPE-PPT; 18 mg/m3 TWA LMPE-PPT35 ppm STEL [LMPE-CT]; 27 mg/m3 STEL [LMPE-CT]			
Ethylene glycol	107-21-1			
ACGIH:	100 mg/m3 Ceiling aerosol only			
Europe:				
	Possibility of significant uptake throug	gh the skin		
Mexico:	100 mg/m3 Ceiling aerosol			
Clay compound	Trade Secret			
ACGIH:	0.025 mg/m3 TWA respirable fraction	l		
NIOSH:	0.05 mg/m3 TWA respirable dust	50 mg/m3 IDLH respirable dust		
OSHA (US):	((30)/(%SiO2 + 2) mg/m3 TWA) total dust; ((250)/(%SiO2 + 5) mppcf TWA) respirable fraction; ((10)/(%SiO2 + 2) mg/m3 TWA) respirable fraction			
Mexico:	0.1 mg/m3 TWA LMPE-PPT respirable fraction			
Limestone	1317-65-3			
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust			
OSHA (US):	15 mg/m3 TWA total dust; 5 mg/m3 T	WA respirable fraction		
Mexico:	10 mg/m3 TWA LMPE-PPT20 mg/m3 STEL [LMPE-CT]			
	,			
Methanol	67-56-1			
ACGIH:	200 ppm TWA	250 ppm STEL		
	Skin - potential significant contribution to overall exposure by the cutaneous route			
NIOSH:	200 ppm TWA; 260 mg/m3 TWA 250 ppm STEL; 325 mg/m3 STEL			
	Potential for dermal absorption			
	6000 ppm IDLH			

Print date: 2016-02-17







### Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

Europa	200 mm TWA: 260 mg/m2 TWA		
Europe:	200 ppm TWA; 260 mg/m3 TWA		
	Possibility of significant uptake through the skin		
OSHA (US):	200 ppm TWA; 260 mg/m3 TWA		
Mexico:	200 ppm TWA LMPE-PPT; 260 mg/m3	TWA LMPE-PPT	
	250 ppm STEL [LMPE-CT]; 310 mg/m3	STEL [LMPE-CT]	
	Skin - potential for cutaneous absorption		
Titanium dioxide	Mixture		
ACGIH:	10 mg/m3 TWA		
NIOSH:	5000 mg/m3 IDLH		
OSHA (US):	15 mg/m3 TWA total dust	· · · · · · · · · · · · · · · · · · ·	
Mexico:	10 mg/m3 TWA LMPE-PPT as Ti	20 mg/m3 STEL [LMPE-CT] as Ti	
Silica, amorphous	7631-86-9	i	
NIOSH:	6 mg/m3 TWA	3000 mg/m3 IDLH	
OSHA (US):	20 mppcf TWA; ((80)/(% SiO2) mg/m3 TWA)		

### **Biological limit value**

There are no biological limit values for any of this product's components.

### **Engineering Controls**

Ensure adequate ventilation. Ensure compliance with applicable exposure limits.

### Individual Protection Measures, such as Personal Protective Equipment

### Eye/face protection

Wear safety glasses or safety goggles, with a faceshield, as appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

#### **Skin Protection**

Wear appropriate work clothing.

### **Respiratory Protection**

A NIOSH approved respirator with a dust, mist, and fume filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits or when symptoms have been observed that are indicative of overexposure.

#### **Glove Recommendations**

Wear appropriate gloves. Recommended material type: Hycron(R), neoprene, nitrile.





DYNAIR DUCT HAROWARE & NEXUS FLAND

### Safety Data Sheet

Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white latex	Physical State liquid	
Odor	Slight,ammonia	Color	white
Odor Threshold	Not available	pH .	8 - 9
Melting Point	Not available	Boiling Point	212 °F
Freezing point	Not available	Evaporation Rate	60 - 64 % volatile
<b>Boiling Point Range</b>	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	17 mmHg (@ 20 °C)
Vapor Density (air=1)	<1	Specific Gravity (water=1)	Not available
Water Solubility	Soluble	Partition coefficient: n- octanol/water	Not available
Viscosity	13 - 15 Kcps	Solubility (Other)	Not available
Density	1.22 (relative)	VOC	71 g/L (water excluded)

### **Other Information**

No additional information available.

### Section 10 - STABILITY AND REACTIVITY

### Reactivity

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No reactivity hazard is expected.

### Chemical Stability Stable under normal conditions of use.

### Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

### **Conditions to Avoid**







#### Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

### **Incompatible Materials**

strong acids, strong oxidizing agents

### Hazardous decomposition products

oxides of carbon, oxides of nitrogén, hydrocarbons

### Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Inhalation May cause respiratory irritation.
Skin Contact Nay cause mild skin irritation.
Eye Contact
May cause mild eye irritation.
Ingestion
Methanol can produce blindness with onset of symptoms being delayed for 18-24 hours.
Acute and Chronic Toxicity
Component Analysis - LD50/LC50 The components of this material have been reviewed in various sources and the following selected endpoints are published: Polymer, ethyl acrylate and methacrylic acid (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg
De-foaming agent (Trade Secret) Oral LD50 >2000 mg/kg
Chlorinated paraffins (Trade Secret) Oral LD50 Rat >4 g/kg
Ammonia (7664-41-7) Oral LD50 Rat 350 mg/kg Inhalation LC50 Rat 2000 ppm 4 h
Ethylene glycol (107-21-1) Oral LD50 Rat 4700 mg/kg Dermal LD50 Rat 10600 mg/kg Inhalation LC50 Rat >200 mg/m3 vapor 4 hr
Polymer, vinyl acetate and vinyl acetate-acrylic (Mixture)

Oral LD50 Rat >5000 mg/kg Dermal LD50 Rat >2000 mg/kg

Clay compound (Trade Secret)







Material Name: Coil-Tack W (White)

Oral LD50 Rat 500 mg/kg

Limestone (1317-65-3) Oral LD50 Rat 6450 mg/kg

Methanol (67-56-1) Oral LD50 Rat 6200 mg/kg Inhalation LC50 Rat 22500 ppm 8 h

4,4-Dimethyloxazolidine (Mixture) Oral LD50 Rat 1037 mg/kg Dermal LD50 Rat >2000 mg/kg Inhalation LC50 Rat 1.1 mg/L 4 hr

Carbamic acid mixture (Trade Secret) Oral LD50 Rat >2000 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat >2.04 mg/L 4 hr

Polycarboxylate salt (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat >5.1 mg/L mist

Octylphenol ethoxylate (Trade Secret) Oral LD50 Rat 2800 mg/kg

Titanium dioxide (Mixture) Oral LD50 Rat >25 g/kg Dermal LD50 Rabbit >10 g/kg Inhalation LC50 Rat >6.82 mg/L

Silica, amorphous (7631-86-9) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat >2.2 mg/L 1 h

**Immediate Effects** May cause mild eye irritation.

**Delayed Effects** May damage fertility or the unborn child.

Irritation/Corrosivity Data May cause respiratory irritation. May cause mild skin irritation. May cause mild eye irritation.

Respiratory Sensitization No data available.

**Dermal Sensitization** No data available. Product #:308580-5 gal 308581-50 gal



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### Safety Data Sheet

Material Name: Coil-Tack W (White)

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Product #:308580-5 gal 308581-50 gal

Component Carcinoger	nicity	
Chlorinated paraffins	Trade Secret	
IARC:	Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))	
DFG:	Category 3B (could be carcinogenic for man)	
OSHA:	Present	
Ethylene glycol	107-21-1	
ACGIH:	A4 - Not Classifiable as a Human Carcinogen	
Clay compound	Trade Secret	
ACGIH:	A2 - Suspected Human Carcinogen	
IARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic to humans))	
NTP:	Known Human Carcinogen (respirable size)	
DFG:	Category 1 (causes cancer in man, alveola fraction)	
OSHA:	Present (respirable size)	
Titanium dioxide	Mixture	
ACGIH:	A4 - Not Classifiable as a Human Carcinogen	
IARC:	Monograph 93 [2010]; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))	
DFG:	Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles)	
ÔSHA:	Present	
Silica, amorphous	7631-86-9	
IARC: Monograph 68 [1997]; Supplement 7 [1987] (Group 3 (not classifiable))		

# Germ Cell Mutagenicity No data available.

**Reproductive Toxicity** May damage fertility or the unborn child.

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Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

Specific Target Organ Toxicity - Single Exposure No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure No target organs identified.

Aspiration hazard No data available.

Medical Conditions Aggravated by Exposure No data available.

#### **Additional Data**

This product contains crystalline silica, which is a known carcinogen. However, this component is bound by the polymer portion of the sealant. The only way this component would be released is through incineration. Therefore, this product is not considered a carcinogen.

### Section 12 - ECOLOGICAL INFORMATION

#### Ecotoxicity

Avoid release to the environment.

**Component Analysis - Aquatic Toxicity** 

Polymer, ethyl acrylate and methacrylic acid	Mixture
Fish:	LC50 96 hr Pimephales promelas >1000 mg/L
Invertebrate:	EC50 48 hr Daphnia magna >1000 mg/L
Chlorinated paraffins	Trade Secret
Fish:	LC50 96 h Lepomis macrochirus >300 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.0109 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 94.5 - 271 mg/L [static]; LC50 96 h Lepomis macrochirus >0.1 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]
Invertebrate:	EC50 48 hr Daphnia magna 0.0059 mg/L
Ammonia	7664-41-7
Fish:	LC50 96 h Cyprinus carpio 0.44 mg/L; LC50 96 h Lepomis macrochirus 0.26 - 4.6 mg/L; LC50 96 h Lepomis macrochirus 1.17 mg/L [flow-through]; LC50 96 h Pimephales promelas 0.73 - 2.35 mg/L; LC50 96 h Pimephales promelas 5.9 mg/L [static];







### Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

	LC50 96 h Poecilia reticulata >1.5 mg/L; LC50 96 h Poecilia reticulata 1.19 mg/L [static]
Invertebrate:	LC50 48 h Daphnia magna 25.4 mg/L IUCLID
Ethylene glycol	107-21-1
Fish:	LC50 96 h Oncorhynchus mykiss 41000 mg/L; LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static]; LC50 96 h Lepomis macrochirus 27540 mg/L [static]; LC50 96 h Oncorhynchus mykiss 40761 mg/L [static]; LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static]; LC50 96 h Poecilia reticulata 16000 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 46300 mg/L IUCLID
Polymer, vinyl acetate and vinyl acetate- acrylic	Mixture
Fish:	LC50 96 hr Oncorhynchis mykiss >1000 mg/L
Invertebrate:	EC50 48 hr Daphnia magna >100 mg/L
Methanol	67-56-1
Fish:	LC50 96 h Pimephales promelas 28200 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]; LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static]; LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through]
4,4- Dimethyloxazolidine	Mixture
Fish:	LC50 96 hr Rainbow trout 95 mg/L [flow-through]
Silica, amorphous	7631-86-9
Fish:	LC50 96 h Brachydanio rerio 5000 mg/L [static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 440 mg/L IUCLID







Material Name: Coil-Tack W (White)

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Invertebrate: EC50 48 h Ceriodaphnia dubia 7600 mg/L IUCLID

Persistence and Degradability

No information available for the product.

**Bioaccumulative Potential** No information available for the product.

Mobility

No information available for the product.

Other Toxicity

No additional information available.

### Section 13 - DISPOSAL CONSIDERATIONS

### **Disposal Methods**

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 14 - TRANSPORT INFORMATION

US DOT Information: UN/NA #: Not regulated

IATA Information: UN#: Not regulated

TDG Information: UN#: Not regulated

IMDG Information: UN#: Not regulated

### Section 15 - REGULATORY INFORMATION

### **U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ammonia	7664-41-7
SARA 302:	500 lb TPQ







### Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

SARA 313:	1 % de minimis concentration (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)
CERCLA:	100 lb final RQ; 45.4 kg final RQ
OSHA (safety):	10000 lb TQ anhydrous); 15000 lb TQ solution, >44% Ammonia by weight)
SARA 304:	100 lb EPCRA RQ
Ethylene glycol	107-21-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Methanol	67-56-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Carbamic acid mixture	Trade Secret
CERCLA:	10 lb final RQ; 4.54 kg final RQ

### SARA Section 311/312 (40 CFR 370 Subparts B and C) Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No

### **U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Chlorinated paraffins	Trade Secret	No	Yes	No	No	No
Ammonia	7664-41-7	Yes	Yes	Yes	Yes	Yes
Ethylene glycol	107-21-1	Yes	Yes	Yes	Yes	Yes
Clay compound	Trade Secret	No	Yes	Yes	Yes	Yes
Limestone	1317-65-3	No	Yes	Yes	Yes	Yes
Methanol	67-56-1	Yes	Yes	Yes	Yes	Yes
Carbamic acid mixture	Trade Secret	No	No	No	Yes	No
Titanium dioxide	Mixture	No	Yes	Yes	Yes	Yes
Silica, amorphous	7631-86-9	Yes	Yes	Yes	Yes	Yes







Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

# The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

1	1
Clay compound	Trade Secret
Carc:	carcinogen, 10/1/1988 (airborne particles of respirable size)
Methanol	67-56-1
Repro/Dev. Tox	developmental toxicity, 3/16/2012
Titanium dioxide	Mixture
Carc:	carcinogen, 9/2/2011 (airborne, unbound particles of respirable size)

### Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Ammonia	7664-41-7
	1 %
Ethylene glycol	107-21-1
	1 %
Clay compound	Trade Secret
	1 %
Methanol	67-56-1
	1 %
Octylphenol ethoxylate	Trade Secret
	1%
Silica, amorphous	7631-86-9
	1 %

### Component Analysis - Inventory

Polymer, ethyl acrylate and methacrylic acid (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes







Material Name: Coil-Tack W (White)

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C	hlor	inated	paraffi	ins (Tı	rade S	ecret)						
τ	JS	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	мх
2	les	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Ammonia (7664-41-7)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Ethylene glycol (107-21-1)

US	CA	EU	AU	PH	JP ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Clay compound (Trade Secret)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Limestone (1317-65-3)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Methanol (67-56-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Ŷes	Yes	No	Yes	No	Yes	Yes	Yes

### 4,4-Dimethyloxazolidine (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes







Material Name: Coil-Tack W (White)

Product #:308580-5 gal 308581-50 gal

Carbamic acid mixture (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN .	NZ	МΧ
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

### Octylphenol ethoxylate (Trade Secret)

US	CA	ÈU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

### Titanium dioxide (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Silica, amorphous (7631-86-9)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KEÇL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Section 16 - OTHER INFORMATION

### HMIS Rating

Health: 1\* Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

### NFPA Ratings

Health: 1 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### Summary of Changes

New SDS: May 1, 2015

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic







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Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts<sup>TM</sup> - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

### **Other Information**

### Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material

HF RTA - 50







#### Material Name: RTA-50

Product #: 304168

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name RTA-50 Synonyms Adhesive/Liquid Portion of Two Part II Sealing System Chemical Family Adhesive Product Use Indoor, outdoor duct sealant Restrictions on Use For industrial use only.

#### Manufacturer Information

Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com

### Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545 Technical Assistance – 888-229-2199 Customer Service – 888-229-0199– 888-229-0199

### Section 2 - HAZARDS IDENTIFICATION

#### Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Sensitization - Category 1A

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 1 (liver, kidneys, central nervous system) Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1









Product #: 304168

Material Name: RTA-50 GHS Label Elements

Symbol(s)



Signal Word Danger

### Hazard Statement(s)

May cause allergic skin reaction May damage fertility or the unborn child Causes damage to organs May cause respiratory irritation Causes damage to organs through prolonged or repeated exposure

### **Precautionary Statement(s)**

#### Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use only outdoors or in a well-ventilated area Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapours/spray Wash thoroughly after handling Contaminated work clothing must not be allowed out of the workplace Do not eat, drink or smoke when using this product

### Response

If exposed: Call a POISON CENTER or doctor/physician IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor if you feel unwell IF ON SKIN: Wash with plenty of soap and water If skin irritation or rash occurs: Get medical advice/attention Wash contaminated clothing before reuse Specific treatment (see label)

#### Storage

Store in a well-ventilated place. Keep container tightly closed Store locked up

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

### Other Hazards

No additional information available.

Print date: 2016-02-17







#### Material Name: RTA-50

Product #: 304168

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	Polymer, vinyl acetate and vinyl acetate-acrylic	30-60
Trade Secret	De-foaming agent	0.1-1
Trade Secret	Nonylphenol polyethylene glycol ether	0.1-1
Trade Secret	Chlorinated paraffins	1-5
107-21-1	Ethylene glycol	1-5
Trade Secret	Clay compound	0.1-1
1317-65-3	Limestone	7-13
Mixture	4,4-Dimethyloxazolidine	0.1-1
Mixture	2-Amino-2-methyl-1-propanol mixture	0.1-1
Mixture	Titanium dioxide	0.1-1
Mixture	Polycarboxylate salt	0.1-1
Mixture	2-Butoxyethanol mixture	0.5-1.5
7779-90-0	Zinc phosphate	1-5
25265-77-4	2,2,4-Trimethylpentane-1,3-diol monoisobutyrate	0.1-1

### Section 4 - FIRST AID MEASURES

### **Description of Necessary Measures**

If exposed or concerned: Call a POISON CENTER or doctor/physician.

#### Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.







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### Skin

Wash with plenty of soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation or rash occurs, seek medical advice/attention.

### Eyes

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

#### Ingestion

Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

**Indication of any immediate medical attention and special treatment needed** Treat symptomatically and supportively.

### Most Important Symptoms/Effects

#### Acute

May cause allergic skin reaction. Causes damage to central nervous system, liver, kidneys. May cause respiratory irritation.

#### Delayed

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure:

### Note to Physicians

Contains ethylene glycol.

### Section 5 - FIRE FIGHTING MEASURES

### **Extinguishing Media**

Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water.

### Unsuitable Extinguishing Media

None known.

**Special Hazards Arising from the Chemical** Slight fire hazard. Containers may rupture or explode if exposed to heat.

Hazardous Combustion Products Ooxides of carbon, oxides of nitrogen, hydrocarbons

### **Fire Fighting Measures**

Remove product from area of fire. Stay upwind and keep out of low areas.

### Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.







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### Section 6 - ACCIDENTAL RELEASE MEASURES

### **Personal Precautions, Protective Equipment and Emergency Procedures** Wear personal protective clothing and equipment, see Section 8.

### Methods and Materials for Containment and Cleaning Up

Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

### **Environmental Precautions**

Avoid release to the environment.

### Section 7 - HANDLING AND STORAGE

#### **Precautions for Safe Handling**

This product contains crystalline silica, which is a known carcinogen: Do not grind or sand. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. KEEP OUT OF REACH OF CHILDREN.

### Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Store above 0 C. Store below 45 C. Do not cut, puncture, or weld on or near this container. Keep away from incompatible materials.

#### **Incompatible Materials**

Strong acids, strong oxidizing agents

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Component Exposure Limits**

Ethylene glycol	107-21-1		
ACGIH:	100 mg/m3 Ceiling aerosol only		
Europe:	20 ppm TWA; 52 mg/m3 TWA40 ppm STEL; 104 mg/m3 STEL		
· · · · · ·	Possibility of significant uptake through the skin		







### Material Name: RTA-50

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Mexico:	100 mg/m3 Ceiling aerosol			
	· .			
Clay compound Trade Secret				
ACGIH:	0.025 mg/m3 TWA respirable fraction			
NIOSH:	0.05 mg/m3 TWA respirable dust 50 mg/m3 IDLH respirable dust			
OSHA (US):	((30)/(%SiO2 + 2)  mg/m3 TWA) total dust; $((250)/(%SiO2 + 5)  mppcf TWA)$ respirable fraction; $((10)/(%SiO2 + 2)  mg/m3 TWA)$ respirable fraction			
Mexico:	Mexico: 0.1 mg/m3 TWA LMPE-PPT respirable fraction			
Limestone	1317-65-3			
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction			
OSHA (US):				
Mexico:	10 mg/m3 TWA LMPE-PPT	20 mg/m3 STEL [LMPE-CT]		
Titanium dioxide	Mixture			
ACGIH:	10 mg/m3 TWA			
NIOSH:	5000 mg/m3 IDLH			
OSHA (US):	15 mg/m3 TWA total dust			
Mexico:	10 mg/m3 TWA LMPE-PPT as Ti	20 mg/m3 STEL [LMPE-CT] as Ti		
,				
2-Butoxyethanol mixture	Mixture			
ACGIH:	20 ppm TWA			
NIOSH:	5 ppm TWA; 24 mg/m3 TWA 700 ppm IDLH			
	Potential for dermal absorption			
Europe:	20 ppm TWA; 98 mg/m3 TWA         50 ppm STEL; 246 mg/m3			
	Possibility of significant uptake throug	gh the skin		

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#### Material Name: RTA-50

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OSHA (US):	(US): 50 ppm TWA; 240 mg/m3 TWA			
	prevent or reduce skin absorption			
Mexico:	26 ppm TWA LMPE-PPT; 120 mg/m3 TWA LMPE-PPT75 ppm STEL [LMPE-CT]; 360 mg/m3 STEL [LMPE-CT]			
Skin - potential for cutaneous absorption				
Silica, amorphous	7631-86-9	······································		
NIOSH:	6 mg/m3 TWA	3000 mg/m3 IDLH		
OSHA (US):	20 mppcf TWA; ((80)/(% SiO2) mg/m3 TWA)			
Mica	12001-26-2			
ACGIH:	3 mg/m3 TWA respirable fraction			
NIOSH: 3 mg/m3 TWA (containing <1% Quartz) respirable dust				
	1500 mg/m3 IDLH (containing <1% Qu	iartz)		
OSHA (US):	OSHA (US): 20 mppcf TWA (<1% Crystalline silica)			
Mexico:	3 mg/m3 TWA LMPE-PPT respirable f	raction		

### **Biological limit value**

There are no biological limit values for any of this product's components.

### **Engineering Controls**

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

### Eye/face protection

Wear safety glasses or safety goggles, with a faceshield, as appropriate.

#### **Skin Protection**

Wear appropriate work clothing.

### **Respiratory Protection**

A NIOSH approved respirator with a dust, mist, and fume filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits or when symptoms have been observed that are indicative of overexposure.

### **Glove Recommendations**

Wear appropriate gloves. Recommended material type: Hycron(R), neoprene, nitrile.

#### **Protective Materials**

Provide an emergency eye wash fountain and quick drench shower in the immediate work area.







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Appearance	white latex	Physical State	liquid
Odor	Slight,ammonia	Color	white
Odor Threshold	Not available	рН	8 - 9
Melting Point	Not available	Boiling Point	212 °F
Freezing point	Not available	Evaporation Rate	48 - 52 % volume
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	17 mmHg (@ 20 °C)
Vapor Density (air=1)	<1	Specific Gravity (water=1)	Not available
Water Solubility	Soluble	Partition coefficient: n- octanol/water	Not available
Viscosity	3000 - 4000 cps	Solubility (Other)	Not available
Density	1.24 (relative)	voc	130 g/L (water excluded)

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### **Other Information**

No additional information available.

### Section 10 - STABILITY AND REACTIVITY

### Reactivity

No reactivity hazard is expected.

### **Chemical Stability**

Stable under normal conditions of use.

### Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

### Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.







### Material Name: RTA-50

Product #: 304168

**Incompatible Materials** Strong acids, strong oxidizing agents

### Hazardous decomposition products

Oxides of carbon, oxides of nitrogen, hydrocarbons

### Section 11 - TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

#### Inhalation

May cause respiratory irritation.

#### **Skin Contact**

May cause allergic skin reaction. May cause mild skin irritation.

#### **Eye Contact**

May cause mild eye irritation.

#### Ingestion

Large doses may cause central nervous system stimulation followed by depression.

#### Acute and Chronic Toxicity

### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published: Polymer, vinyl acetate and vinyl acetate-acrylic (Trade Secret) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rat >2000 mg/kg De-foaming agent (Trade Secret) Oral LD50 >2000 mg/kg Nonylphenol polyethylene glycol ether (Trade Secret) Oral LD50 Rat 2780 mg/kg Chlorinated paraffins (Trade Secret) Oral LD50 Rat >4 g/kg Ethylene glycol (107-21-1) Oral LD50 Rat 4700 mg/kg Dermal LD50 Rat 10600 mg/kg Inhalation LC50 Rat >200 mg/m3 vapor 4 hr Clay compound (Trade Secret) Oral LD50 Rat 500 mg/kg Limestone (1317-65-3) Oral LD50 Rat 6450 mg/kg 4,4-Dimethyloxazolidine (Mixture) Oral LD50 Rat 1370 mg/kg Dermal LD50 Rat >2000 mg/kg Inhalation LC50 Rat 1.1 mg/L 4 hr



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2-Amino-2-methyl-1-propanol mixture (Mixture) Oral LD50 Rat 2900 mg/kg Dermal LD50 Rabbit >2000 mg/kg
Titanium dioxide (Mixture) Oral LD50 Rat >25 g/kg Dermal LD50 Rat >25 g/kg Inhalation LC50 Rat >6.82 mg/L
Polycarboxylate salt (Mixture) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat >5.1 mg/L total dust, mist
2-Butoxyethanol mixture (Mixture) Oral LD50 Rat 1400 mg/kg Dermal LD50 Rabbit >2000 mg/kg
Joral LD50 Rat 1400 mg/kg
Joral LD50 Rat 450 ppm 4 h
Silica, amorphous (7631-86-9)

Silica, amorphous (7631-86-9) Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat >2.2 mg/L 1 h Zinc borate (138265-88-0)

Oral LD50 Rat >10000 mg/kg Dermal LD50 Rabbit >10000 mg/kg Inhalation LC50 Rat >5 mg/L 4 hr Zinc phosphate (7779-90-0) Oral LD50 Rat >5000 mg/kg 2,2,4-Trimethylpentane-1,3-diol monoisobutyrate (25265-77-4) Oral LD50 Rat 3200 mg/kg Dermal LD50 Rat >15200 mg/kg Inhalation LC50 Rat >2.73 mg/L

#### **Immediate Effects**

May cause allergic skin reaction. Causes damage to central nervous system, liver, kidneys. May cause respiratory irritation.

#### **Delayed Effects**

May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure:

#### Irritation/Corrosivity Data

May cause respiratory irritation. May cause mild skin irritation. May cause mild eye irritation.

#### **Respiratory Sensitization** No data available.

No dala avallable.

### Dermal Sensitization

May cause allergic skin reaction.

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### Material Name: RTA-50

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Chlorinated paraffins	Trade Secret		
IARC:	Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))		
DFG:	Category 3B (could be carcinogenic for man)		
OSHA:	Present		
Ethylene glycol	107-21-1		
ACGIH:	A4 - Not Classifiable as a Human Carcinogen		
Clay compound	Trade Secret		
ACGIH:	A2 - Suspected Human Carcinogen		
IARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic humans))		
NTP:	Known Human Carcinogen (respirable size)		
DFG:	Category 1 (causes cancer in man, alveola fraction)		
OSHA:	Present (respirable size)		
Titanium dioxide	Mixture		
ACGIH:	A4 - Not Classifiable as a Human Carcinogen		
IARC:	Monograph 93 [2010]; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))		
DFG:	Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles)		
OSHA:	Present		
2-Butoxyethanol mixture	Mixture		
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans		
IARC:	Monograph 88 [2006] (Group 3 (not classifiable))		
DFG:	Category 4 (no significant contribution to human cancer)		







#### Material Name: RTA-50

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Product #: 304168

Silica, amorphous	7631-86-9
IARC:	Monograph 68 [1997]; Supplement 7 [1987] (Group 3 (not classifiable))

#### Germ Cell Mutagenicity

No data available.

**Tumorigenic Data** No data available

#### **Reproductive Toxicity**

May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure Central nervous system, liver, kidneys

Specific Target Organ Toxicity - Repeated Exposure Causes damage to organs through prolonged or repeated exposure.

### Aspiration hazard

No data available.

#### Medical Conditions Aggravated by Exposure No data available.

### Additional Data

This product contains crystalline silica, which is a known carcinogen. However, this component is bound by the polymer portion of the sealant. The only way this component would be released is through incineration. Therefore, this product is not considered a carcinogen.

### Section 12 - ECOLOGICAL INFORMATION

#### Ecotoxicity

Avoid release to the environment.

#### **Component Analysis - Aquatic Toxicity**

Chlorinated paraffins	Trade Secret
Fish:	LC50 96 h Lepomis macrochirus >300 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.0109 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 94.5 - 271 mg/L [static]; LC50 96 h Lepomis macrochirus >0.1 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]
Invertebrate:	EC50 48 hr Daphnia magna 0.0059 mg/L







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### Material Name: RTA-50

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Ethylene glycol	107-21-1
Fish:	LC50 96 h Oncorhynchus mykiss 41000 mg/L; LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static]; LC50 96 h Lepomis macrochirus 27540 mg/L [static]; LC50 96 h Oncorhynchus mykiss 40761 mg/L [static]; LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static]; LC50 96 h Poecilia reticulata 16000 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 46300 mg/L IUCLID
	· · · · · · · · · · · · · · · · · · ·
4,4-Dimethyloxazolidine	Mixture
Fish:	LC50 96 hr Rainbow trout 95 mg/L [flow-through]
2-Amino-2-methyl-1-propanol mixture	Mixture
Fish:	LC50 96 h Lepomis macrochirus 190 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 520 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 193 mg/L IUCLID
2-Butoxyethanol mixture	Mixture
Fish:	LC50 96 h Lepomis macrochirus 1490 mg/L [static]; LC50 96 h Lepomis macrochirus 2950 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L EPA
Silica, amorphous	7631-86-9
Fish:	LC50 96 h Brachydanio rerio 5000 mg/L [static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 440 mg/L IUCLID
Invertebrate:	EC50 48 h Ceriodaphnia dubia 7600 mg/L IUCLID







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Zinc borate	138265-88-0
Fish:	LC50 96 hr Oncorhynchus mykiss 2.4 mg/L
Zinc phosphate	7779-90-0
- Fish:	LC50 96 hr Oncorhynchus mykiss 0.14 - 0.26 mg/L
Invertebrate:	EC50 48 hr Daphnia magna 0.04 - 0.86 mg/L
2,2,4-Trimethylpentane-1,3-diol monoisobutyrate	25265-77-4
Fish:	LC50 96 h Pimephales promelas 30 mg/L
Algae:	EC50 72 h Pseudokirchneriella subcapitata 18.4 mg/L IUCLID

### Persistence and Degradability

No information available for the product.

### **Bioaccumulative Potential**

No information available for the product.

### Mobility

No information available for the product.

### Other Toxicity

No additional information available.

### Section 13 - DISPOSAL CONSIDERATIONS

#### **Disposal Methods**

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 14 - TRANSPORT INFORMATION

US DOT Information: UN/NA #: Not regulated

IATA Information: UN#: Not regulated









Product #: 304168

### Safety Data Sheet

#### Material Name: RTA-50

TDG Information: UN#: Not regulated

**IMDG Information:** 

UN#: Not regulated

### Section 15 - REGULATORY INFORMATION

### **U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ethylene glycol	107-21-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ

### SARA Section 311/312 (40 CFR 370 Subparts B and C) Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No

### **U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

		1		1	
CAS	CA	MA	MN	NJ	PA
Trade Secret	No	Yes	No	No	No
107-21-1	Yes	Yes	'Yes	Yes	Yes
Trade Secret	No	Yes	Yes	Yes	Yes
1317-65-3	No	Yes	Yes	Yes	Yes
Mixture	Ŋo	Yes	No	Yes	Yes
Mixture	No	Yes	Yes	Yes	Yes
Mixture	Yes	Yes	Yes	Yes	Yes
7631-86-9	Yes	Yes	Yes	Yes	Yes
12001-26-2	Yes	Yes	Yes	Yes	Yes
	Trade Secret 107-21-1 Trade Secret 1317-65-3 Mixture Mixture Mixture 7631-86-9	Trade SecretNo107-21-1YesTrade SecretNo1317-65-3NoMixtureNoMixtureYoMixtureYes7631-86-9Yes	Trade SecretNoYes107-21-1YesYesTrade SecretNoYes1317-65-3NoYesMixtureNoYesMixtureNoYesMixtureYesYesMixtureYesYesMixtureYesYes7631-86-9YesYes	Trade SecretNoYesNo107-21-1YesYesYesTrade SecretNoYesYes1317-65-3NoYesYesMixtureNoYesYesMixtureNoYesYesMixtureYesYesYesMixtureYesYesYesMixtureYesYesYes7631-86-9YesYesYes	Trade SecretNoYesNoNo107-21-1YesYesYesYesTrade SecretNoYesYesYes1317-65-3NoYesYesYesMixtureNoYesNoYesMixtureNoYesYesYesMixtureYesYesYesYesMixtureYesYesYesYesMixtureYesYesYesYesMixtureYesYesYesYes7631-86-9YesYesYesYes







### Material Name: RTA-50

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# The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer

Clay compound	Trade Secret
Carc:	carcinogen, 10/1/1988 (airborne particles of respirable size)
Titanium dioxide	Mixture
Carc:	carcinogen, 9/2/2011 (airborne, unbound particles of respirable size)

### Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Ethylene glycol	107-21-1
	1%
Clay compound	Trade Secret
	1 %
2-Butoxyethanol mixture	Mixture
	1 %
Silica, amorphous	7631-86-9
	1 %
Mica	12001-26-2
	1 %

### **Component Analysis - Inventory**

Nonylphenol polyethylene glycol ether (Trade Secret)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

### Chlorinated paraffins (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes







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### Ethylene glycol (107-21-1)

, US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Clay compound (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Limestone (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### 4,4-Dimethyloxazolidine (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

### 2-Amino-2-methyl-1-propanol mixture (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Titanium dioxide (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	ĊN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Hydroxyethyl cellulose (9004-62-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	1	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

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### Material Name: RTA-50

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### 2-Butoxyethanol mixture (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Silica, amorphous (7631-86-9)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

### Mica (12001-26-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	DSL	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Zinc borate (138265-88-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	No	No	No	No	No	No	No	No	Yes	Yes	No

Zinc phosphate (7779-90-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

### 2,2,4-Trimethylpentane-1,3-diol monoisobutyrate (25265-77-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

### Section 16 - OTHER INFORMATION

### **HMIS Rating**

Health: 2\* Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard







### Material Name: RTA-50

**NFPA Ratings** 

Health: 2 Fire: 0 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes New SDS: May 22, 2015

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH -Philippines; RCRA - Resource Conservation and Recovery Act, REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

### **Other Information**

#### Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

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HF TRAVEL TACK 10 PGS







### Material Name: Travel-Tack Non-Flam

Product #: 323821

## Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name Travel-Tack Non-Flam Synonyms Water-based Adhesive Chemical Family

Adhesive

Product Use Water based Adhesive Restrictions on Use For industrial use only.

**Manufacturer Information** 

Carlisle HVAC Products 900 Hensley Lane Wylie, TX 75098 www.carlislehvac.com

## Medical Emergency: CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545 Technical Assistance – 888-229-2199 Customer Service – 888-229-0199

# Section 2 - HAZARDS IDENTIFICATION

## Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 1 (respiratory system, body, central nervous system, systemic toxicity, eyes)

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (kidneys, respiratory system, eyes, central nervous system)







## Material Name: Travel-Tack Non-Flam

GHS Label Elements

Product #: 323821





**Signal Word** Warning Irritant by inhalation, ingestion, skin contact, and eye contact.

### Hazard Statement(s)

Contains gas under pressure; may explode if heated Causes skin irritation Causes eye irritation May cause respiratory irritation May cause drowsiness or dizziness

## **Precautionary Statement(s)**

### Prevention

Pressurized container: Do not pierce or burn, even after use Protect from sunlight. Store in a well-ventilated place. Keep container tightly closed Use personal protective equipment as required.

Avoid breathing dust/fume/gas/mist/vapours/spray

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lens, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice or attention.

IF ON SKIN: Wash with plenty of water. If skin irritation occurs, get medical advice or attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

## **Potential Health Effects**

Principal Routes of Exposure: Inhalation, skin absorption, eye contact

### Acute Effects

### Eyes

Contact with eyes may cause irritation. Direct contact with liquid or vapors may cause stinging, tearing, redness, swelling, and eye damage.

### Skin

May cause skin irritation and /or dermatitis. Prolonged or repeated contact or exposure to vapors may cause redness, burning, and drying and cracking of the skin.

# Inhalation

Breathing high concentrations of vapors may cause irritation of the nose and throat or signs of nervous system depression (i.e. – headache, nausea, drowsiness, dizziness, vomiting, loss of coordination and fatigue).







## Material Name: Travel-Tack Non-Flam

Product #: 323821

### Ingestion

Ingestion may cause irritation of the digestive tract, nausea, vomiting, and signs of nervous system depression.

### Chronic Effects

Avoid repeated exposure. May cause blood damage. Repeated contact may cause allergic reactions in very susceptible persons.

## Aggravated Medical Conditions

Pre-existing eye, skin, or respiratory disorders may be aggravated by exposure to this product.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
75-09-2	Dichloromethane	50-75
811-97-2	1,1,1,2-TETRAFLUOROETHANE	12-25
124-38-9	CARBON DIOXIDE	5-15
115-10-6	DIMETHYL ETHER	1-7

# Section 4 - FIRST AID MEASURES

## **General Advice**

Show this safety data sheet to the doctor in attendance

### Inhalation

Move to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen and get immediate medical attention.

### Skin

Wash exposed skin with soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

### Eyes

Flush with plenty of cool water for at least 15 minutes, holding eyelids apart for thorough irrigation. If irritation persists, get immediate medical attention.

## Ingestion

Do NOT induce vomiting. If swallowed, get medical attention. If vomiting occurs, keep head lower than hips to prevent aspiration.







## Material Name: Travel-Tack Non-Flam

Product #: 323821

## **Note to Physicians** Treat symptomatically

# Section 5 - FIRE FIGHTING MEASURES

## **Extinguishing Media**

## Suitable Extinguishing Media

Carbon dioxide, dry chemicals, foam. Water may be helpful in keeping adjacent containers cool; avoid spreading the liquid with water used for cooling. Water-based sprinkler systems may help contain larger fires.

## Special Hazards Arising from the Chemical

Closed containers may rupture if exposed to fire or extreme heat. May produce toxic fumes if burning.

## **Special Protective Equipment and Precautions for Firefighters**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

# Section 6 - ACCIDENTAL RELEASE MEASURES

## Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Remove all sources of ignition.

## Methods and Materials for Containment and Cleaning Up

Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

## **Environmental Precautions**

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

# Section 7 - HANDLING AND STORAGE

## Precautions for Safe Handling

Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Wear appropriate personal protective equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from open flames, hot surfaces and sources of ignition.

## Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from extremes of heat or cold. Keep in properly labeled containers.







## Material Name: Travel-Tack Non-Flam

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Product #: 323821

# Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

## **Component Exposure Limits**

Dichloromethane	75-09-2
ACGIH TLV:	50
OSHA PEL:	25
· .	
1,1,1,2- TETRAFLUOROETHANE	811-97-2
ACGIH TLV:	1000
OSHA PEL:	Not Established
CARBON DIOXIDE	124-38-9
ACGIH TLV:	30000
OSHA PEL:	5000
DIMETHYL ETHER	115-10-6
OSHA PEL:	Not Established
ACGIH TLV:	1000

## **Engineering Controls**

Ensure adequate ventilation, especially in confined areas.

# Individual Protection Measures, such as Personal Protective Equipment

## Eye/face protection

Wear safety glasses or safety goggles, or full faceshield.







# Material Name: Travel-Tack Non-Flam

Product #: 323821

### **Skin Protection**

Protective gloves and impervious clothing.

### **Respiratory Protection**

In operations where exposure limits are exceeded, use a NIOSH approved respirator that has been selected by a technically qualified person for the specific work conditions.

### **Hygiene Practices**

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling. When using, do not eat, drink or smoke.

Appearance	Not available	pH	Not available
Odor	Not available	<b>Boiling Point</b>	-320.00°F [-196°C]
Odor Threshold	Not available	Evaporation Rate	Faster than nBuAc
Autoignition	Not data	Flammability (solid, gas)	Not data
Bulk Density (lb/gal)	9.48	Flash Point	Not available
Vapor Density (air=1)	Heavier than air	Decomposition	Not data
Water Solubility	Insoluble	Vapor Pressure	Not available
Viscosity	Not available	Specific Gravity (water=1)	1.138
VOC	~65 g/L (water excluded) ~23 g/L	Non-Volatile (wt%)	20.20

# Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### **Other Information**

No additional information available.

# Section 10 - STABILITY AND REACTIVITY

### Chemical Stability

Stable under normal conditions of use.

## **Possibility of Hazardous Reactions**

None under normal conditions of use.

Print date: 2016-02-17







## Material Name: Travel-Tack Non-Flam

Product #: 323821

### **Conditions to Avoid**

Keep away from open flames, hot surfaces, static electricity and sources of ignition. Avoid extremes of heat or cold.

Incompatible Materials

Strong acids, strong bases, strong oxidizing agents

## Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide, carbon dioxide, smoke, and other unidentified organic compounds may be formed during combustion.

## Section 11 - TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure Inhalation, skin absorption, eye contact

Acute and Chronic Toxicity No data

Irritation/Corrosivity Data No data

Sensitization No data

**Corrosivity** No data

### **Component Carcinogenicity**

Dichloromethane	Trade Secret
IARC:	Listed
NTP:	Not Listed
OSHA:	Listed

### Mutagenicity No data

**Reproductive Toxicity** No data

Specific Target Organ Toxicity - Single Exposure No data

Specific Target Organ Toxicity - Repeated Exposure No data







### Material Name: Travel-Tack Non-Flam

Aspiration hazard No data Product #: 323821

# Section 12 - ECOLOGICAL INFORMATION

## **Aquatic Toxicity**

Acute and prolonged Toxicity to Fish: No data Acute Toxicity to Aquatic Invertebrates: No data Environmental Fate and Pathways: No data

**Persistence and Degradability** No data.

**Bioaccumulative Potential** No data

Mobility in soil No data

Other adverse effects No data

# Section 13 - DISPOSAL CONSIDERATIONS

## **Disposal Methods**

Dispose of in accordance with all applicable local, state, and federal regulations. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

# Section 14 - TRANSPORT INFORMATION

US DOT Information:
Proper shipping name: CHEMICAL UNDER PRESSURE, N.O.S. (1,1,1,2 TETRAFLUOROETHANE, NITROGEN)
Hazard Class: 2.2
UN#: UN3500
ICAO/IATA: Contact the preparer for further information.
IMDG/MO Information: Contact the preparer for further information.







### Material Name: Travel-Tack Non-Flam

Product #: 323821

## Section 15 - REGULATORY INFORMATION

US TSCA: Yes – All components are listed or exempt

### **U.S. Federal Regulations**

SARA Section 313 : Section 313 OF Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). If listed below, this product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

<b>Chemical Designation</b>	Cas No.	% Weight
Dichloromethane	75-09-2	50-75

# Clean Air Act, Section 112 Hazardous Air Pollutants (HAPS) (see 40 CFR 61)

<b>Chemical Designation</b>	Cas No.	% Weight
Dichloromethane	75-09-2	50-75

### State Regulations

### California Proposition 65

This product contains the following substance(s) known to the state of California to cause cancer or reproductive harm:

<b>Chemical Designation</b>	Cas No.
Dichloromethane	75-09-2
Ethyl benzene	100-41-4

## Section 16 - OTHER INFORMATION

### NFPA Ratings

Health: 2 Fire: 1 Reactivity: 0 B Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### Summary of Changes New SDS: May 21, 2015

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability







### Material Name: Travel-Tack Non-Flam

Product #: 323821

Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA -Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts<sup>™</sup> - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration: PH -Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

## **Other Information**

### **Disclaimer:**

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.



GPASER

### MATERIAL SAFETY DATA SHEET

# 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: VersaGrip 102 Synonyms: Water-Based Mastic

### Manufacturer/Supplier

Carlisle Coatings & Waterproofing Incorporated 900 Hensley Lane Wylie, TX 75098 Internet Address: http://www.ccwcompanies.com/

**Phone Numbers** Medical Emergency: CHEMTREC (USA): (800) 424-9300 CHEMTREC (International): MSDS Assistance: (972) 442-6545 Fax On Demand: NA Technical Assistance: (888) 229-2199 Customer Service: (888) 229-0199

2.	<b>COMPONENT INI</b>	ORMATION
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Component	CAS No.	Percent Range	Hazardous in Blend
Ethylene Glycol	107-21-1	0.5 - 2	
Methanol	67-56-1	0.2 - 2	

This product is not hazardous according OSHA 29 CFR 1910.1200.

_	lazards: ammable/C	Combustible	No	Acute Toxin	No	Chronic Toxin	No	Carcinogen	No	
Pı	ressure N	o Reactive	No	Exposure	Limit	Target	Organ	Other		

## 2A OTHER INGREDIENTS Greater than 3%

ZA. UTHER INGREDIENTS Greater man over			
Component	CAS No.		
Latex Co-polymer	Mixture		
Calcium Carbonate	1317-65-3		
Hydrated Alumina	21645-51-2		
Chlorinated Paraffin	63449-39-8 Blend		

### **3. HAZARDS IDENTIFICATION**

# **Emergency and Hazards Overview:**

May cause moderate irritation to eyes. May be harmful if swallowed. Read and understand all health and safety information on the product label and Material Safety Data Sheet before use.

#### Ratings

0 **Reactivity** 0 Health 1 Flammability

Primary Route of Exposure: Skin x Inhalation x Eye x Ingestion x

#### **Health Effect Information**

Eye Contact: May cause eye irritation if wiped or rubbed into eyes.

Skin Contact: May cause mild skin irritation on prolonged or repeated contact.

Inhalation: Breathing high concentrations of vapors may cause nausea & irritation of nose, throat, & respiratory tract. Respiratory symptoms associated with pre-existing lung disorders may be aggravated by exposure to this material.

Ingestion: Ingestion of large quantity may cause initial central nervous system stimulation, followed by



Medical Conditions Aggravated by Exposure: Prolonged exposure to vapors could aggravate pre-existing disorders in lungs, kidney and liver.

### 4. FIRST AID INFORMATION

Eye Contact: Flush with water for 15 minutes. Get medical attention immediately.

Skin Contact: Wipe off and wash skin with soap and water. Promptly remove contaminated clothing and wash before reuse.

Inhalation: Remove to fresh air. If breathing has stopped, start artificial respiration. Oxygen may be administered. Consult physician immediately

Ingestion: Do not induce vomiting unless directed to do so by a physician. Consult a physician immediately.

Notes to Physician: This product contains ethylene glycol, Hexahydro-1, 3,5-triethyl-s-triazine (not in a reportable amount).

### 5. FIRES AND EXPLOSION INFORMATION

Flammable Properties Flash Point: No flash to boiling Flame extension: NA Flammable Limits in Air Upper Percent: NA Lower Percent: NA Auto ignition Temperature: NA

Test Method: Closed cup Test Method: NA

Test Method: NA

NFPA Classification: H1 F0 R0

Extinguishing Media: CO<sub>2</sub>, foam, dry chemical or water spray.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: Firemen must wear full-face air-supplied masks and full protective clothing.

**Unusual Fire and Explosion Conditions:** This product is not sensitive to physical shock or static discharge. Exposure of closed container to temperatures above the boiling point could cause pressure buildup and container rupture.

Hazardous Combustion By-Products: CO, CO<sub>2</sub>, unburned hydrocarbons, or nitrous oxides.



#### 6. ACCIDENTAL RELEASE MEASURES

**Personnel Safeguards:** Evacuate non-essential personnel to safe areas. Clean-up responders should wear proper protective clothing and gloves before entering the affected area.

Regulatory Notifications: Certain component of this product is defined as hazardous according to U.S. EPA. Spill reporting requirements and reportable quantities vary by region. Consult all applicable state and local regulations. For Canada, observe all precautions noted above.

**Containment and Clean up:** Prevent product from entering drinking water supplies or streams. Observe above precautions, collect liquid with inert, noncombustible material and remove for disposal.

### 7. HANDLING AND STORAGE INFORMATION

- Handling: Normal use condition doesn't produce respirable Silica. However, sanding, grinding, and burning might release respirable Silica. Keep out of reach of children. Launder contaminated clothing. Wash hands with soap and water after use, especially before eating or drinking.
- Storage: Store in a dry, well ventilated environment away from heat, above 35 deg F and below 110 deg F. Keep containers closed when not in use. Do not pressurize, cut weld or grind containers.

### **Empty Container Warnings**

**Drums:** Drums may be reused after wash. **Plastic:** Plastic containers may be reused after wash.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

#### **Exposure Limits and Guidelines**

Component	CAS No.	Exposure Limit
Methanol	67-56-1	200 ppm OSHA PEL
		200 ppm ACGIH TWA, 250 ppm STEL
Ethylene Glycol	107-21-1	50 ppm OSHA PEL/Ceiling

#### **Personal Protective Equipment**

Eye/Face Protection: Wear safety goggles or face shield. Contact lenses should not be worn.

Skin Protection: Use protective rubber gloves (Hycron, neoprene, or nitrile).

**Respiratory Protection:** Provide adequate ventilation to maintain vapors below PEL/TWA. If vapor levels are exceeded, use NIOSH approved respirator, both during and immediately after application, until vapor levels are below limits.

**Personal Hygiene:** Avoid rubbing eyes during handling. Use good personal hygiene practices to avoid incidental ingestion.

#### **Engineering Controls / Work Practices**

- Ventilation: Provide local exhaust or area ventilation to maintain concentration of vapors below PEL/TWA.
- Other: Source of clean water should be available in the work area for flushing eyes and skin. Wash thoroughly with soap and water after use and before eating.



### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White/Gray Mastic	Vapor Pressure: 17 mm Hg @ 20°C
Odor: Typical latex with slight ammonia odor	Vapor Density (air=1): <air< td=""></air<>
Physical state: Mastic	Percent Volatile by Weight: 24-28
<b>pH:</b> 8.0 – 9.0	Volatile Organic Content: 45 gpl (water excluded)
DOT Corrosivity: NA	Molecular Weight: NA
Boiling Point: 212°F	Average Carbon Number: NA
Melting Point: NA	Viscosity @ 77 F: Thixotropic
Specific Gravity: 1.39	
Pour Point: NA	
Solubility in Water: Miscible with water	
Octanol / Water Coefficient: Log K <sub>ow</sub> = NA	

### 10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: Avoid extreme heat, fire and temperature.

Incompatible Materials to Avoid: Avoid strong acids, strong oxidizers.

11. TOXICOLOGICAL INFORMATION (will only print available data) Ethylene Glycol Primary Eye Irritation: Irritating **Primary Skin Irritation: NA** Acute Dermal Toxicity: Product toxicity has not been determined. Subacute Dermal Toxicity: NA **Dermal Sensitization: NA** Inhalation Toxicity: Product toxicity has not been determined. Inhalation Sensitization: NA Oral Toxicity: Product toxicity has not been determined. Following are component data: LD<sub>50</sub>, Ethylene Glycol: Rat 4,000 mg/kg Mutagenicity: NA Carcinogenicity: NA Reproductive Toxicity: Product toxicity has not been determined. Following are component data: Ethylene Glycol: Pregnant Rat 1.25g/kg and above: increased malformed fetus Pregnant Mice 750 mg/kg and above: increased malformed fetus Teratogenicity: NA Immunotoxicity: NA Neurotoxicity: NA No other toxicological information available

12. ECOLOGICAL INFORMATION Ethylene Glycol Aquatic Toxicity: Not known Terrestrial Toxicity: Not known Chemical Fate and Transport: Not known No other ecological information available

> Issued: 07/01/08 Supersedes: 06/15/07 Page 4 of 6



### 13. DISPOSAL INFORMATION

**Regulatory Information:** Consult all regulations (federal, state, provincial, local etc.) or a qualified waste disposal firm when characterizing waste for disposal.

Waste Disposal Methods: Recover free liquid. Absorb residue and dispose of according to local, state and Federal EPA regulation. Empty container: may contain explosive vapors. Do Not cut, puncture or weld on or nearby.

### 14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT) Highway / Rail: Not regulated by DOT

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping descriptions.

Other: No other information available.

### **15. REGULATORY INFORMATION**

#### **Regulatory Lists**

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory or exempt from listing on the TSCA Inventory.

Sara Section 313: This product contains the following Sara, Title III, Section 313 Chemicals:

Chemical	CAS Number	Percent in Product
Methanol	67-56-1	0.2 - 2
Ethylene Glycol	107-21-1	0.5 - 2

IARC Group: NA

#### **Regulatory Lists Searched**

This product contains a mixture of one or more components found on the following State List at or above OSHA de minimis quantities

Health & Safety: NA Environmental: NA International: NA State: FL, MA, MN, PA, NJ, WA National Inventories: NA

SARA 3	SARA 311 / 312 Categories (For the chemicals above)											
Acute:	Yes	Chronic:	Yes	Fire:	Yes	Pressure:	No	<b>Reactive:</b>	No			
Regulated	d: No											

California Proposition 65 Information: Warning! None in the list

**Canadian WHMIS Classification** 

Issued: 07/01/08 Supersedes: 06/15/07 Page 5 of 6

VersaGrip 102



### Class: Class B2 and D2B

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

### Canadian Environmental Protection Act (CEPA)

All reportable chemical substance is listed on the Domestic Substances List (DSL) or otherwise complies with CEPA new substance notification requirements.

#### National Pollution Release Inventory (NPRI)

This product contains the following chemical subject to the reporting requirements of the CEPA subsection 16(1), NPRI.

<u>Chemical</u>	CAS Number	Percent in Product
Methanol	67-56-1	0.2 - 2
Ethylene Glycol	107-21-1	0.5 - 2

Other Regulations: No other information available.

### **16. OTHER INFORMATION**

#### Health and Environmental Label Language

All ingredients contained in this product are included on the US EPA Toxic Substances Control Act (TSCA) inventory or exempt from listing on the TSCA inventory. All ingredients contained in this product comply with the requirements of the Canadian Environmental Protection Act (CEPA) and are listed on the Domestic Substance List (DSL) or Non-Domestic Substance List (NDSL)

MSDS Revisions Previous Version Date: 06/15/07 Section Old Information: New Information: Revision to Section 2A

Prepared By: R&D Department

Date: 07/01/08

**Disclaimer of Warranty:** The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Issued: 07/01/08 Supersedes: 06/15/07 Page 6 of 6

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		/ELD-ON® 795™ Lov					Supersedes:		
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		OC PVC Plastic Pipe Cemer or PVC Plastic Pipe	nt						
PRODUCT USE: Low VC SUPPLIER:	C Solvent Cement 1		ACTURER:	P.O. Box 379	Main Street, C 9, Gardena, CA				
EMERGENCY: Transportation: CH		2024 ±1 912-248-0595 //nt		Tel. 1-310-89 Medical: CH		00 255-3924	+1 813-248-	)585 (International)	
SECTION 2 - HAZARDS I			1		easterna t			a na san an san a	
GHS CLASSIFICATION:							iysical		_
Health Acute Toxicity: Catego Skin Irritation: Catego Skin Sensitization: NO Eye: Catego	y 3	Enviror Acute Toxicity: Chronic Toxicity:	nmental None Known None Known		Flammable Li		iyaicai	Category 2	
GHS LABEL:		Signal Word: Danger			WHMIS CLASS	IFICATION:	CLASS B, D CLASS D, D		
	zard Statements					ry Statement			
H225: Highly flammable liquid and vapor H319: Causes serious eye irritation					arks/open flarnes e/gas/mist/vapors		No smoking		
H335; May cause respiratory irritation			P280: Wear pro	tective gloves/p	rotective clothing		face protection		
H336: May cause drowsiness or dizziness				et medical advic ore in a well ven	e/attention tilated place, Kee	p container tinh	tly closed		
H351: Suspected of causing cancer EUH019: May form explosive peroxides			P501: Dispose		ainer in accordan	ce with local reg	gulation		
SECTION 3 - COMPOSIT	ON/INFORMAT	ION ON INGREDIEN	rs	NCH 1		ONCENTRATIO	2		
		CAS# EINECS #	Pre-registratio		C	% by Weight			
Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK)		109-99-9 203-726-8 78-93-3 201-159-0	05-21162977			35 - 45 5 - 15			
Cyclohexanone		108-94-1 203-631-1	05-21162977	18-25-0000		5 - 15			
Acetone All of the constituents of this adhes	vo product pro listed		05-21162977 pemical substa		ned by the US	5 - 15 EPA, or are e	exempt from t	hat listing.	
* Indicator this chamical is subject	n the reporting requi	rements of Section 313 of th	e Emergency I	Planning and	Community Rig	aht-to-Know /	act of 1986 (4	0CFR372).	
# indicates that this chemical is fou			the State of C	alifomia to ca	use cancer or	reproductive	toxicity.	ويور ويتوجد والإرادين	
SECTION 4 - FIRST AID Contact with eyes: Flush	ves immediately with	n plenty of water for 15 minut	es and seek n	edical advice	immediately.		· ·	and the	<u></u>
Skin contact: Remov	e contaminated cloti	hing and shoes. Wash skin t	horoughly with	soap and wa	ter. If irritation	develops, s	eek medical a	dvice.	
Inhalation: Remove Ingestion: Rinse	e to fresh air. If brea nouth with water. G	athing is stopped, give artific ive 1 or 2 glasses of water of	ai respiration. milk to dilute.	Do not induc	s anncait, give ce vomiting. Si	eek medical a	advice immed	iately.	
Likely Routes of Exposure:	Inhalation, Ey	e and Skin Contact							
Acute symptoms and effects: Inhalation: Severe	overexposure may	result in nausea, dizziness, ł	eadache. Ca	n cause drow	siness, irritatio	n of eyes and	i nasal passa	ges,	
Eye Contact: Vapor	slightly uncomfortal	ole. Overexposure may resu	lt in severe ey	e injury with c	orneal or conju	unctival inflan	nmation on co	intact with the liquic	l.
		natural skin oils resulting in g, diarrhea and mental slugg		Dermatitus ma	ay occur with p	rolonged con	lact.		
Chronic (long-term) effects:	Category 2 C	arcinogen					<u></u>		
SECTION 5 - FIREFIGHT	NG MEASURE	St. (Marcolling and Co	ga 1968, s		1.			0-Minimal	
Suitable Extinguishing Media: Unsuitable Extinguishing Medi		powder, carbon dioxide gas or stream.	, toam, Halon,	water rog.	Health	HMIS 2	NFPA 2	1-Slight	
Exposure Hazards:	inhalation an	d dermal contact			Flammability	3 0	3 0	2-Moderate 3-Serious	
Combustion Products:	Uxides of car	rbon, hydrogen chloride and	SITIOKE		Reactivity PPE	в	Ū	4-Severe	
Protection for Firefighters:		d breathing apparatus or full	face positive	oressure airlir	ne masks.				
SECTION 6 - ACCIDENT	AL RELEASE M	EASURES om heat, sparks and open fla	me	<u> </u>	<u></u>			<u> </u>	5
Personal precautions:	Provide suffic	cient ventilation, use explosion	n-proof exhau	st ventilation	equipment or v	vear suitable	respiratory p	otective equipment	L
n to see the Brown floor	Prevent cont	act with skin or eyes (see se uct or liquids contaminated v	ction 8).						
Environmental Precautions: Methods for Cleaning up:	Clean up with	sand or other inert absorbe	nt material. Tr	ansfer to a cl	osable steel ve	essel.			
Materials not to be used for cle	-	Aluminum or plastic contair	iers						
SECTION 7 - HANDLING Handling: Avoid breathing of va	or avoid contact w	ith eves skin and clothing.			<u> </u>				
Keep away from ignit	on sources, use only	relectrically grounded handli	ng equipment	and ensure a	dequate ventila	ation/fume ex	haust hoods.		
Do not eat, drink or s Storage: Store in ventilated ro	m or shade helow A	A°C (110°E) and away from (	firect sunlight.						
Keep away from ignit	on sources and inco	mpatible materials: caustics,	ammonia, ino	ganic acids,	chlorinated cor	npounds, stro	ong oxidizers	and isocyanates.	
SECTION 8 - PRECAUTI		ntainer label, product bulletin							
SECTION 8 - PRECAUT					OSHA	CAL/OSHA	CAL/OSHA	1	
EXPOSURE LIMITS:	Component	ACGIH TLV ACGIH STEL	OSHA PEL 200 ppm	OSHA STEL N/E	PEL-Celling N/E	PEL 200 ppm	Ceiling N/E	CAL/OSHA STEL 250 ppm	
Methy	/drofuran (THF) Ethyl Ketone (MEK)	50 ppm 100 ppm 200 ppm 300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm	
Cyclob	exanone	20 ppm 50 ppm	50 ppm 1000 ppm	N/E N/E	N/E N/E	25 ppm 500 ppm	N/E 3000 ppm	N/E 750 ppm	
Acetor Engineering Controls: Use lo	e al exhaust as need			J			Coop bbin		
Monitoring: Mainta	in breathing zone air	borne concentrations below	exposure limit	5.					
Personal Protective Equipment Eye Protection: Avoid	(PPE): contact with eves. we	ear splash-proof chemical go	ggles, face sh	ield, safety gl	asses (spectad	les) with bro	w guards and	side shields,	
etc. as	may be appropriate	for the exposure.							
Skin Protection: Preve Use of	t contact with the sk solvent-resistant old	in as much as possible. Buty oves or solvent-resistant barr	i rupper glove ier cream shoi	s snould be u uld provide ad	seu ior irequer lequate protect	tion when no	mal adhesive	application	
practic	es and procedures a	are used for making structura	l bonds.						
evhau	t ventilation to remo	olvents. Use in a well-ventila ve airborne contaminants fro	m employee b	reathing zone	and to keep c	ontaminants	Delow levels	isted above.	
With n	ormal use, the Expo	sure Limit Value will not usua	lly be reached	. When limits	approached, u	ise respirator	y protection e	quipment.	

Filename: W-0795LoVoc 4-15.xls Page 1 of 2

WELD	ON		GHS					Date Revised: A Supersedes: N		
SECTION 9 - PHYS	SICAL AND	CHEMICA	L PROPERTIE	S	nanta lasting a second	an a	n an	an Malanes ng Barbarana. Malansa pangala	e nere strandare Transformation	जन्म व्यवसाय
Appearance: Odor: pH:		Blue or clear Ketone Not Applicab	, medium syrupy liqi	uid			Odor Threshold:	0.88 ppm (Cycl	ohexanone)	
pn. Melting/Freezing Po Boiling Point: Flash Point: Specific Gravity: Solubility: Partition Coefficient Auto-ignition Temp Decomposition Tem VOC Content:	n-octanol/wa	-108.5°C (-1 56°C (133°F -20°C (-4°F) 0.94 @23°C Solvent porti ter; 321°C (610° Not Applicab	63.3°F) Based on fir based on first boili TCC based on Ace (73°F) on soluble in water. Not Available based on THF e	ing comp tone Resin p	onent: Acetone	s out.	Boiling Range: Evaporation Rate: Flammability: Flammability Limits: Vapor Pressure: Vapor Density: Other Data: Viscosity: 16A,VOC content is: ≤ 510		1) ed on Cyclol ased on Acet	hexanone one
SECTION 10 - STA	BILITY AN	D REACTIV	/ITY	0, é 2	de provi	N. A.S.	et southag	C. Y. Marson	6.73	condrive"
Hazardous decompc Conditions to avoid: Incompatible Materia SECTION 11 - TOX Toxicity: Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEH Cyclohexanone Acetone	als: ICOLOGIC	AL INFOR LD50 Oral: 2842 m Oral: 2737 m	Keep away from h Oxidizers, strong a MATION g/kg (rat) g/kg (rat), Dermal: 6 g/kg (rat), Dermal: 9	eat, spar acids and 3480 mg/l	ks, open flame I bases, amines kg (rabbit)	and other is ammonia LC50 Inhalation Inhalation Inhalation	-	n, hydrogen chlorid Target C STOT STOT STOT	organs SE3 SE3	<b>.</b>
Reproductive Effects Not Established		genicity ablished	Mutagenic Not Establisi		Embryo Not Esta	toxicity	Sensitization to Produ		Products	]
Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS follow local and national re	Not readily bi Minimal to no STE DISPO	odegradable ne. SAL <sup>®</sup> CONS	IDERATIONS			2011,2,	ce, typically at a rate of < 5		· · · · · · · · · · · · · · · · · · ·	
SECTION 14 - TRAN				10.10			and the second	****		· · · · · · · · · · · · · · · · · · ·
Proper Shipping Name:		Adhesives								
Hazard Class: Secondary Risk: Identification Number: Packing Group:		3 None UN 1133 PG II				to 5L per in	TION for Ground Shipping ner packaging, 30 kg gross packaging, these quantitie	weight per packag		RM-D" .
Label Required: Marine Pollutant:		Class 3 Flam NO	nable Liquid		TDG CLASS: SHIPPING NA UN NUMBER/	ME:	ADHESIVE			
SECTION 15 - REG	ULATORY	INFORMA	ΓΙΟΝ	11.14	1998 (4. M. 1997)	र संस्थान स्थल	and a second consideration	3		1.
Precautionary Label I Symbols: Risk Phrases:	R11: Highly fla	F, Xi mmable.	able, Irritant, Carc. ( espiratory system.	Cat. 2	R66: Repeated	AICS, K exposure m	TSCA, Europe EINECS, C orea ECL/TCCL, Japan MI ay cause skin dryness or cra wsiness and dizziness	TI (ENCS)	ia	
Safety Phrases:	S2: Keep out o S9: Keep conta	f the reach of c ainer in a well-v	nildren	ing.	S25: Avoid con S26: In case of	lact with eye contact with			eek medical a	advice.
ECTION 16 - OTH		ATION	s.,			••••••	······································			
Specification Informa Department issuing o E-mail address:			IPS, Safety Health < <ehsinfo@ipscorp< td=""><td>.com&gt;</td><td></td><td></td><td>All ingredients are compli Directive on RoHS (Rest</td><td>ant with the require</td><td>ments of the s Substances</td><td>European s).</td></ehsinfo@ipscorp<>	.com>			All ingredients are compli Directive on RoHS (Rest	ant with the require	ments of the s Substances	European s).
Training necessary: Reissue date / reasor Intended Use of Prod			Yes, training in prace 4/21/2015 / Update Solvent Cement for	d GHS S	standard Forma		product literature.			

Solvent Cement for PVC Plastic Pipe

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								J	QS9	9-100
WELD×C	DN.		G	HS SAF	ETY DATA S	HEET		Date Revised:	MAY 2015	<u>9-100</u> 2
			,	Weld-On®	600™ Clear Adh	esive		Supersedes:	APR 2015	
SECTION IN PRODUCT	AND COM			DN	an a	e istoorne spaatslik	e orskette	(gladen) (dir bal)	Sector States	ne szeketetetetetetetetetetetetetetetetetete
	-		astic drainage a	nd HVAC syst	ems					
SUPPLIER:			-		CTURER: IPS Co	poration		040 0407		
						South Main Street, Gardo x 379, Gardena, CA 90		240-3127		
						10-898-3300			(Internetional)	
EMERGENCY: Transportation: (	HEMTEL Tel.	800.255-392	4, +1 813-248-0	0585 (Internati		I: CHEMTEL Tel. 800.2			(International) INTERNATIONAL)	
SECTION 28 HAZARDS	SIDENTIFIC	SATION		Station of the second		383 (PAR)	a y spran and a	and a second	al of a descent sector of the	CHE BROW COMMENTERS
Healt					nmental	r Florenshie Lieu		Physical	Category 2	
	tegory 4 tegory 2		Acute Toxicity: Chronic Toxicit		Category 1 Category 1	Flammable Liqu	a		Category 2	
Skin Sensitization: NC		1		<b>.</b>						
	tegory 2 tegory 1	ſ								
Aspiration Toxicity: Ca GHS LABEL:			<b>^</b>		Signal Word:	WHMIS CLASS	IFICATION:	CLASS B, D	IVISION 2	
	>	< <b>\$</b> ><			Danger			CLASS D, D		
<b>`</b>		<u> </u>	<b>v</b>			Precautionan	Statemen	CLASS D, D		
H225: Highly flammable liquid and var	Hazard Stat	ements			P210: Keep away from h	at/sparks/open flames/hot s				
H304: May be fatal if swallowed and e					P261: Avoid breathing du	st/fume/gas/mist/vapors/spra	У			
H315: Causes skin irritation H336: May cause drowsiness or dizzin	<b>85</b> \$				P280: Wear protective gl P337+P313: Get medical	oves/protective clothing/eye p advice/attention	Juecuon/Tac	e hi oreciiori		
H336: May cause genetic defects					P403+P233: Store in a w	ell ventilated place. Keep con				
H350; May cause cancer H361: Suspected of damaging fertility	or the unborn chi	ild			1P501: Dispose of content	s/container in accordance wi	u iocal regul	מטטוו		
H373: May cause damage to organs to			posure							
H400; Very toxic to aquatic life H41 <u>0: Very toxic to aquatic life with lor</u>	a lacting effects									
SECTION 3 - COMPOS	ITION/INFC	RMATIO	N ON INGR	EDIENTS					5 M	states a particular second
			CAS#	EINECS #	REACH Pre-registration Numbe		NCENTRAT			
Methylene Chloride * # (dichloro	methane)		75-09-2	200-838-9	17-2119926076-39	-0000	20 - 25 20 - 25		t of Hexasol Mixtur	
Solvent Naphtha n-hexane *			64742-89-8 110-54-3	265-192-2 203-777-6	Under developm Under developm		20 - 25 20 - 25	(Componen	t of Hexasol Mixtur	e)
Cyclohexane *			110-82-7	203-806-2	Under developm Under developm	ent	5-10 3-7		t of Hexasol Mixtur t of Hexasol Mixtur	
Heptane All of the constituents of this adh	ocivo product :	are listed on f	142-82-5 the TSCA inven	205-563-8 tory of chemic	al substances maintain	ed by the US FPA, or an	exempt fr	om that listing.		-
t Indianian that this abomical is a	whiert to the re	enortina reauti	rements of Sec	tion 313 of the	Emergency Planning a	na Community Right-to-		f 1986 (40CFR	372).	
# indicates that this chemical is f	ound on Propo	osition 65's Lis	st of chemicals I	known to the S	tate of California to cal	ise cancer or reproducin	le toxicity.			
SECTION 4 - FIRST All Contact with eyes: FI	uch over imme	diately with n	lenty of water fo	or 15 minutes a	nd seek medical advic	e immediately.			¥8	A MANAGER MANAGEMENT
Olde contects D	omava contami	insted clothing	a ond shase V	Vash skin thon	wohly with soap and w	ater. If imitation develop:	s, seek me	dical advice.		
Inhalation: Re Ingestion: Ri	emove to fresh	air. If breathi water Give	ing is stopped, and a stopped, and a stopped, and a stopped at a stopped at a stopped at a stopped, and a stopped at a stopped at a stopped, and a stopped at a s	give artificial re of water or mili	spiration. If breathing to dilute. Do not indu	s difficult, give oxygen. Seek medic	seek medik al advice i	nmediately.		
Likely Routes of Exposure:	lr	nhalation, ingr	estion, Eye and	Skin Contact						
Acute symptoms and effects: Inhalation: Se	vere overexor	osure may res	suit indrowsines	s, nausea, dizi	iness, or headache.					
Eve Contect: M	av cause mild e	eve irritation								
			itural skin oils re diarrhea and m			ay occur with prolonged	CONTACT			
Ingestion: M Chronic (long-term) effects:	- IA	ARC Classific	ation 2B (Methy	lene Chloride)	, 1B (Solvent Naphtha)					
					le), Carc1B (Solvent N		al an	-14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		
SECTION 5 FIREFIGH Suitable Extinguishing Medi			owder carbon	dioxide gas, fo	am, Halon, water fog.	<b>在</b> 地的	HMIS	nic 4 (A) AS	0-Minimal	
Unsuitable Extinguishing Me	edia: V	Vater spray or	r stream.			Health	3	3 3	1-Slight 2-Moderate	
Exposure Hazards: Combustion Products:	lr C	halation and	dermal contact	ns. hvdroaen (	hioride and smoke	Flammability Reactivity	3 0	ő	3-Serious	
						PPE	н		4-Severe	
Protection for Firefighters: SECTION 6 ACCIDEN	S	elf-contained	breathing appa	aratus or full-fa	ce positive pressure ai	me masks.	an a			un lan
SECTION 6 - ACCIDEN Personal precautions:	V	foon away from	m heat enance	and onen flam	A			e <u>e constante</u>		
	P	Provide sufficie	ent ventilation, u	use explosion-	proof exhaust ventilation	n equipment or wear sui	table respir	atory protective	equipment.	
Environmental Precautions:	P	Prevent produ	ct with skin or e ct or liquids con	taminated with	product from entering	sewers, drains, soil or or	oen water o	xourse.		
Methods for Cleaning up:	c	Clean up with	sand or other in	ert absorbent	material. Transfer to a	ciosable vessel.				
Materials not to be used for o		Plastic contain			n , Masser a star di da	ta da tanàna ina d		1100.001		
SECTION 7 - HANDLIN Handling: Avoid breathing of	funner avoid	contact with a	was skin and c	lothing			<u>, , , , , , , , , , , , , , , , , , , </u>		<u></u>	I
Keep away from i	gnition sources	s, use only ele	ectrically ground	led handling e	quipment and ensure a	dequate ventilation/fume	exhaust h	oods.		
Do not eat, drink Storage: Store in ventilated	f room or shad	le below 44°C	; (110°F) and av	way from direct	sunlight.					
Koon away from i	anition sources	and incompa	atible materials	such as: causi	ics, amines, acids, and	strong oxidizers.				
Follow all precaut	ionary informat	ion on contail	ner label, produ	CE / DEDC	solvent cementing lite	<b>ON</b>				
SECTION 8 - PRECAU		CONTROI Component	L EAPUSUR	ACGIH TLV	ACGIH STEL OSH	APEL	·	<u></u>		السينية عور مست
M	ethylene Chlori	ide (dichlorom	nethane)	50 ppm	None 25 pp	m skin				
	olvent Naphtha hexane*	i -		300 pp 50 ppm		ppm ppm				
C	yclohexane*			100 ppm	None 300	ppm				
	eptane se local exhaus	et as acceded		400 ppm	500 ppm 500	ppm				
Monitoring: M	aintain breathir	ng zone airbo	me concentrati	ons below exp	osure limits.					
Personal Protective Equipme						asses (spectacles) with I	orow quard	s and side shie	lds,	
	c as may be a	noropriate for	r the exposure.						.,	
		بمثباه ماشم	on much on poe	sible. PVA coa	ted rubber gloves shot	Ild be used for frequent i wate protection for norm	mmersion. al adhesive	application		
			wood for mokin	a structural bo	nde					
Respiratory Protection: P	revent inhalatio	on of the solve	ents. Use in a v	vell-ventilated : minants from e	oom. Open doors and molovee breathing zon	/or windows to ensure ai e and to keep contamina	ants delow	levels listed abo	JVE.	
ex W	kiaust ventilati /ith normal use	the Exposur	re Limit Value w	ill not usually b	e reached. When limits	approached, use respin	atory prote	ction equipmen	t.	
				-						

WELDION

## **GHS SAFETY DATA SHEET**

Weld-On® 600™ Clear Adhesive

Date Revised: MAY 2015 Supersedes: APR 2015

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	ICAL AND C		KOPERTIES	development of the state of the s	and the set of the telephoneters in the state of the set	The second second second second second	RATER CHERRY
Appearance:		Clear, regular	syrupy liquid		<ul> <li>The second se second second seco</li></ul>		
Odor:		Naptha			Odor Threshold:	250 ppm based on MeCl	
pH:		Not Applicable	э				
Melting/Freezing Poin	t:	Not available			Boiling Range:	64°C (147°F) to 89°C (190°F)	
Boiling Point:			based on Hexasol Mixture			based on Hexasol Mixture	
Flash Point:			CC based on Hexasol Mixture	•	Evaporation Rate:	8.8 (BUAC = 1) based on Hexa	asol Mix
Specific Gravity: Solubility:		0.890 @23°C	(73°F)		Flammability:	Category 2	
Partition Coefficient n		Not available	Mat Available		Flammability Limits:	LEL: 1% based on Hexasol M	
Auto-ignition Tempera			Not Available ) based on Hexasol		Vanor Bracours	UEL: 7% based on Hexasol Mi	xture
Decomposition Temp		Not available	/ based on nexasor		Vapor Pressure:	138 mm Hg @ 68°C (154°F) based on Hexasol Mixture	
VOC Content:	crutare.	≤ 400 g/L			Vapor Density:	3.2 (Air = 1)	
SECTION 10 STAE			V			3.2 (All = 1)	South and
Stability:			Stable	a service a service service of the service s	demarks advertise		2.336.396.666.276.3 596.356
Hazardous decompos Conditions to avoid:	ition products:		None in normal use. When	forced to burn, this product g (s, open flame and other igniti	ives off oxides of carbon, hydrod ion sources.	carbons and smoke.	
Incompatible Material	s:		Oxidizers, strong acids and	bases, amines			
SECTION 11 TOXI	COLOGICAL	INFORMA	TION	A SAME A	S. 6 3 Sec. 1		양 같은 것을 알려요.
la sa kanan daha ka					State of the state	CALCULATION CONTRACTOR	<u>e f Stradig</u>
Toxicity:			LDso		LC50	STOT	
Methylene Chloride (dichloro	methane)		00 mg/kg (rat), Dermal: Not		hrs. >10000 PPM (rat)	SE3	
Solvent Naphtha			/kg (rat), Dermal 4000mg/kg (		hrs. 3400 mg/m <sup>3</sup> (rat)	A	
n-hexane			ng/kg (rat), Dermal: 1300 mg/		hrs. 48,000 mg/m <sup>3</sup> (rat)	SE3/RE2	
Cyclohexane			ng/kg (rat), Dermal: 2000 mg/		hrs. 103,000 PPM (rat)	SE3	
Heptane		Oral: 15,000 n	ng/kg (rat), Dermal: 2000 mg/	kg (rabbit) Inhalation 5	0,100 mg/m <sup>3</sup> (rat)	SE3	
Reproductive Effects		genicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products	
Category 2		ablished	Category 1B	Not Established	Not Established	Not Established	Review Sectors and
Ecotoxicity:	Category 1	ORMATIO	Network Proposition of the		static strain the	coordinate downer ways of gamest	1-24-5-00-00-20
Mobility:		emission of vol	atile organic compounds (VO	C's) to the air takes place, two	vically at a rate of $< 400 \text{ of}$		
Degradability:	Not Available		alle organic compoditos (vo	C s) to the all takes place, typ	ically at a faile of $\leq 400$ g/l.		
Bioaccumulation:	Minimal to none						
			EDATIONO	ATHER WILL WATE COMPLEX OF STREET, STREET,	in the state of the second state	- For and standards to the Adda -	Males Males and the first
	IE DISPUSA	L CUNSID					
Follow local and national red				ALCONTRACTOR	Later and a state of the state	million Advances	Sec. Sec.
	ulations. Consul	t disposal expe	ort.				
SECTION 148 TRAN	SPORT INFO	t disposal expe DRMATION	ort.				<sup>1,0</sup> sratskater.
SECTION 14	SPORT INFO	t disposal expe DRMATION Adhesives	ort.		a - <b>Chro</b> th		an a
SECTION 14 TRAN Proper Shipping Name: Hazard Class:	SPORT INFO	t disposal expe DRMATION Adhesives 3	ert. Reference in the state of the second state of the second state of the second state of the second state of the s	EXCEP	TION for Ground Shipping		and and a second second
SECTION 14#3TRAN Proper Shipping Name: Hazard Class: Secondary Risk:	SPORT INFO	t disposal expe DRMATION Adhesives 3 6.1	DOT Limited	EXCEP Quantify: Up to 5L per inner	TION for Ground Shipping packaging, 30 kg gross weight (	per package.	
SECTION 14 TRAN Proper Shipping Name; Hazard Class: Secondary Risk: Identification Number:	SPORT INFO	t disposal expe DRMATION Adhesives 3 6.1 UN 1133	DOT Limited	EXCEP Quantify: Up to 5L per inner	TION for Ground Shipping	per package.	19 <sup>1</sup> 89 <b>102</b>
SECTION 14% TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group:	SPORT INFO	t disposal expe DRMATION Adhesives 3 6.1 UN 1133 PG II	DOT Limited	EXCEP Quantity: Up to 5L per inner ommodity: Depending on pa	TION for Ground Shipping packaging, 30 kg gross weight j ckaging, these quantities may gr	per package.	
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SECTION 14 TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REGU Precautionary Label In Symbols: Risk Phrases: Safety Phrases: SecTION 16 - OTHE Specification Informati Department issuing da E-mail address:	SPORT INFO JLATORY IN formation: R11: Highly flam R38: Irritating to R45: May cause R46: May cau	t disposal expe DRMATION Adhesives 3 6.1 UN 1133 PG II Class 3 Flamm NO FORMATIC Highly Flamma F, Xn, N mable. skin. cancer. heritable geneti sk of impaired fe the reach of chill ner in a well-vem from sources of twith eyes. Sty into drains. Stonary measures	Int.	EXCEP Quantity: Up to 5L per inner ormmodity: Depending on pa TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING GF AICS, Ko R65: Harmful: may cause lun R67: Vapors may cause drow R45/20: Harmful: danger of seric R50/53: Very toxic to aquatic S36/37: Wear suitable protec S45: In case of accident of if S53: Avoid exposure - obtain S60: This material and its contair S61: Avoid release to the environ S62: If swallowed, do not indu- series and the series of the series	Characteristics     Construction     Constate     Construction     Construction     Co	Der package. Lalify under DOT as "ORM-D".       	onment. ere possible),

IPG 704 2pgs WELDXON GHS SAFETY DATA SHEET Date Revised: APR 2015 Supersedes: NOV 2014 WELD-ON® 704™ Low VOC PVC Plastic Pipe Cement SECTION I - PRODUCT AND COMPANY IDENTIFICATION WELD-ON® 704 \*\* Low VOC PVC Plastic Pipe Cement PRODUCT NAME: Low VOC Solvent Cement for PVC Plastic Pipe PRODUCT USE: IPS Corporation 17109 South Main Street, Gardena, CA 90248-3127 MANUFACTURER: SUPPLIER: P.O. Box 379, Gardena, CA 90247-0379 Tel, 1-310-898-3300 Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (international) EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) SECTION 2 - HAZARDS IDENTIFICATION GHS CLASSIFICATION: Physical Environmental Health Flammable Liquid None Known Calegory 2 Acute Toxicily: Category 4 Acute Toxicity: Chronic Toxicity: None Known Category 3 Skin Irritalio NO Skin Sensilization: Eye: Calegory 2 CLASS B, DIVISION 2 WHATS CLASSIFICATION: Signal Word: GHS LABEL: CLASS D, DIVISION 1B ٨ Danger Precautionary Statements Hazard Statements P210: Keep away from heal/sparks/open flames/hol surfaces - No smoking H225: Highly flammable liquid and vapor P261: Avoid breaking dust/lume/gas/mist/vapors/spray 1319: Causes serious aya initation P20: Wer protective dover/protective clothing/eye protection/face protection P20: Very protective dover/protective clothing/eye protection/face protection P304+P340: IF INHALED; Remove victim to fresh air and keep at rest in a position com/ortable for breathing H332; Hamful if Inholed 1335: May cause respiratory irritation 2403+P233: Store in a well ventilated place. Keep container lightly closed H336: May cause drowsiness or dizzinosa rescontainer in accordance with local regulation P501: Dispose of cont H351: Suspected of causing cancer EUH019: May form explosive pero SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS CONCENTRATION REACH Pre-registration Number 05-2116297729-22-0000 05-2116297728-24-0000 05-2116297718-25-0000 % by Weight 203-726-9 10 - 30 20 - 40 109-99-9 Tetrahydrofuran (THF) Methyl Elhyl Kelons (MEK) 78-93-3 201-159-0 15 - 35 Cyclohexanone 108-94-1 203-631-1 5 - 15 200-662-2 05-2116297713-35-0000 67-64-1 All of the consiluents of this adhesive product are listed on the TSCA inventory of chamical substances mointained by the US EPA, or are exempt from that listing. Indicates this chamical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372). -# Indicates that this chamical is found on Proposition 55's List of chamicals known to the State of Collionia to cause cancer or reproductive toxicity. SECTION 4 - FIRST AID MEASURES ALU MEADURED Flush eyes immedialely with plenty of water for 15 minutes and seek modical advice immediately. Remove contaminated clothing and shoes. Wash skin throroughly with scop and water. If imitation develops, seek medical advice. Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice. Rinse mouth with water. Give 1 or 2 glasses of water or milk to ditute. Do not induce vomiting. Seek medical advice immediately. Contact with eyes: Skin contact: Inhalation: Ingestion: Inhalation, Eye and Skin Contact Likely Routes of Exposure: Acute symptoms and effects: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of oyos and nasel passages. Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid. Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact. Inhalation Eye Contact: Skin Contact: May cause nousea, vomiling, diawhea and mental sluggishness. Ingestion: Calegory 2 Carcinogen Chronic (long-term) effects: SECTION 5 - FIREFIGHTING MEASURES Dry chemical powder, carbon dioxide gas, loam, Halon, water log. Water spray or stream. Inhalation and domnal contact NEPA 0-Minimal HMIS Sullable Extinguishing Media 1-Silght 2-Moderate 3-Serious Health 2 2 3 0 Unsultable Extinguishing Media; Flammability Exposure Hazards: Combustion Products: Reactivity Oxides of carbon, hydrogen chloride and smoke 0 4-Severe в PPE Self-contained breathing apparatus or full-face positivo pressure airtine masks. Protection for Firefighters; Protection for Prolognotes; Sent-curvanize under any opposed SECTION 6 - ACCIDENTAL: RELEASE MEASURES Personal precautions: Keep away from heat, sparks and open flame. Provide sufficient venitiation, use explosion-proof exhaust venitiation equipment or wear suitable respiratory protective equipment. Provide sufficient venitiation, use explosion-proof exhaust venitiation equipment or wear suitable respiratory protective equipment. Provide sufficient venitiation, use explosion-proof exhaust venitiation equipment or wear suitable respiratory protective equipment. Provent contact with skin or eyer (see section 8). Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course. Clean up with sand or other finert absorbent material. Attenditions or protective equipment Methods for Cleaning up; Materials not to be used for clean up; Aluminum or plastic containe SECTION 7 - HANDLING AND STORAGE Avoid breathing of vapor, avoid contact with eyes, skin and clothing. Keep away from Ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods. Handling: Keep away from Ignition sources, use only electrically grounded handling equipment and ensure adequate ventitation/fume exhaust hoods. Do not eat, drink or smoke while handling. Store in ventifiated room or shade below 44°C (110°F) and away from direct sunlight. Keep away from Ignition sources and incompatible materials: calustics, animonia, inorganic acids, chlorinated compounds, strong exidizers and isocyanales. Follow all precautionary information on container label, product building and solvent companing literature, Storage: SECTION 8: PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION CAL/OSHA CAL/OSH/ OSH AL/OSHA STEL Cellh PEL OSHA STE Cetiling N/E OSHA PEL ACGIH TLV ACGIH STEL EXPOSURE LIMITS: Component Tetrahydrofuran (THF) 200 ppm 250 ppm 200 ppm 200 ppm 100 ppm 300 ppm N/E N/E 50 ppm 200 ppm 300 ppm N/E N/E 200 ppm N/E N/E Methyl Ethyl Ketone (MEK Cyclohexanone N/E N/F 25 ppm N/E 20 ppm 50 ppm 50 ppm 3000 ppr 750 ppm 500 ppn 500 ppm 750 ppm 1000 ppm N/E N/E Acelone Engineering Controls: Use local exhaust as needed, Maintain breathing zone airborne concentrations below exposure limits. Monitoring: Maintain brea Personal Protective Equipment (PPE): Avoid contact with oyes, wear splash-proof chemical goggles, face shield, safely glasses (speciacles) with brow guards and side shields, atc. as may be appropriate for the exposure. Eye Protection: Provent contact with the skin as much as possible. Butyl rubber glovos should be used for frequent immersion. Provent contact with the skin as much as possible. Butly rubber gloves should be used for frequent immetsion. Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adiresive application practices and procedures are used for making structural bonds. Prevent inhibition of the solvents. Use in a well-ventilated rapm. Open doors and/or windows to ensure alridow and air changus. Use local exhaust ventilation to the solvents. Use in a well-ventilated rapm. Open doors and/or windows to ensure alridow and air changus. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above, with normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment. Skin Protection: **Respiratory Protection:** 

WELD			ETY DATA SHE		Dala Rovised: APR 2015		
	·	WELD-ON® 704™ Lo	w VOC PVC Plastic F	ripe Gement	Supersodés: NOV 2014		
	ICAL AND CHEMICA			·····			
Appearance: Odor:	Ketone	y, modium syrupy liquid		Odor Threshold:	0.88 ppm (Cyclohexanone)		
ph: Melling/Freezing Poli Bolling Point: Flash Roint: Specific Gravity: Solubility: Partition Coefficient Auto-Ignition Temper Decomposition Temp VOC Content:	56°C (133°F -20°C (4°F) 0.920 @23° Solvent port n-octanol/water: ature: 321°C (610° sarature: Not Apolicat	on soluble in water. Resin portion separates out. Not Available Vapor Pressure: F) based on THF Vapor Density:			56°C (133'F) to 156°C (313'F) > 1.0 (8UAC = 1) Category 2 LEL: 1.1% based on Cyclohexanone UEL: 12.8% based on Accione 190 mm Hg @ 20°C (68'F) Accione >2.0 (Ar = 1) Medium bodiled		
	BILITY AND REACTIV						
Stability: Hazardous decompo Conditions to avoid: Incompatible Materia	ls:	Keep away from heel, spari Oxidizers, strong acids and	s, open flame and other ign bases, amines, ammonia	gives olf oxides of carbon, i Nilion sources.	nydrogen chloride and smoke.		
SECTION 11 - TOX		MATION					
Toxicity: Tetrahydrofuran (THF) Methyl Ethyl Kelone (MEK Cyclohexenone Acelone		ng/kg (rat), Dermal: 6480 mg/ ng/kg (rat), Dermal: 948 mg/k	kg (rabbit) Inhalation 8 g (rabbit) Inhalation 4	hrs, 21,000 mg/m <sup>3</sup> (ral) hrs, 23,500 mg/m <sup>3</sup> (ral) hrs, 8,000 PPM (ral) 0,100 mg/m <sup>3</sup> (ral)	Target Organs STOT SE3 STOT SE3 STOT SE3		
Reproductive Effects Not Established	<u>Teratogenicity</u> Not Established	Mulagenicity Not Established	Embryotoxicity Not Established	Sensitization to Product Not Established	Synergistic Products Not Established		
SECTION 12 - ECO		TION		and a second second			
Ecotoxicity: Mobility: Degradability: Bioaccumulation:	None Known In normal use, emission of Not readily biodegradable Minimal to none.	volalile organic compounds (	VOC's) lo lhe air lakos plac	to, typically at a rate of $\leq 510$	β g/l.		
SECTION 13 - WAS	TE DISPOSAL CONS	SIDERATIONS		N. 11			
	gulations. Consult disposal						
	ISPORT INFORMATI	ÔN `					
Proper Shipping Name: Hazard Class:	Adhasives 3		FYCEPT	ION for Ground Shipping			
Secondary Risk:	None	DOT Limited	Quantity: Up to 51, per inne	r packaging, 30 kg gross wo	light per package.		
Identification Number:	UN 1133	Consumer Co	ommodity: Depending on pa	ackaging, these quantilles m	ay qualify under DOT as "ORM-D" .		
Packing Group: Label Required:	PG II Closs 3 Flam	mable Liquid	то	G INFORMATION			
Marine Pollutant:	NO -		TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING G				
SECTION 15 - REG			and the second second	ISCA, Europe EINECS, Can	de DSL Australia		
Precautionary Label Ir Symbols: Risk Phrases:	F, Xi R11: Highly flammable. R20-Harmful by inhalation.	nablo, Irritant, Carc. Cat. 2	AICS, Ko	orea ECL/TCCL, Japan MITI ny cause skin dryness or cracki	(ENCS)		
Salely Phrases:	R36/37: Initialing to eyes and S9; Keep container in a well-v S16: Keep away from source: S25: Avoid contact with eyes.	ventilated place. s of Ignilion - No smoking.	S26; in case of contact with eyes, rinse immedialely with picnty of water and seek medical advico. S33: Tako procautionary measures against static discharges. S46; if swallowed, seek medical advise immedialely and show this container or label.				
SECTION 16 - OTHI							
Specification informa Department issuing d E-mail address:		IPS, Safety Health & Environ <ehsinfo@lpscorp.com></ehsinfo@lpscorp.com>		Directive on RoHS (Resiric	n with the requirements of the European tion of Hazardous Substances).		
Training necessary: Reissue date / reason Intended Use of Produ		Yes, training in practices and 4/20/2015 / Updated GHS S Solvent Cement for PVC Plat	landard Formal	roduci literalure,			

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be oblained from the use thereof.

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WELD×C	DN.	GH	IS SAFE	TY DAT	A SHEE	T	I	Date Revised:		
		LD-ON® 70			its for PV	C Plastic P	ipe	Supersedes:	NOV 2014	
000011041101	ELD-ON® 705™ Low V w VOC Solvent Cement			c Pipe						
JPPLIER:					PS Corporati	on Main Street, G	ardana CA 9	0248-3127		
				I	P.O. Box 379	Gardena, CA				
MERGENCY: Transportation:	CHEMTEL Tel 800 255	.3924 +1 813-2	248-0585 (infi		Fel. 1-310-89 Medical: CHi		0.255-3924, -	+1 813-248-0	585 (Internation	al)
ECTIONIZ CHAZARD	SIDENTIFICATIO	N 11 11 11 11 11 11 11					the second second second second			
HS CLASSIFICATION: Health			Environ			<u> </u>	Phy	/sical		
cute Toxicity: Ca	ategory 4	Acute Toxicity:		None Known None Known		Flammable Lk	puid		Category 2	
kin Irritation: Ca kin Sensitization: NC	ategory 3 D	Chronic Toxicil	ıy.							
	ategory 2	l	Signal Word:			WHMIS CLASSI	FICATION:	CLASS B, D	IVISION 2	
HS LABEL:			Danger					CLASS D, D		
	Hazard Statements			P210: Keep awa	v from heat/spa		ry Statements hot surfaces ~ N			
225: Highly flammable liquid and vaj 319: Causes serious eye irritation	por			P261: Avoid bre	athing dust/fume	/gas/mist/vapors	/spray		x	
332: Harmful if inhaled 335: May cause respiratory irritation	1				NHALED: Rem	ove victim to fres	h air and keep a	t rest in a positi	on comfortable for	breathing
336: May cause drowsiness or dizzi				P403+P233: Slo P501: Dispose o						
351: Suspected of causing cancer JH019: May form explosive peroxid	les					or a second second				
ECTION3 COMPOS	SITION/INFORMA	CAS#	GREDIEN EINECS#	KEA	CH	C	ONCENTRATIO	and an extension of the second se		a an
etrahydrofuran (THF)		109-99-9	203-726-8	Pre-registration 05-21162977			% by Weight 25 - 50			
ethyl Ethyl Ketone (MEK)		78-93-3 108-94-1	201-159-0 203-631-1	05-21162977			5 - 36 15 - 30			
yclohexanone Il of the constituents of this ad	ihesive product are listed	on the TSCA i	overtory of c	nemical substa	nces maintai	red by the US	EPA, or are e	exempt from t	ihat listing.	
I the stars that also and and in public	leaf to the reporting regu	iroments of Sec				Community RI	ant-to-Know A		400FR3/2).	
indicates that this chemical is	found on Proposition 65	's List of chemic	cals known to	the State of C	alifornia to ca	use cancer or	reproductive	toxicity.		
indicates that this chemical is	found on Proposition 65	's List of chemi	cals known to	the State of C	alifornia to ca	use cancer or	reproductive	toxicity.	<b>VOID</b>	
indicates that this chemical is ECTIONAL FIRSTAN Contact with eyes: Fit	found on Proposition 65 IDIMEASURES ush eyes immediately with amove contaminated close	's List of chemic th plenty of wate	cals known to er for 15 minu Wash skin	the State of C tes and seek r	alifornia to ca nedical advice soap and wa	a immediately.	n develops, s	eek medical a	advice.	
indicates that this chemical is ECTIONACE FIRSTAN Contact with eyes: Fit Skin contact: Re	I found on Proposition 65 IDIMEASURES ush eyes immediately wi emove contaminated clo	's List of chemic the plenty of wate thing and shoes	cals known to er for 15 minu . Wash skin	the State of C tes and seek r thoroughly will ial respiration.	alifornia to ca nedical advice a soap and wa	a immediately. ater. If irritations difficult, give	n develops, s	eek medical a	advice. Ivice.	
t indicates that this chemical is ECTIONATE FIRSTAN Contact with eyes: Fit Skin contact: Re Inhalation: Re Ingestion: Ri Likely Routes of Exposure:	a found on Proposition 66 ID/MEASURES ush eyes Immediately wi emove contaminated clo emove to fresh air. If bre inse mouth with water. C Inhalation, E	's List of chemic the plenty of wate thing and shoes	cals known to er for 15 minu s. Wash skin ed, give artific ses of water o	the State of C tes and seek r thoroughly will ial respiration.	alifornia to ca nedical advice a soap and wa	a immediately. ater. If irritations difficult, give	n develops, s	eek medical a	advice. Ivice.	
# indicates that this chemical is SECTIONACT IRSTAN Contact with eyes: Fil Skin contact: Re Inhalation: Re Ingestion: Re Ingestion: Re Indely Routes of Exposure: Acute symptoms and effects:	i found on Proposition 65 ID <u>MEASURES</u> ush eyes immediately wi amove contaminated clo emove to fresh air. If brei inse mouth with water. C Inhalation, E	i's List of chemic the plenty of wate thing and shoes athing is stoppe sive 1 or 2 glass ye and Skin Col	cals known to per for 15 minu s. Wash skin ed, give artific ses of water o ntact	the State of C tes and seek r thoroughly will ial respiration. r milk to dilute	alifornia to ca nedical advice a soap and wa If breathing i Do not indu	a immediately. ater, If irritation s difficult, give ce vomiting, S	n develops, s oxygen. See seek medical a	eek medical a ek medical ac advice immed	advice. Ivice. diately. ages.	
indicates that this chemical is <b>SECTION/AEA LIRST/AI</b> Contact with eyes: Fit Skin contact: Re Inhalation: Re Ingestion: Ri Ikely Routes of Exposure: cute symptoms and effects: Inhalation: Se Eye Contact: Va Skin Contact: Lic	f found on Proposition 66 IDIMEASURES move contaminated cloc emove to fresh air. If bre inse mouth with water. C Inhalation, E ever overexposure may apors slightly uncomforta quid contact may remove	I's List of chemil the plenty of wate thing and shoes anthing is stoppe Sive 1 or 2 glass ye and Skin Cou- result in nause: ble. Overexpose a natural skin oil	cals known to er for 15 minu s. Wash skin ed, give artific ses of water o ntact ra, dizziness, sure may resu Is resulting in	the State of C tes and seek r thoroughly will ial respiration. r milk to dilute headache. Ca ult in severe ey skin irritation.	alifornia to ca nedical advice a soap and wa If breathing i Do not indu	use cancer or immediately. ater. If irritation s difficult, give ce vomiting. S rsiness, irritatio corneal or con	n develops, s oxygen. Sec leek medical a	eek medical a ek medical ac advice immed d nasal passa nmation on c	advice. Ivice. diately. ages.	
indicates that this chemical is <b>SECTIONAGE FIRSTAL</b> Contact with eyes: Fit Nation contact: Re Inhalation: Re Inhalation: Ri Ikely Routes of Exposure: Likely Routes of Exposure: Inhalation: Se Eye Contact: Va Skin Contact: Lic Ingestion: Mat	found on Proposition 66 IDIMEASUREST ush eyes immediately wi emove contaminated cloc emove to fresh air. If bre inse mouth with water. C Inhalation, E evere overexposure may apors slightly uncomfort quid contact may remove ay cause nausea, vomiti	's List of chemin the plenty of wate thing and shoes athing is stoppe live 1 or 2 glass ye and Skin Con result in nause ble. Overexpos o natural skin oli ng, dlarrhea and	cals known to er for 15 minu s. Wash skin ed, give artific ses of water o ntact ra, dizziness, sure may resu Is resulting in	the State of C tes and seek r thoroughly will ial respiration. r milk to dilute headache. Ca ult in severe ey skin irritation.	alifornia to ca nedical advice a soap and wa If breathing i Do not indu	use cancer or immediately. ater. If irritation s difficult, give ce vomiting. S rsiness, irritatio corneal or con	n develops, s oxygen. Sec leek medical a	eek medical a ek medical ac advice immed d nasal passa nmation on c	advice. Ivice. diately. ages.	
indicates that this chemical is SECTION/ACTIRSTAIL Contact with eyes: File Skin contact: Re Inhalation: Re Ingestion: Ri Kely Routes of Exposure: Kuts symptoms and effects: Inhalation: Se Eye Contact: Va Skin Contact: Li Ingestion: Ket Chronic (long-term) effects:	i found on Proposition 66 IDIMEASURES move contaminated tolo emove to fresh air. If bre inse mouth with water. C Inhalation, E were overexposure may apors slightly uncomforta quid contact may remove ay cause nausea, vomiti Category 2 HTINGIMEASURE	's List of chemin the plenty of wate thing and shoes atahing is stoppe sive 1 or 2 glass ye and Skin Cor result in nause bile. Overexpos a natural skin oil ng, dlarrhea anc Zarchrogen S	cals known to ser for 15 minus, Wash skin, ed, give artific ses of water of ntact a, dizziness, sure may resu is resulting in d mental slug	the State of C tes and seek r thoroughly will ial respiration. r milk to dilute headache. Ca alt In severe ey skin irritation. gishness.	allfornia to ce nedical advice i soap and wa If breathing i Do not indu n cause drow e injury with o Dermatilis ma	use cancer or immediately, ater. If irritation s difficult, give se vomiting. S resiness, irritation corneal or conj ay occur with p	n develops, s oxygen. See eek medical a unctival inflar orolonged con	eek medical ac ak medical ac advice immed d nasal passa nmation on c fact.	advice. tvice. jlately. ages. ontact with the li	quiđ.
indicates that this chemical is <b>BECTION/ACTIRISTIAL</b> Contact with eyes: File Indication: Re Indication: Re Indication: Re Indication: Re Indication: Re Indication: Re Indication: Re Response Cutes symptoms and effects: Inhalation: Se Eye Contact: Va Skin Contact: Lic Ingestion: Me Chronic (long-term) effects: Suitable Extinguishing Mec	i found on Proposition 66 IDIMEASURES ush eyes Immediately with emove contaminated clo emove to fresh air. If bre inse mouth with water. C Inhalation, E evere overexposure may apors slightly uncomforte apors slightly uncomforte ay cause nausea, vomiti Category 2 ( INTINGIMEASURE slia: Dry chemice	*S List of chemin the plenty of wate thing and shoes atahing is stoppe sive 1 or 2 glass ye and Skin Coi result in nause ble. Overexpose a natural skin oil ng, dlarrhea anc Carcinogen Schubert i powder, carbo	cals known to ser for 15 minus, Wash skin, ed, give artific ses of water of ntact a, dizziness, sure may resu is resulting in d mental slug	the State of C tes and seek r thoroughly will ial respiration. r milk to dilute headache. Ca alt In severe ey skin irritation. gishness.	allfornia to ce nedical advice i soap and wa If breathing i Do not indu n cause drow e injury with o Dermatilis ma	use cancer or immediately, ater. If irritation s difficult, give se vomiting. S resiness, irritation corneal or conj ay occur with p	n develops, so oxygen. Sec leek medical a on of eyes and unctival inflar rolonged com	eek medical ac ek medical ac advice immed d nasal passa nmation on c fact.	advice. Ivice. Islately. ages. ontact with the li	quiđ.
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indicates that this chemical is <b>ECTION/ACTIRSTA</b> Contact with eyes: Fil Instalation: Re Instalation: Re Instalation: Re Instalation: Re Instalation: Re Instalation: Re Instalation: Re Instalation: Re Rely Contact: Re Eye Contact: Va Skin Contact: Va Skin Contact: Lic Ingestion: Me Errore (long-term) effects: ECTION/SETERELIG Suitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Seposure Hazards: Combustion Products: Protection for Firefighters: SECTION/657/ACCIDEI Personal precautions: Methods for Cleaning up: Materials not to be used for SECTION/657/ACCIDEI Handling: Avoid breaking of Keep away from Do not eat; drink Storage: Store in venillate Keep away from Colow all precau SECTION/857/RECAU EXPOSURE LIMITS: Tre Me Monitoring: Me Personal Protective Equipm Eye Protection: A Skin Protection: Pr	i found on Proposition 66 IDMEASURES investigation 66 move contaminated clob emove to fresh air. If bre inse mouth with water. Con inhalation, E is evere overexposure may apors slightly uncomforta quid contact may remove ay cause nausea, vorniti Category 21 HTINGIMEASURE dia: Dry chemice Media: Water spray Inhalation at Self-contain NTALI RELEASE(M Keep away Provide suff Prevent con clean up: NGIANDISTORAG of vapor, avoid contact wi Ignition sources, use on or smoke while handling d room or shade below 4 Ignition sources, use on or smoke while handling d room or shade below 4 Ignition sources, use on or smoke while handling d room or shade below 4 Ignition sources, use on or smoke while handling d room or shade below 4 Ignition sources and ince tionary information on c UTIONSILOICONT Component etrahydrofuran (THF) lethyl Ethyl Ketone (MEK yclohexanone se local exhaust as need lantain breathing zone a nent (PPE): void contact with eyes, v tc. as may be appropriat revent contact with eyes, v tc. as may be appropriat revent contact with eyes, v tc. as may be appropriat	Is List of cheminic the plenty of wate thing and shoes at thing and shoes ye and Skin Corresult in nausee bie. Overexpose a natural skin oil ing, diarrhea and zarcinogen Support at the short of the s	cals known to seals known to wash skin ad, give artific ses of water of ntact a, dizziness, sure may resi se so fully a strain ad mental slug in dioxide gass is resulting in d mental slug in dioxide gass tot a chloride and paratus or fully seal of the paratus or fully seal of the new seal of the seal of the	the State of C the state of C thoroughly will ial respiration. r milk to dilute headache. Ca it in severe ey skin irritation. gishness. foam, Halon, smoke i-face positive ame. ing equipment direct sunlight. amona, inc s and solvent <b>RSONALS</b> OSHA PEL 200 ppm 200 ppm 50 ppm rexposure limi oggles, face si	allionnia to ce endical advices to a soap and we if breathing Do not indu n cause drow e injury with o Dermatitis m water fog. pressure airli water fog. pressure airli st ventilation or entering s ransfer to a c and ensure a rganic acids, cementing litt <b>ROTECTI</b> osha stel N/E N/E N/E S. sield, safety g	Illuse cancer of a Immediately, ater. If irritations s difficult, give ze vomiting. S siness, irritatic corneal or conj ay occur with p Health Flammability Reactivity PPE ne masks. equipment or sewers, drains, tosable steel v dequate ventil chlorinated co arature. ON PEL-ceiling N/E N/E N/E N/E N/E Sasses (specta	n develops, s oxygen. Ser eeek medical <i>i</i> on of eyes and unctival inflar rolonged con HMIS 2 3 0 B wear suitable soil or open v essel. ation/fume ex mpounds, str CAL/05HA PEL 200 ppm 200 ppm 25 ppm	Indicity.	advice. tvice. tvice. ilately. ages. ontact with the li 1-Slight 2-Moderate 3-Serious 4-Severe contective equipation protective equipation and isocyanate CALLOSHA STE 250 ppm 300 ppm N/E d side shields,	quid.
indicates that this chemical is <b>ECTION/ACTIRSTAN</b> Contact with eyes: Fil Instantion: Re Instantion: Re Instantion: Re Instantion: Re Instantion: Re Instantion: Re Instantion: Re Instantion: Re Relieve Contact: Re Eye Contact: Va Skin Contact: Va Skin Contact: Lic Ingestion: Me Erroric (Ion-term) effects: ECTION/SETERETION Suitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Secore of Firefighters: SECTION/SETERETION SECTION/SETERETION: Bervironmental Precautions: Environmental Precautions: Environ	i found on Proposition 66 IDMEASURESI ush eyes Immediately wi emove contaminated clo emove to fresh air. If bre inse mouth with water. Con Inhalation, E evere overexposure may apors slightly uncomforta quid contact may remove ay cause nausea, vomiti Category 21 INTINGIMEASURE diat Dry chemice diat Water spray Inhalation at Oxides of ce Self-contain NTALI RELEASE(M Keep away Provide suff Prevent con clean up: INGIANDISTORAG of vapor, avoid contact wi Ignition sources, use on or smoke while handling d room or shade below 4 Ignition sources, use on or smoke while handling d room or shade below 4 Ignition sources, use on Itionary information on cc UTIONSITOCONT Component etrahydrofuran (THF) lethyl Ethyl Ketone (MEH yclohexanone se local exhaust as neet laintain breathing zone a nent (PPE):	Is List of cheminic the plenty of wate thing and shoes athing and shoes athing is stopper site of a 2 glass ye and Skin Corresult in nausee bie. Overexpose plant and shoes and the site of the short	cals known to seals known to wash skin ad, give artific ses of water of ntact a, dizziness, sure may resi se so fulling in d mental slug in dioxide gass is resulting in d mental slug in dioxide gass tot o chloride and paratus or full seals contain n, use explore sound open f n, use explore sound open f n, use explore sound of handl ad away from fais: caustics roduct builetin <u>SURE!</u> <sup>7</sup> , <u>PE</u> <u>Accent STEL</u> 100 ppm <u>300 ppm</u> <u>50 ppm</u> trations below of chemical g ure, possible, Bull tresistant baser possible, Bull tresistant baser aking structur	the State of C the state of C thoroughly will ial respiration. r milk to dilute headache. Ca it in severe ey skin irritation. gishness. foam, Halon, smoke i-face positive ame. ion-proof exhat ing equipment direct sunlight. amona, inc s and solvent <b>RSONALS</b> OSHA PEL 200 ppm 200 ppm 50 ppm rexposure limi oggles, face si yi rubber glove rier cream she al bonds. the face positive	alliornia to ce endical advices to be a soap and we if breathing Do not indu n cause drow e injury with o Dermatitis m water fog. pressure airli water fog. pressure airli set ventilation or entering s ransfer to a c and ensure a rganic acids, cementing litt <b>POTECTI</b> osHA STEL N/E N/E N/E N/E S. lield, safety g is should be t uld provide a	Illuse cancer of a Immediately, ater. If irritation is difficult, gives a vomiting. S is iness, irritatic corneal or conjay occur with p Health Flammability Reactivity PPE ne masks. equipment or awers, drains, losable steel v dequate ventil chlorinated co arature. ON N/E N/E N/E N/E N/E asses (spectal assed for freque dequate prote-	n develops, s oxygen. Ser eeek medical <i>i</i> on of eyes and unctival inflar rolonged con HMIS 2 3 0 B wear suitable soil or open v essel. ation/fume ex mpounds, str CAL/05HA PEL 200 ppm 200 ppm 25 ppm	Indicity.	advice. tvice. tvice. ilately. ages. ontact with the li 1-Slight 2-Moderate 3-Serious 4-Severe vorotective equipri- protective equipri- and isocyanate 250 ppm 300 ppm N/E d side shields, re application anges, Use loca	quid.

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# GHS SAFETY DATA SHEET

·					Date Revised: APR 2015	
L		LD-ON® 705™ Low	VOC Cements for F	VC Plastic Pipe	Supersedes: NOV 2014	
SECTION 9 - IPHYS						
Appearance: Odor: pH:	Clear or gra Ketone Not Applicat	y, medium syrupy liquid		· Odor Threshold:	0.88 ppm (Cyclohexanone)	
Melting/Freezing Pol Boiling Point: Flash Point: Specific Gravity: Solubility: Partition Coefficient Auto-Ignition Tempe Decomposition Temp VOC Content:	nt: -108.5*C (-1 66*C (151*F -20*C (-4*F) 0.8611 @23 Solvent port n-octanol/water: rature: 321*C (610* perature: Not Applicat When applica	63.3°F) Based on first meltir ) Based on first boiling comp TCC based on THF °C (73°F) ion soluble in water. Resin p Not Available F) based on THF ie d as directed, per SCAQMD	onent: THF ortion separates out. Rule 1168, Test Method	Bolling Range: Evaporation Rate: Flammability: Flammability Limits: Vapor Pressure: Vapor Density: Other Data: Viscosity: 316A,VOC content is: ≤ 500 g	66°C (151°F) to 156°C (313°F) > 1.0 (BUAC = 1) Category 2 LEL: 1.1% based on Cyclohexano UEL: 11.8% based on THF 129 mm Hg @ 20°C (68°F)based o >2 (Air = 1) Medium bodied //.	
SECTION 10 C STA	BILITY AND REACTIV	VITY Stable	<u>de de la comp</u> ete			
Hazardous decompo Conditions to avold: Incompatible Materia	ls:	None in normal use. When Keep away from heat, spar Oxidizers, strong acids and	ks, open flame and other I bases, amines, ammonia	ignition sources.	hydrogen chloride and smoke.	47118 5
SECTIONIALS TOX		MATION				C State
Toxicity: Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK Cyclohexanone		ıg/kg (rat) ıg/kg (rat), Dermal: 6480 mg, ıg/kg (rat), Dermal: 948 mg/k	/kg (rabbit) Inhalation	3 hrs. 21,000 mg/m <sup>3</sup> (rat) 8 hrs. 23,500 mg/m <sup>3</sup> (rat) 4 hrs. 8,000 PPM (rat)	Target Organs STOT SE3 STOT SE3	
Reproductive Effects Not Established	Teratogenicity Not Established	MutagenIcity Not Established	Embryotoxicity Not Established	Sensitization to Product Not Established	Synergistic Products Not Established	
SECTION 12 SECO		[ION]		And the second		
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION:135.WAS Follow local and national rep	Not readily biodegradable Minimal to none. TEDISPOSALCONS	IDERATIONS	(VOC's) to the air takes p	lace, typically at a rate of ≤ 50	0 дл.	
SECTION 14 DTRAN				and the second		
Proper Shipping Name: Hazard Class:	Adhesives 3			TION for Ground Shipping		
Secondary Risk: Identification Number: Packing Group:	None UN 1133 PG II			nner packaging, 30 kg gross v n packaging, these quantilies	veignt per package. may qualify under DOT as "ORM-D"	]
Label Required: Marine Pollutant:	Class 3 Flam NO	mable Liquid	TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING	DG INFORMATION FLAMMABLE ADHESIVES GROUP: UN 1133, PG		
SECTION 15 REG						
Precautionary Label Ir Symbols: Risk Phrases:	nformation: Highly Flamm F, XI R11: Highly flammable. R20: Harmful by inhalation,		AICS, H	TSCA, Europe EINECS, Can Korea ECL/TCCL, Japan MITI Led exposure may cause skin dr	(ENCS)	
Safety Phrases;	R36/37: Irritating to eyes and S9: Keep container in a well-v S16: Keep away from sources S25: Avoid contact with eyes.	entilated place.	R67: Vapors S26: In case of contact with S33: Take precautionary m	may cause drowsiness and diz	ziness enly of water and seek medical advice, is,	
SECTION 16 OTHE				Section and the section of the secti		1212
Specification Informa Department issuing d E-mail address:		IPS, Safety Health & Enviro <ehsinfo@ipscorp.com></ehsinfo@ipscorp.com>	nmental Affairs		nt with the requirements of the Europ tion of Hazardous Substances).	ean
Training necessary: Reissue date / reason Intended Use of Produ		Yes, training in practices an 4/20/2015 / Updated GHS S Solvent Cement for PVC Pla	tandard Format	i product literature.		

WELD×C	N.	GHS	SAFE	TY DATA	SHEE	Г	Da	ate Revised: J	UL 2015	
		WELD-ON® 71	1™ Low	VOC PVC PI	astic Pipe	e Cements		ipersedes: A		
SECTION/I PRODUCT	ANDCOMPANY	IDENTIFICATIO	ONI						مى بەر مەر مەر مەر مەر مەر مەر مەر مەر مەر م	
	LD-ON® 711™ Low V v VOC Solvent Cemen			5						
PRODUCT USE: Lov SUPPLIER:	V VOC SOVER CERTER			CTURER: IPS	Corporation	ala Straat Ga	rdena, CA 902	248-3127		
		N.		P.0	). Box 379, (	Gardena, CA	90247-0379			
EMERGENCY: Transportation: (	CHEMTEL Tel. 800.25	5-3924, +1 813-248-	0585 (Inter		i. 1-310-898- Idical: CHEN	ATEL Tel. 800	.255-3924, +1	813-248-058	35 (International)	
SECTIONI2 OHAZARD	SIDENTIFICATIO	N								
GHS CLASSIFICATION: Health			Environ	mental None Known	F	lammable Liq	Phys		Category 2	
Skin Irritation: Ca	tegory 4 tegory 3	Acute Toxicity: Chronic Toxicity:		None Known		•				
Skin Sensitization: NC Eye: Ca	) Itegory 2									
GHS LABEL:			gnal Word:		۷	VHMIS CLASSI		LASS B, DIV		
	シ♥♥�		Danger							
	Hazard Statements			P210: Keep away	from heal/soar	Precautionar ks/open flames/	<u>y Statements</u> hot surfaces – N	io smoking		
H225: Highly flammable liquid and v H319: Causes serious eye Irritation	apor			P261: Avoid breat P280: Wear protect	nina dust/lume	/gas/mist/vapors	/spray			
H332: Harmful if inhaled H335: May cause respiratory irritatio	ก			P304+P340; IF IN	ALED: Remo	ve victim to fres	h air and keep a	t rest in a positi	ion comfortable for h	preathing
H336: May cause drowsiness or dizz H351: Suspected of causing cancer	ziness			P403+P233: Store P501: Dispose of	in a well venti contents/conta	lated place. Kee iner in accordan	ep container tign ce with local reg	uy closed julation		
EUH019: May form explosive peroxi	des	TIONTONTING							na jiway	
SECTIONIS COMPOS	STION/INFORMA	CAS# E	INECS#	REACI Pre-registration	1 Jumber		NCENTRATION % by Weight	l		
Tetrahydrofuran (THF)				05-2116297729	-22-0000		40 - 50 5 - 15			
Methyl Ethyl Ketone (MEK) Cyclohexanone		108-94-1 2	203-631-1	05-2116297718	-25-0000		9 - 18 3 - 11			
Acetone All of the constituents of this ad	ibesive product are list	1	- land of oh	05-2116297713 emical substance	e meinteine	d by the US E	PA. or are exe	mpt from tha	t listing.	
All of the constituents of this au								1086 (40)		
* Indicates this chemical is sub, # indicates that this chemical is <b>KSECTION</b> Contact with eyes: FI Skin contact: Re	ject to the reporting rec s found on Proposition IDIMEASURES ush eyes immediately to emove contaminated c	ulrements of Sectio 65's List of chemical with plenty of water 1 lothing and shoes.	ls known to for 15 minut Wash skin t	the State of Cali	fornia to cau dical advice l pap and wate	mmediately.	eproductive to develops, see	xicity. K medical advine	vice.	
Indicates this chemical is sub # indicates that this chemical is \$\$ECTION445.FIRST4A Contact with eyes: FI Skin contact: R Inhalation: R Ingestion: R Likely Routes of Exposure:	Ject to the reporting ret s found on Proposition IDMEASURESS ush eyes Immediately to emove contaminated to emove to fresh air. It inse mouth with water. Inhalation,	uirements of sectio 65's List of chemical with plenty of water f lothing and shoes. ' reathing is stopped, Give 1 or 2 glasses Eye and Skin Conta	for 15 minut Wash skin t give artifici s of water of act	the State of Cali tes and seek me horoughly with s lal respiration. If r milk to dilute.	fornia to cau dical advice l boap and wate breathing is bo not induce	immediately. ar. If irritation difficult, give of o vomiting. Se	eproductive to develops, see oxygen. Seek sek medical ad	xicity. K medical adv medical advi Ivice immedia	vice. ice. ately.	
Indicates this chemical is sub # indicates that this chemical is KSECTIONALTIRSUA Contact with eyes: FI Skin contact: R Inhalation: R Likely Routes of Exposure: Acute symptoms and effects: Inhalation: S	Ject to the reporting rets found on Proposition I IDMEASURESS ush eyes Immediately te move contaminated c envox to fresh afr. If to inse mouth with water. Inhalation, evere overexposure mi	jurgments of section 65's List of chemical 65's List of chemical 65's List of chemical 65's List of chemical 10's List of the stopped 60's List of the stopped 60's List of the stopped 80's List of	for 15 minut for 15 minut Wash skin t , give artific s of water of act dizziness, h	the State of Cali the State of Cali tes and seek mer- horoughly with s fal respiration. If r milk to dilute. I meadache, Can c It in severe ave i	fornia to cau fornia to cau dical advice I pap and wate breathing is bo not induce ause drowsi	immediately. Fr. If irritation difficult, give of o vomiting. Se ness, irritation meas or conjui	eproductive to develops, see oxygen. Seek ek medical ad of eyes and n octival inflamm	xicity. k medical advinedical	vice. ice. alely.	
Indicates this chemical is sub- # Indicates that this chemical is <u>KSECTION</u> Contact with eyes: FI Skin contact: R Inhalation: R Inhalation: R Likely Routes of Exposure: Acute symptoms and effects: Inhalation: S Eye Contact: V Skin Contact: Li	Ject to the reporting re- found on Proposition 1 IDIMEASURES ush eyes Immediately 1 emove to fresh air. If t inse mouth with water. Inhelation, evere overexposure mi apors sightly uncomfor udid contact may reme	uurements of section 55% List of chemical 56% List of chemical vith plenty of water 1 lothing and shoes. 1 reathing is stopped, Give 1 or 2 glasses Eye and Skin Contr ay result in nausea, aver sult in nausea, overexposur we natural skin oils	Is known to for 15 minut Wash skin t , give artifici s of water of act dizziness, h re may resu resulting in	the State of Cali the State of Cali horoughly with s lal respiration. If r milk to dilute. I headache. Can c lt in severe eye i skin irritation. Di	fornia to cau fornia to cau dical advice I pap and wate breathing is bo not induce ause drowsi	immediately. Fr. If irritation difficult, give of o vomiting. Se ness, irritation meas or conjui	eproductive to develops, see oxygen. Seek ek medical ad of eyes and n octival inflamm	xicity. k medical advinedical	vice. ice. alely.	
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* Indicates this chemical is sub # Indicates that this chemical is KSECTION/ACTIRSTIA Contact with eyes: FI Skin contact: R Inhalation: R Ingestion: R Likely Routes of Exposure: Acute symptoms and effects: Inhalation: S Eye Contact: V Skin Contact: II Ingestion: M Chronic (long-term) effects: Chronic (long-term) effects: Suitable Extinguishing Mac Unsuitable Extinguishing Mac Exposure Hazards: Combustion Products: Personal procession Storage: Store in ventilate Keep away from Do not eat, dring Storage: Store in ventilate Keep away form Pollow all precas Unsuitable Extinguishing Mac Exposure LIMITS: Engineering Controls: M Monitoring: M Skin Protection: Star Skin Protection: Skin Protecti	Ject to the reporting re- found on Proposition 1 DIMEASURESS ush eyes Immediately emove contaminated c emove to fresh air. If t inse mouth with water. Inhalation, :	uirements of section Sis List of chemical with plenty of water 1 lothing and shoes. N weathing is stopped, Give 1 or 2 glasses Eye and Skin Conta ay result in nausea, y result in nausea, ay result in nausea, ay result in nausea, ay carinogen chronic exposure h ESUMATION Correctore cal powder, carbon i chronic exposure h ESUMATION Correctore carbon, hydrogen cl inted breathing appa MEASURESIM MEASURESI	The standard set of the set of th	the state of Cali the State of Cali horoughly with s lal respiration. If r milk to dilute. I hereadache, Can o It in severe eye is skin irritation. Do jstness. own to cause der cause der	dical advice i dical advice i apa nd walk breathing is bo not induce ause drowsti njury with co- arreating ser- arreated men contained advice i arreating advice contained advice i contained advice i c	se cancer or r mmedialely. 	eproductive to develops, see xxygen. Seek heek medical ad of eyes and n notival inflamm clonged conta imment of the c HMIS 2 3 0 B Contaction B Contaction HMIS 2 3 0 B Contaction B Contaction B Contaction B Contaction B Contaction B Contaction B Contaction Contaction B Contaction B Contaction B Contaction Contaction B Contaction B Contaction Contacti	xicity. k medical advi medical advi medical advi vice immedia asal passage ation on con- ict. entral nervou ict. NIEPA 2 3 0 ict. ict. NIE NIE 2 3 0 0 pm 1 2 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	vice. ce. ately. ss. tact with the liquid ss. 0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe A-Severe	d. <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b>

WELD	ON,	GHS SAF	ETY DATA SHE	ET	Data Davies de JUL 2018
	······	WELD-ON® 711™ Lov	w VOC PVC Plastic P	Pipe Cements	Date Revised: JUL 2015 Supersedes: APR 2015
SECTION 9 - IPHYS					
Appearance: Odor:	Gray, heavy Ketone	r syrupy liquid		Odor Threshold:	0.88 ppm (Cyclohexanone)
pH: Melting/Freezing Poi Boiling Point: Flash Point: Specific Gravity: Solubility:	56°C (133°F -20°C (-4°F) 0.966 @23°	63.3°F) Based on first meltin ) Based on first boiling comp TCC based on Acetone	onent: Acetone	Boiling Range: Evaporation Rate: Flammability: Flammability Limits:	56°C (133°F) to 156°C (313°F) > 1.0 (BUAC = 1) Category 2 LEL: 1.1% based on Cyclohexanone UEL: 12.8% based on Acetone
Partition Coefficient Auto-ignition Tempe Decomposition Tem	n-octanol/water: rature: 321°C (610 perature: Not Applicat	Not Available F) based on THF ble	•	Vapor Pressure: Vapor Density: Other Data: Viscosity:	190 mm Hg @ 20°C (68°F) Acetons >2.0 (Air = 1) Heavy bodied
VOC Content:		ed as directed, per SCAQMD		6A,VOC content is: ≤ 510 g/	
Stability: Hazardous decompo Conditions to avoid: Incompatible Materia	sition products:	Stable	n forced to burn, this produc ks, open flame and other ig		hydrogen chloride and smoke.
SECTIONIII O TOX	ICOLOGICAL INFOR	MATION			
<i>Toxicity:</i> Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEH Cyclohexanone Acetone		ng/kg (rat), Dermal: 6480 mg/ ng/kg (rat), Dermal: 948 mg/k	kg (rabbit) Inhalation 8 g (rabbit) Inhalation 4	hrs. 21,000 mg/m <sup>3</sup> (rat) hrs. 23,500 mg/m <sup>3</sup> (rat) hrs. 8,000 PPM (rat) 0,100 mg/m <sup>3</sup> (rat)	Target Organs STOT SE3 STOT SE3 STOT SE3
Reproductive Effects Not Established	Teratogenicity Not Established	Mutagenicity Not Established	Embryotoxicity Not Established	Sensitization to Product Not Established	Synergistic Products Not Established
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION:1335 WAS	Not readily biodegradable Minimal to none.	volatile organic compounds (	VOC's) to the air takes plac	e, typically at a rate of $\leq$ 510	) g/l
	gulations. Consult disposal				
SECTION 14 STRAN		DN			
Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group:	Adhesives 3 None UN 1133 PG II	Consumer C	Quantity: Up to 5L per inne ommodity: Depending on p		eight per package. ay qualify under DOT as "ORM-D" .
Label Required; Marine Pollutant;	NO	imable Liquid	TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING G		<u> </u>
SECTION 15 REG Precautionary Label		TION		SCA, Europe EINECS, Can	
Symbols: Risk Phrases;	F, XI F, XI R11: Highly flammable. R20-Harmful by Inhalation. R36/37: irritating to eyes and		AICS, Ko	orea ECL/TCCL, Japan MITI y cause skin dryness or cracki	(ENCS)
Safety Phrases:	S9; Keep container in a well- S16: Keep away from source S25: Avoid contact with eyes	s of ignition - No smoking.	S33: Take precautionary mea	eyes, rinse immediately with plasures against static discharge ical advise immediately and sh	
SECTION 16 COTH Specification Informa Department issuing d	tion:	IPS, Safety Health & Environ	nmental Affairs		at with the requirements of the European
E-mail address:		<ehsinfo@ipscorp.com></ehsinfo@ipscorp.com>		Directive on RoHS (Restrict	ion of Hazardous Substances).
Training necessary: Reissue date / reasor		Yes, training in practices an 7/15/2015 / Updated GHS S Solvent Compart for PVC Pla	tandard Format	roduct literature.	

Intended Use of Product: Solvent Cement for PVC Plastic Pipe
This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of
knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof,

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WELD×C	DN.	GH	IS SAFE	TY DAT	A SHEE					r J
		ELD-ON® 71	4™ Low V	OC Cemer	t for CPV	C Plastic F	Pipe	Date Revised: Supersedes:	APR 2015 NOV 2014	
PRODUCT NAME: WE	TANDICOMPANY									
	w VOC Solvent Cement	for CPVC Plastic	Pipe MANUFA		P.O. Box 379	Main Street, C , Gardena, C/				
EMERGENCY: Transportation:	CHEMTEL Tel. 800.255	-3924, +1 813-2 N	48-0585 (Inter	national)				+1 813-248-05	85 (International)	「「「「「「」」」
GHS CLASSIFICATION:			Environ					hysical		
Skin Initation: Ca Skin Sensitization: NC	ategory 4 ategory 3	Acute Toxicity: Chronic Toxicit		None Known None Known		Flammable Li			Category 2	
GHS LABEL:			Signal Word: Danger			WHMIS CLASS	IFICATION:	CLASS B, D CLASS D, D		
H225: Highly flammable liquid and va H319: Causes serious eye irritation H332: Harmful if Inhaled H335: May cause respiratory irritation H336: May cause drowsiness or dizz H351: Suspeeled of causing cancer EUH019: May form explosive peroxic	n iness des			P280: Wear pro P337+P313: Ge P403+P233: Sto	athing dust/fume lective gloves/pr t medical advice pre in a well vent	urks/open flames a/gas/mist/vapon rotective clothing	s/spray /eye protection/l ep container tigh	No smoking face protection kly closed		
EUH056: Repeated exposure may c	SITION/INFORMA	FION ON INC	REDIENT	S					10 M 10 M 10 M	
Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK)		CAS# 109-99-9 78-93-3 108-94-1	203-726-8 201-159-0 203-631-1	REA Pre-registratio 05-21162977 05-21162977 05-21162977	CH <u>Number</u> 29-22-0000 28-24-0000		CONCENTRAT % by Welght 30 - 60 5 - 25 5 - 20	ION		
Cyclohexanone All of the constituents of this ac * Indicates this chemical is sub # indicates that this chemical is	lect to the reporting regu	I on the TSCA in irements of Sect	iventory of che ion 313 of the	emical substan Emergency Pl he State of Ca	ces maintaine anning and C iifornia to cau	ommunity Rigi se cancer or r	ht-to-Know A eproductive t	oxicity.	FR372).	
#SECTION 4 E FIRST A										
Inhalation: Re Ingestion: Ri Likely Routes of Exposure: Acute symptoms and effects Inhalation: Se Eve Contact: V2	· · · · ·	athing is stopped ive 1 or 2 glasse ye and Skin Con result in nausea ble, Overexposi	d, give artificial as of water or r tact , dizziness, he ure may result	I respiration. In milk to dilute. I eadache. Can in severe eye	i breathing is Do not induce cause drowsii injury with cor	difficult, give o vomiting. Se ness, irritation meal or conjui	oxygen. Seek ek medical ac of eyes and nctival inflam	r medical advice lvice immediate nasal passages nation on conta	e. Hy.	
Ingestion: Ma Chronic (long-term) effects:	ay cause nausea, vomiti Category 2 (	ng, diarrhea and Carcinogen	mental sluggis	shness.					Several as a second and	- Marken Con
SECTION SECTION SECTION		S powder, carbor		ioam, Halon, w			HMIS	NFPA	0-Minimal	a states a
Unsuitable Extinguishing 1 Exposure Hazards: Combustion Products:	Media: Water spray Inhalation ar		t			Health Flammability Reactivity PPE	2 3 0 B	2 3 0	1-Slight 2-Moderate 3-Serious 4-Severe	
Protection for Firefighters:	Self-contain	d breathing app	aratus or full-fa	ace positive pr	essure airline	masks.				and she is
SECTION 6 CTACCIDE Personal precautions:	Keep away f Provide suff Prevent con	rom heat, sparks cient ventilation, act with skin or a	and open flan use explosion aves (see sect	ne. -proof exhaus ion 8).	ventilation e	quipment or w	ear suitable r	espiratory prote	ctive equipment.	
Environmental Precautions Methods for Cleaning up: Materials not to be used for	Clean up wil r clean up:	luct or liquids co h sand or other i Aluminum or p	nert absorbeni lastic contalne	t material, Tra rs	nsfer to a clos	able steel ves	ssel.			
Andling: Avoid breathing Keep away from	NG AND STORAG of vapor, avoid contact v ignition sources, use on	ith eves, skin an	d clothing.						<u>tersend</u> ig herk	<u>× 2012 () .</u>
Storage: Store in ventilate	or smoke while handling d room or shade below 3 Ignition sources and inco tionary information on co	3°C (90°F) and	als: caustics, a	mmonia, inorg	anic acids, ch	lorinated com	ipounds, stroi	ng oxidizers and	d isocyanates.	
Follow all precau	UTIONS TO CONT	ROLEXPOS	URE!/[PER	SONAL	ROTECTIO	N		ure la comp		SE MANYOR
EXPOSURE LIMITS:	Component etrahydrofuran (THF)	ACGIH TLV 50 ppm	ACGIH STEL 100 ppm	OSHA PEL 200 ppm	OSHA STEL N/E	OSHA	CALJOSHA PI 200 ppm 200 ppm	CAL/OSHA	CAL/OSHA STEL 250 ppm 300 ppm	
Engineering Controls: U	ethyl Ethyl Ketone (MEK yclohexanone se local exhaust as neec aintain breathing zone a	20 ppm , ed.	300 ppm 50 ppm ations below e:	200 ppm 50 ppm xposure limits.	N/E N/E	N/E N/E	25 ppm	N/E	N/E	]
Personal Protective Equipm Eye Protection: Av	nent (PPE): void contact with eyes, w	ear splash-proof for the exposur	f chemical gog e.	gles, face shie				guards and sid	le shields,	
U	revent contact with the s se of solvent-resistant gl ractices and procedures revent inhalation of the s	oves or solvent-	resistant barrie	er cream shoul	d provide ade	quate protecti	ion when norr			
	revent inhalation of the s khaust ventilation to rem /ith normal use, the Expo	wa sirborne con	taminants from	n employee bre	afhing zone a	and to keep co	ontaminants D	elow levels liste	ad above.	

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### GHS SAFETY DATA SHEET

WELD-ON® 714™ Low VOC Cement for CPVC Plastic Pipe

Date Revised: APR 2015

Supersedes: NOV 2014

SECTION(9 @ IRHYSICAL/AND/CHEMICAL/PROPERTIES) Appearance: Orange or gray, heavy syrupy liquid 0.88 ppm (Cyclohexanone) Odor: Ketone Odor Threshold: Not Applicable pH: -108.5°C (-163.3°F) Based on first melting component: THF 66°C (151°F) Based on first boiling component: THF -20°C (-4°F) TCC based on THF Melting/Freezing Point: Boiling Range: 66°C (151°F) to 156°C (313°F) Boiling Point: Flash Point: Evaporation Rate: Flammability: > 1.0 (BUAC = 1) Category 2 LEL: 1.1% based on Cyclohexanone 0.995 @23°C (73°F) Solvent portion soluble in water. Resin portion separates out. Specific Gravity: Flammability Limits: UEL: 11.8% based on THF Solubility: 129 mm Hg @ 20°C (68°F)based on THF >2 (Air = 1) Partition Coefficient n-octanol/water: Not Available Vapor Pressure: 321°C (610°F) based on THF Vapor Density: Auto-ignition Temperature: Decomposition Temperature: Not Applicable Other Data: Viscosity: Heavy bodied When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: < 490 g/l. VOC Content: SECTION 10 - STABILITY AND REACTIVITY 171 Stability: None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke. Hazardous decomposition products: Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources Incompatible Materials Oxidizers, strong acids and bases, amines, ammonia SECTION M = TOXICOLOGICAL INFORMATION LD50 LC50 Target Organs Toxicity: Oral: 2842 mg/kg (rat) Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit) Inhalation 3 hrs. 21,000 mg/m<sup>3</sup> (rat) Tetrahydrofuran (THF) STOT SE3 Methyl Ethyl Ketone (MEK) Inhalation 8 hrs. 23,500 mg/m3 (rat) STOT SE3 Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit) Inhalation 4 hrs. 8,000 PPM (rat) Cyclohexanone **Reproductive Effects** Sensitization to Product Synergistic Products Teratogenicity Mutagenicity Embryotoxicity Not Established Not Established Not Established Not Established Not Established Not Established SECTION 12 C ECOLOGICAL INFORMATION 1.1.5 Ecotoxicity: None Known Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 490 g/l. Degradability: Not readily biodegradable **Bioaccumulation:** Minimal to none. SECTION 13 SWASTE DISPOSAL CONSIDERATIONS Follow local and national regulations, Consult disposal expert, SECTION/14 OTRANSPORT INFORMATION Proper Shipping Name: Adhesives Hazard Class: 3 EXCEPTION for Ground Shipping DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package. Secondary Risk: None Identification Number: UN 1133 Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" Packing Group: PG II Label Required: Class 3 Flammable Liquid TDG INFORMATION FLAMMABLE LIQUID 3 TDG CLASS Marine Pollutant; NO SHIPPING NAME: ADHESIVES UN NUMBER/PACKING GROUP UN 1133, PG I SECTION 15 CTREGULATORY INFORMATION 10 Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS) Symbols: F. XI **Risk Phrases:** R11: Highly flammable. R66: Repeated exposure may cause skin dryness or cracking R36/37: Initating to eyes and respiratory system. R67: Vapors may cause drowsiness and dizziness Safety Phrases: S2; Keep out of the reach of children S25: Avoid contact with eyes. S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking, \$26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges. SECTION 16 OTHER INFORMATION Specification Information: Department issuing data sheet: IPS, Safety Health & Environmental Affairs All ingredients are compliant with the requirements of the European E-mail address: <EHSinfo@ipscorp.com> Directive on RoHS (Restriction of Hazardous Substances). Yes, training in practices and procedures contained in product literature. Training necessary: Reissue date / reason for reissue: 4/8/2015 / Updated GHS Standard Format Solvent Cement for CPVC Plastic Pipe Intended Use of Product:

						I	17	721	47
WELD×ON.	GHS S	AFETY D	ATA SH	EET	-				
	Weld-On <sup>®</sup> 721™	Low VOC C	ement for F	VC Plast	tic Pipe		Date Revised: Supersedes:	APR 2015 NOV 2014	
	MRANVIDENTIFIC	ATION					A. Carl		
	™ Low VOC Cement for ent Cement for PVC Plast		ipe						
PRODUCT USE: Low VOC Solve	ant Cement for PVC Plast			IPS Corporal					
					Main Street, G 9, Gardena, CA				
			-	Tel. 1-310-8	98-3300				n .
EMERGENCY: Transportation: CHEMTEL SECTION 2: 0 HAZARDSIDENT	Tel. 800.255-3924, +1 81:	3-248-0585 (Inte						0585 (Internationa	
SECTION 2 OTHAZARDSTIDENT	FIGATION	Maria a sint	<u>. Al-Al-Al-Al-Al-Al-Al-Al-Al-Al-Al-Al-Al-A</u>					and a star of the second second	ALL
Health Acute Toxicity: Category 4	Acute Toxici	Environ	mental None Known		Flammable Li		ysical	Category 2	ļ
Acute Toxicity: Category 4 Skin Irritation: Category 3	Chronic Tox	•	None Known			•		• •	
Skin Sensitization: NO Eye: Category 2									
GHS LABEL:		Signal Word:			WHMIS CLASS	FICATION:	CLASS B, C	IVISION 2	
		Danger					CLASS D, D	IVISION 1B	
Hazard Sta			r		Precautiona	ry Statement	<u>s</u>		
1225: Highly flammable liquid and vapor	ACTION AS				arks/open flames/	hot surfaces –			
1319: Causes serious eye irritation 1335: May cause respiratory irritation					e/gas/mist/vapors trotective clothing/		ace protection		
336: May cause drowsiness or dizziness			P337+P313: Ge	t medical advic	e/attention				
351: Suspected of causing cancer UH019: May form explosive peroxides					ullated place. Kee alner in accordan		ulation		
EGTIONS & COMPOSITION/IN	FORMATIONION'I	NGREDIENT	IS:				والمتعادية والمتعاد	Course at 10	
	CAS#	EINECS #	REA Pre-registration	Number		NCENTRATIO			
etrahydrofuran (THF)	109-99-9 78-93-3	203-726-8 201-159-0	05-211629772			40 - 55 5 - 15			
/iethyl Ethyl Ketone (MEK) Cyclohexanone	108-94-1	203-631-1	05-21162977	18-25-0000		10 - 20			
cetone Il of the constituents of this adhesive prod	67-64-1	200-662-2	05-21162977		ned by the US	3 - 15 FPA or are (	vegent from t	hat listing.	
Indiantee this chemical is subject to the re-	S to stremeriuper printrone	lection 313 of the	e Fmerdency P	lannind and	Community Rid	Int-to-Know /	ACL OF 1980 (4	OCFR372).	
f indicates that this chemical is found on Pr	roposition 65's List of che	micals known to	the State of Ca	alifornia to ca	use cancer or	reproductive	toxicity.	14. <u>19. 2</u> . 19. 19. 19.	2012448.40
SECTION 4 OF FIRST AID MEAS Contact with eyes: Flush eyes Imr	mediately with plenty of wa	ater for 15 minut	es and seek m	edical advice	a immediately.			and determined and a second second second	A CONTRACTOR OF A CONTRACTOR A CONTRACTOR A CONT
Skin contact: Remove conta	minated clothing and sho	es. Wash skin ti	horoughly with	soap and wa	ater. If irritation	develops, se	ek medical a	idvice. vice	
Inhalation: Remove to free Ingestion: Rinse mouth w	sh air. If breathing is stop vith water. Give 1 or 2 gla	sses of water or	milk to dilute.	Do not indu	s annicult, give ce vomiting. Se	ek medical a	dvice immed	liately.	
Likely Routes of Exposure:	Inhalation, Eye and Skin (								
Acute symptoms and effects: Inhalation: Severe overex	posure may result in naus	sea, dizziness, h	neadache. Can	cause drow	siness, irritatio	n of eyes and	nasal passa	ges,	
Eye Contact: Vapors slightly Skin Contact: Liquid contact	may remove natural skin	osure may result oils resulting in t	it in severe eye skin irritation. [	a injury with o Dermatitis ma	orneal of conju ay occur with pi	inctival inflan rolonged con	imation on co tact.	v vito the tiqu	iia.
Ingestion: May cause na	usea, vomiting, diarrhea a	nd mental slugg	ishness.						
	Category 2 Carcinogen		100 C 140 A 14	CREW AND A					Carling Street
	LASUKED	Sugar & manual & really	form Halon				die ventreeten en en	0-Minimal	Server Server
SECTION SET FIREFIGHTING M Suitable Extinguishing Media;	Dry chemical powder, car	bon dioxide gas	, toam, naion,	water fog.		HMIS	NFPA		
Suitable Extinguishing Media: Unsuitable Extinguishing Media:	Dry chemical powder, car Water spray or stream.	bon dioxide gas	, ioan, naon, '	water fog.	Health	2	2	1-Slight	
Suitable Extinguishing Media: Unsuitable Extinguishing Media: Exposure Hazards:	Dry chemical powder, car	bon dioxide gas		water fog.	Health Flammability Reactivity	2 3 0		1-Slight 2-Moderate 3-Serious	
Suitable Extinguishing Media: Unsultable Extinguishing Media: Exposure Hazards: Combustion Products:	Dry chemical powder, car Water spray or stream. Inhalation and dermal cor Oxides of carbon, hydrog	bon dioxide gas ntact en chloride and	smoke	water fog.	Health Flammability Reactivity PPE	2 3	2 3	1-Slight 2-Moderate	
Suitable Extinguishing Media: Unsuitable Extinguishing Media: Exposure Hazards: Combustion Products: Protection for Firefighters: SECTION/66TACCIDENTAL RE	Dry chemical powder, car Water spray or stream. Inhalation and dermal cor Oxides of carbon; hydrog Self-contained breathing i VEASE[MEASURE]	bon dioxide gas ntact en chloride and apparatus or full S <b>ubside and</b>	smoke I-face positive p	water fog. pressure airli	Health Flammability Reactivity PPE ne masks.	2 3 0 B	2 3 0	1-Slight 2-Moderate 3-Serious	
Suitable Extinguishing Media: Unsuitable Extinguishing Media: Exposure Hazards: Combustion Products: Protection for Firefighters: SECTION:66:3ACCIDENTAL RE	Dry chemical powder, car Water spray or stream. Inhalation and dermal cor Oxides of carbon, hydrog Self-contained breathing i <u>UEASE/MEASURE</u> :	bon dioxide gas, ntact en chloride and apparatus or full S <b>in arks</b> and open fla	smoke I-face positive p (VV-PLOS VAR)	water fog, pressure airli	Health Flammability Reactivity PPE ne masks.	2 3 0 B	2 3 0	1-Slight 2-Moderate 3-Sertous 4-Severe	
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Suitable Extinguishing Media: Unsuitable Extinguishing Media: Exposure Hazards: Combustion Products: Protection for Firefighters: SECTION[68::ACCIDENTAL RE Personal precautions: Environmental Precautions:	Dry chemical powder, car Water spray or stream. Inhalation and dermal cor Oxides of carbon; hydrog Self-contained breathing i UEASE(MEASURE: Keep away from heat, spy Provide sufficient ventilati Prevent contact with skin Prevent contact with skin	bon dioxide gas ntact en chloride and apparatus or full Superior of the solution, use explosic or eyes (see se s contaminated v	smoke -face positive p ame. on-proof exhau ction 8). with product froi	water fog. pressure airli <b>Katoministi</b> st ventilation m entering s	Health Flammability Reactivity PPE ne masks. equipment or the ewers, drains, s	2 3 0 B wear suitable soil or open v	2 3 0 respiratory p	1-Slight 2-Moderate 3-Şerlous 4-Severe	
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### GHS SAFETY DATA SHEET

Weld-On<sup>®</sup> 721<sup>™</sup> Low VOC Cement for PVC Plastic Pipe

Date Revised: APR 2015

Supersedes: NOV 2014

SECTION(9) RHYSICALAND CHEMICAL PROPERTIES Appearanc Odor: Blue, medium syrupy liquid Ketone Odor Threshold: 0.88 ppm (Cyclohexanone) pH: Melting/Freezing Point: Not Applicable -108.5°C (-163.3°F) Based on first melling component: THF 56°C (133°F) to 156°C (313°F) **Boiling Range** 56°C (133°F) Based on first boiling component: Acetone -20°C (-4°F) TCC based on Acetone Evaporation Rate: Boiling Point: > 1.0 (BUAC = 1) Category 2 LEL: 1.1% based on Cyclohexanone Flash Point: Flammability: Specific Gravity 0.955 @23°C (73°F) Flammability Limits: Solubility: So Partition Coefficient n-octanol/water: Solvent portion soluble in water. Resin portion separates out. ar: Not Available UEL: 12.8% based on Acetone 190 mm Hg @ 20°C (68°F) Acetone Vapor Pressure: 321°C (610°F) based on THF Vapor Density: Other Data: Viscosity: Auto-ignition Temperature: >2.0 (Air = 1) Medium bodiec Decomposition Temperature: Not Applicable VOC Content: When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: < 510 g/l. SECTION 10 - STABILITY AND REAGTIVITY Stability: Stable None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke. Hazardous decomposition products: Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources Oxidizers, strong acids and bases, amines, ammonia Incompatible Materials: **的时间,**这些有效的。 SECTION 11 OTOXICOLOGICAL INFORMATION Toxicity: LDs<sub>0</sub> LC<sub>50</sub> Target Organs Oral: 2842 mg/kg (rat) Inhalation 3 hrs. 21,000 mg/m<sup>3</sup> (rat) STOT SE3 Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK) Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit) Inhalation 8 hrs. 23,500 mg/m3 (rat) STOT SE3 Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit) Inhalation 4 hrs. 8,000 PPM (rat) Cyclohexanone STOT SE3 Acetone Oral: 5800 mg/kg (rat) Inhalation 50,100 mg/m<sup>3</sup> (rat) Reproductive Effects <u>Teratogenicity</u> <u>Mutagenicity</u> Embryotoxicity Sensitization to Product Synergistic Products Not Established Not Established Not Establishe Not Established Not Established Not Established SECTION 12 - IECOLOGICAL INFORMATION Ecotoxicity: None Known In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of < 510 g/l. Mobility: Degradability: Not readily blodegradable Bioaccumulation: Minimal to none. SECTIONI13 E WASTEIDISPOSAL CONSIDERATIONS Follow local and national regulations. Consult disposal expert. SECTION 45 TRANSPORT INFORMATION Proper Shipping Name: EXCEPTION for Ground Shipping DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package Hazard Class: 3 Secondary Risk: None Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" Identification Number: UN 1133 PG I Packing Group: Label Required: Marine Pollutant: Class 3 Flammable Liquid TDG INFORMATION NO TDG CLASS: FLAMMABLE LIQUID 3 SHIPPING NAME: UN NUMBER/PACKING GROUP: ADHESIVES UN 1133, PG I SECTION 15 REGULATORY INFORMATION NAME AND A DESCRIPTION OF A DESCRIPTIONO Precautionary Label Information: Highly Flammable, Irritant, Carc. Cat. 2 Symbols: F, XI Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS) **Risk Phrases:** R11: Highly flammable R66: Repeated exposure may cause skin dryness or cracking R36/37: Irritating to eyes and respiratory system. R67: Vapors may cause drowsiness and dizziness Safety Phrases: S2: Keep out of the reach of children S25: Avoid contact with eves. S9: Keep container in a well-ventilated place. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S16: Keep away from sources of ignition - No smoking S33: Take precautionary measures against static discharges \*SECTION 16 OTHER INFORMATION Specification information: Department issuing data sheet: IPS, Safety Health & Environmental Affairs All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances). E-mail address: <EHSinfo@ipscorp.com> Yes, training in practices and procedures contained in product literature. 4/20/2015 / Updated GHS Standard Format Training necessary: Reissue date / reason for reissue: Intended Use of Product: Solvent Cement for PVC Plastic Pipe

1725 2PGE WELD×ON. **GHS SAFETY DATA SHEET** Date Revised: APR 2015 WELD-ON® 725™ Wet 'R Dry™ Low VOC Cement for PVC Plastic Pipe Supersedes: NOV 2014 CONTRACTOR OF STREET SECTIONIL PRODUCT AND COMPANY IDENTIFICATION WELD-ON® 725™ Wet 'R Dry™ Low VOC Cement for PVC Plastic Pipe PRODUCT NAME PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe **IPS** Corporation MANUFACTURER: SUPPLIER: 17109 South Main Street, Gardena, CA 90248-3127 P.O. Box 379, Gardena, CA 90247-0379 Tel. 1-310-898-3300 Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) SECTION 2 - HAZARDSIDENTIFICATION GHS CLASSIFICATION: Environmental Physical Health Acute Toxicity: None Known Flammable Liquid Category 2 Acute Toxicity: Category 4 Chronic Toxicity: None Known Category 3 Skin Irritation: Skin Sensitization: NO Category: Eye: WHMIS CLASSIFICATION: CLASS B. DIVISION 2 Signal Word: GHS LABEL: CLASS D. DIVISION 1B Danger Precautionary Statements Hazard Statements P210: Keep away from heat/sparks/open flames/hol surfaces - No smoking H225: Highly flammable liquid and vapor P261: Avoid breathing dust/fume/gas/mist/vapors/spray H319: Causes serious eye irritation P280: Wear protective gloves/protective clothing/eye protection/face protection H335: May cause respiratory irritation P337+P313: Get medical advice/attenlion H336: May cause drowsiness or dizziness P403+P233: Store in a well ventilated place. Keep container tightly closed H351: Suspected of causing cancer P501: Dispose of contents/container in accordance with local regulation EUH019: May form explosive peroxide SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS REACH CONCENTRATION % by Weight Pre-registration Number 05-2116297729-22-0000 45 - 60 109-99-9 203-726-B Tetrahydrofuran (THF) 4 - 15 78-93-3 201-159-0 05-2116297728-24-0000 Methyl Ethyl Ketone (MEK) 05-2116297713-35-0000 14 - 25 67-64-1 200-662-2 Acetone All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing. \* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372). # indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity. SECTION 4 SERSTAID MEASURES Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately. Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice. Contact with eyes: Skin contact: Remove containinated counting and sinces. Wash shift inforceing will scap and wash, in instant develops, seek module advice. Remove to fresh air, if breathing is stopped, give artificial respiration. If breathing is difficult, give axygen. Seek medical advice. Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately. Inhalation: Ingestion: Inhalation, Eye and Skin Contact Likely Routes of Exposure: Acute symptoms and effects: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages. inhalation: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid. Eye Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact. Skin Contact: May cause nausea, vomiting, diarrhea and mental sluggishness. Ingestion: Category 2 Carcinogen Chronic (long-term) effects: SECTION'S A FIREFIGHTING MEASURES Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog. 「「日本語」を見ていた。 LIMIC NFPA 0-Minima Suitable Extinguishing Media: Unsuitable Extinguishing Media: 1-Slight 2 Health 2 Water spray or stream 3 3 2-Moderate Flammability Inhalation and dermal contact Exposure Hazards: Oxides of carbon, hydrogen chloride and smoke Reactivity 0 0 3-Serious **Combustion Products:** в 4-Severe PPE Self-contained breathing apparatus or full-face positive pressure airline masks Protection for Firefighters: SECTION 61 ACCIDENTAL RELEASE MEASURES Keep away from heat, sparks and open flame. Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment. Personal precautions Prevent contact with skin or eyes (see section 8). Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course. Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel. Environmental Precautions: Methods for Cleaning up: Aluminum or plastic containers Materials not to be used for clean up: SECTION:723HANDL'ING/AND/STORAGE Store and a clothing. Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing. Keep away from Ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods. Do not eat, drink or smoke while handling. Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight. Storage: Keep away from ignition sources and incompatible materials: causics, annonia, linorganic acids, chlorinated compounds, strong oxidizers and isocyanates. Follow all precautionary information on container label, product bulletins and solvent cementing literature. SECTION 84 PRECAUTIONSITO CONTROL EXPOSURE // PERSONAL PROTECTION OSHA PEL-Cel CAL/OSHA CAL/OSHA CAL/OSHA STE Cellin OSHA PEL OSHA STEL ACGIH TLV ACGIH STEL EXPOSURE LIMITS: Component 250 ppm N/F N/E 200 ppm N/E 100 ppm 200 ppm Tetrahydrofuran (THF) 50 ppm 200 ppm N/E 300 ppm N/E 200 ppm 300 ppm N/E Methyl Ethyl Ketone (MEK) 200 ppm N/E 500 ppm 3000 ppm 750 ppm 750 ppm 1000 ppn N/E Acetone 500 ppm Use local exhaust as needed Engineering Controls: Maintain breathing zone airborne concentrations below exposure limits. Monitoring: Personal Protective Equipment (PPE): Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, Eye Protection: etc. as may be appropriate for the exposure. Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion. Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application Skin Protection: practices and procedures are used for making structural bonds. Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment. **Respiratory Protection:** 

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## **GHS SAFETY DATA SHEET**

WELD-ON® 725™ Wet 'R Dry™ Low VOC Cement for PVC Plastic Pipe Supersedes: NOV:2014

Date Revised; APR 2015

Appearance:	ICAL ANDICHEMICA Aqua Blue, m	edium syrupy liquid			· · · · · · · · · · · · · · · · · · ·
Odor:	Ketone			Odor Threshold:	1 ppm (Acetone)
pH:	Not Applicable				
Melting/Freezing Poir Boiling Point:		3.3°F) Based on first melting Based on first boiling comport		Boiling Range: Evaporation Rate:	56°C (133°F) to 80°C (176°F) > 1.0 (BUAC = 1)
Flash Point:		CC based on Acetone	Ient Adelone	Flammability:	Category 2
Specific Gravity:	0.924 @23°C			Flammability Limits:	LEL: 1.4% based on MEK
Solubility:		n soluble in water. Resin por	tion separates out.	,,,,,	UEL: 12.8% based on Acetone
Partition Coefficient		Not Available		Vapor Pressure:	190 mm Hg @ 20°C (68°F) Acetone
Auto-Ignition Temper		) based on THF		Vapor Density:	>2.0 (Air = 1)
Decomposition Temp				Other Data: Viscosity:	Medium bodied
VOC Content:		as directed, per SCAQMD R	ule 1168, Test Method 316/	A,VOC content is: < 510g/l.	
SECTION/10 + STAI	BILITY/AND/REACTIV	(JTÝ			國際國際通信和行動運行的主義
Stability:		Stable			
Hazardous decompo:					nydrogen chloride and smoke.
Conditions to avoid:		Keep away from heat, sparks		tion sources.	
Incompatible Materia	ls:	Oxidizers, strong acids and b	oases, amines, ammonia		
ECTION IN	COLOGICALINFORM	ATION			
foxicity:	LDso		LC50		Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg	ı/kg (rat)	Inhalation 3	hrs. 21,000 mg/m <sup>3</sup> (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)		/kg (rat), Dermal: 6480 mg/kg		hrs. 23,500 mg/m <sup>3</sup> (rat)	STOT SE3
Acetone	Oral: 5800 mg	y/kg (rat)	Inhalation 5	0,100 mg/m <sup>3</sup> (rat)	STOT SE3
Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established
ECTION 12 ECO	LOGICALINFORMAT	ION			
Ecotoxicity:	None Known				
ECOLOXICILY.					
Mobility:		olatile organic compounds (V	OC's) to the air takes place	, typically at a rate of $\leq$ 510g	g/l.
		olatile organic compounds (V	OC's) to the air takes place	, typically at a rate of $\leq$ 510g	g/l.
Mobility:	In normal use, emission of v	olatile organic compounds (V	OC's) to the air takes place	, typically at a rate of $\leq$ 510g	Л.
Mobility: Degradability: Bioaccumulation:	In normal use, emission of v Not readily biodegradable Minimal to none.			, typically at a rate of $\leq$ 510g	л.
Mobility: Degradability: Bioaccumulation: SECTION:13:SWAS	In normal use, emission of v Not readily biodegradable Minimal to none. TEIDISPOSALCONS			, typically at a rate of $\leq 510$	
Mobility: Degradability: Bloaccumulation: SECTION:13ESWAS Follow local and national reg	In normal use, emission of v Not readily biodegradable Minimal to none. TE(D)SPOSAUCONS gulations. Consult disposal et	IDERATIONS		, typically at a rate of ≤ 510g	
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Mobility: Degradability: Bioaccumulation: SECTION 13 SEWAS follow local and national reg SECTION 14 STRAN Proper Shipping Name: Hazard Class: Secondary Risk:	In normal use, emission of v Not readily blodegradable Minimal to none. TEIDISROSAUCONS Jutations: Consult disposal er ISRORTINEORMATIC Adhesives 3 None	IDERATIONS	EXCEPTIA Quantity: Up to 5L per Inner	DN for Ground Shipping packaging, 30 kg gross we	lght per package.
Mobility: Degradability: Bioaccumulation: SECTION:13EWAS Follow local and national reg SECTION:13ETRAN Proper Shipping Name: Hazard Class:	In normal use, emission of v Not readily biodegradable Minimal to none. TEIDISPOSALCONSI gulations. Consult disposal et ISPORTINEORMATIC Adhesives 3	IDERATIONS	EXCEPTIA Quantity: Up to 5L per Inner	DN for Ground Shipping packaging, 30 kg gross we	
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Mobility: Degradability: Bloaccumulation: SECTION:13 SECTION:13 ECTION:14 BECTION:14 Hazard Class: Secondary Risk: Identification Number: Packing Group:	In normal use, emission of v Not readily biodegradable Minimal to none. TEIDISPOSALECONSI gulations. Consult disposal ex ISPORTINEORMATIC Adhesives 3 None UN 1133 PG II	IDERATIONS) xpert. DNI DOT Limited C Consumer Con	EXCEPTIN Quantity: Up to 5L per inner mmodity: Depending on per TDG CLASS:	ON for Ground Shipping packaging, 30 kg gross wa cckaging, these quantities m G INFORMATION FLAMMABLE	light per package. hay qualify under DOT as "ORM-D" .
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Mobility: Degradability: Bioaccumulation: SECTION/1336/WAS follow local and national reg SECTION/13/STRAM Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant:	In normal use, emission of v Not readily biodegradable Minimal to none. <b>TEIDISPOSALCONSI</b> julations: Consult disposal et <b>ISPORTINEORMATIC</b> Adhesives 3 None UN 1133 PG II Class 3 Flamm NO	IDERATIONS) xpert. NI DOT Limited C Consumer Con nable Liquid	EXCEPTION Ruantity: Up to 5L per Inner mmodity: Depending on part TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING G	DN for Ground Shipping packaging, 30 kg gross we ackaging, these quantities m G INFORMATION FLAMMABLE ADHESIVES ROUP: UN 1133, PC	lght per package. Iay qualify under DOT as "ORM-D" . E LIQUID 3
Mobility: Degradability: Bioaccumulation: SECTION/135 WAS follow local and national reg SECTION/14 STRAM Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Reguired; Marine Pollutant;	In normal use, emission of v Not readily biodegradable Minimal to none. TEIDISFOSAUCONS Jutations: Consult disposal er ISFORTINFORMATIC Adhesives 3 None UN 1133 PG II Class 3 Flamm NO	IDERATIONS xpert. N DOT Limited C Consumer Con nable Liquid	EXCEPTIO Quantity: Up to 5L per Inner mmodity: Depending on pa TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING G	DN for Ground Shipping packaging, 30 kg gross we ackaging, these quantities m G INFORMATION FLAMMABLE ADHESIVES ROUP: UN 1133, PC	ight per package. Iay qualify under DOT as "ORM-D" . E LIQUID 3 3 II
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WELD×	DN.	GHS SAFI	ETY DATA	SHEET	ŕ	ית	ate Revised: A	APR 2015	
······································		LD-ON® 771™ Low VC				Pipe Su	ipersedes: C	OCT 2014	
	TANDCOMPAN	VIDENTIFICATION VOC Pipe Cement for ABS PI	astic Pine						
	ELD-DN® 771 ™ Low ow VOC Solvent Cerner								
SUPPLIER:			171		ain Street, Ga	rdena, CA 90	248-3127		
			Tel.	1-310-898-					
EMERGENCY: Transportation	: CHEMTEL Tel. 800.2	55-3924, +1 813-248-0585 (Inte	rnational) Med	lical: CHEN	ATEL Tel. 800	0.255-3924, +1	813-248-058	5 (International)	LA IL
SECTION 21-1 HAZARI GHS CLASSIFICATION:	DSIDENTIFICATI	ON		and the second	the state of the second			Aday - designation and	
Healt	h ategory 4	Acute Toxicity:	nmental None Known	F	lammable Liqi	•	sical	Category 2	
Skin Irritation: C	ategory 3	Chronic Toxicity:	None Known						
Skin Sensitization: N Eye: C	O ategory 28							SION 2	
GHS LABEL:		Signal Word Danger	:	W	HMIS CLASSIF	ICATION: C	LASS B, DIVI	510N 2	
<u>`</u>	Hazard Statements					y Statements			
H225: Highly flammable liquid and	vapor		P210: Keep away fr P261: Avoid breathi	om heat/spark	s/open flames/r cas/mist/vacors	not surfaces No /spray	o smoking		
H319: Causes serious eye irritation H336: May cause drowsiness or diz	ziness		P280; Wear protect	lve gloves/pro	tective clothing/	eye protection/fa	ace protection		
EUH 066: Repeated exposure may	cause skin dryness or crac	king.	P337+P313: Get me P403+P233: Store is	n a well ventil	ated place. Kee	p container tight	y closed		
		ATION ON INGREDIEN	P501: Dispose of co	ontents/contair	ner in accordanc	e with local regu	lation		
SECTION 3 COMPO	JSTTON/INLORM	CAS# EINECS #	REACH Pre-registration Nu			NCENTRATION			<u>i</u>
Methyl Ethyl Ketone (MEK)		78-93-3 201-159-0	05-2116297728-2	24-0000		35 - 50 10 - 20			
Acetone	dhoolyo product are lis	67-64-1 200-662-2 ted on the TSCA inventory of ch	omical substances	heristairem	by the US EP.	A. or are exen	npt from that li	sting.	
		quirements of Section 313 of th 65's List of chemicals known to						R372).	
# indicates that this chemical		BSS LIST OF CHEMICAIS INFOMA CO			5. S.	S. G. 540			整要が行
		southing and shoes. Wash skin t breathing is stopped, give artific							
Ingestion: F	Rinse mouth with water.	. Give 1 or 2 glasses of water o	r milk to dilute. Do r	not induce v	omiting. Seel	c medical advi	ce immediately	<b>/</b> -	
Likely Routes of Exposure:		, Eye and Skin Contact							
Acute symptoms and effect	5:								
Inhalation:	Severe overexposure m	ay result in nausea, dizziness, h stable Overexposure may resu	It in severe eve iniu	rv with come	a) of conjunc	uvarimanima	sal passages. iion on contact		
Inhalation: S Eye Contact: N	Severe overexposure m /apors slightly uncomfo	rtable. Overexposure may resu ove natural skin oils resulting in	it in severe eye inju skin irritation. Derm	rv with come	a) of conjunc	uvarimanima	sal passages. iion on contact		
Inhalation: 5 Eye Contact: 1 Skin Contact: 1 Ingestion: 1	Severe overexposure m /apors slightly uncomfo Liquid contact may remo May cause nausea, von	rtable. Overexposure may resu ove natural skin oils resulting in niting, diarrhea and mental slugg own to humans	it in severe eye injui skin irritation. Derm jishness.	ny with come atitis may or	ccur with prot	onged contact	sal passages. iion on contact	t with the liquid.	
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Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effects: SECTION[5]: FIREFI Suitable Extinguishing M	Severe overexposure m Vapors slightly uncomfo Liquid contact may remu May cause nausea, von : None kno GHTING MEASU edia: Dry chem Media: Water sp	rtable. Overexposure may resu ove natural skin olis resulting in niting, dlarrhea and mental slugg wn to humans RES) icical powder, carbon dloxide gas ray or stream.	it in severe eye injui skin irritation. Derm jishness.	ry with come latitis may or r fog.	ecur with proto	nged contact	sal passages. tion on contact NFPA 2	t with the liquid. 0-Minimal 1-Slight	
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Inhalation: S Eye Contact: U Skin Contact: U Ingestion: Chronic (long-term) effects: SECTIONISK: FIREFJ Suitable Extinguishing M Unsuitable Extinguishing Exposure Hazards: Combustion Products: Protection for Firefighters SECTION/66/ACCID Personal precautions: Environmental Precaution Methods for Cleaning up: Materials not to be used f SECTION/76/HAND/ Handling: Avoid breathing Keep away for Do not eat, drir Storage: Store in ventila Keep away for Follow all preca	Severe overexposure m Vapors slightly uncomfo Liquid contact may remu May cause nausea, von : None kno GHTING MEASU edla: Dry chem Media: Water sp Inhalatior Oxides of s: Self-cont ENTAL RELEASE Keep aw Provide s Prevent of Clean up or clean up: UNGIANDISTORI g of vapor, avoid contac m lightlion sources, use h or smoke while hand ted room or shade belo m lightlion sources and kor smoke while hand ted room or shade belo m lightlion sources and autionary information or AUTIONSITOCO	Intable. Overexposure may resu pove natural skin olis resulting in niting, diarrhee and mental slugg win to humans <b>RES</b> <b>Interpret</b> <b>RES</b> <b>Interpret</b> <b>RES</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Interpret</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b>Inter</b> <b></b>	It in severe eye inju skin irritation. Derm jishness. , foam, Halon, wate I-face positive press fame. on-proof exhaust ve section 8). with product from er ant material. Transf ners ing equipment and e direct sunlight. , ammonia, inorgani is and solvent ceme ERSONAL PRC o SHAPEL ( 1 200 ppm	ry with come atilits may or atilits may or fog. I ure airline m intilation equ intering sewe er to a closa ensure adeq c acids, chic enting literatu DTECTIO	Health Flammability Reactivity PPE masks.	HMIS 2 3 0 B ar suitable res d or open wate set.	sal passages. tion on contact NFPA 2 3 0 piratory protec or course. st hoods. oxidizers and CAL/OSHA	t with the liquid. 0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe tive equipment. tive equipment.	
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Inhalation: S Eye Contact: U Skin Contact: U Ingestion: M Chronic (long-term) effects: SECTION(55) FIREFI Suitable Extinguishing M Unsuitable Extinguishing Exposure Hazards: Combustion Products: Protection for Firefighters SECTION(65) ACCID Personal precautions: Environmental Precautior Materials not to be used f SECTION/76; HANDI Handling: Avoid breathing Keep away fror Do not eat, dri Storage: Store in ventila Keep away fror Follow all preca SECTION SECTION SECTION Follow all preca	Severe overexposure m Vapors slightly uncomfo Liquid contact may remu- May cause nausea, von : None kno GHTING MEASU edia: Dry chem Media: Dry chem Media: Water sp Inhalation Oxides of s: Self-cont ENTAL' REL'EASE Keep aw Provide s Provent c Colean up CINGFAND/STOCK g of vapor, avoid contac m ignition sources, use h or smoke while hand ted room or shade belo m ignition sources and autionary information or AUTIONSTOCCO Component Methyl Ethyl Ketone (M Acetone	Intable. Overexposure may result ove natural skin oils resulting in niting, diarhea and mental slugg with the humans <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RE</b>	It in severe eye injui skin irritation. Derm jishness. I face positive press I face posit	ry with come atilits may or a fog.	Health Flammability Reactivity PPE masks.	HMIS 2 3 0 B ar suitable res d or open wate sel.	sal passages. tion on contact NFPA 2 3 0 piratory protect ar course. et hoods. oxidizers and CAL/OSHA Ceiling N/E 3000 ppm	t with the liquid.	
Inhalation: S Eye Contact: U Ingestion: C Chronic (long-term) effects: SECTION(5%) FIREFJ Suitable Extinguishing M Unsuitable Extinguishing M Unsuitable Extinguishing M Exposure Hazards: Combustion Products: Protection for Firefighterr SECTION(6%) ACCID Personal precautions: Environmental Precaution Methods for Cleaning up: Materials not to be used f SECTION/6% ACCID Handling: Avoid breathing Keep away fror Do not eat, drif Storage: Store in ventila Keep away fror Do not eat, drif Storage: Store in ventila Keep away fror Follow all prece SECTION: 8% PRECO EXPOSURE LIMITS: Engineering Controls: Monitoring: Personal Protective Equit Eye Protection:	Severe overexposure m Vapors slightly uncomfo Liquid contact may remu May cause nausea, von : None kno GHTING MEASUI edla: Dry chem Media: Water sp Inhalatior Oxides of s: Self-cont ENTAL' REL'EASE Keep aw Provide s Self-cont ENTAL' REL'EASE Clean up or clean up: Cload up: Cl	Intable. Overexposure may result ove natural skin oils resulting in nithing, diarrhea and mental slugg win to humans <b>RES</b> ical powder, carbon dioxide gas ray or stream. In and dermal contact f carbon and smoke alined breathing apparatus or full <b>IMEASURES</b> inficient ventitation, use explosi- contact with skin or eyes (see se oroduct or liquids contaminated with sand or other inert absorb Aluminum or plastic contai incompatible materials: caustics only electrically grounded handi ling. W 44°C (110°F) and away from incompatible materials: caustics on container label, product bulletir <b>NTROBEXPOSURE!</b> (PIEK) 200 ppm 300 ppm 500 ppm 750 ppm eeded. e airborne concentrations below s, wear splash-proof chemical g riste for the exposure.	It in severe eye injui skin irritation. Derm jishness.	ry with come atilits may or internet at the second register at the s	Health Flammability Reactivity PPE nasks. Inpment or were rs, drains, soil bile steel vess uate ventilation prinated comp ure. NoshA PEL-Celling N/E N/E	HMIS 2 3 0 B ar suitable res 1 or open wate sel CAL/OSHA PEL 200 ppm 500 ppm	sal passages. tion on contact NFPA 2 3 0 piratory protect ar course. et hoods. oxidizers and CAL/OSHA Ceiling N/E 3000 ppm	t with the liquid.	
Inhalation: S Eye Contact: U Skin Contact: U Ingestion: C Chronic (long-term) effects: SECTION[55: FIREE] Suitable Extinguishing M Unsuitable Extinguishing Exposure Hazards: Combustion Products: Protection for Firefighters SECTION/66: ACCID Personal precautions: Environmental Precaution Materials not to be used f SECTION/76: HANDI Handling: Avoid breathing Keep away for Do not eat, drir Storage: Store in ventila Keep away for Do not eat, drir Storage: Store in ventila Keep away for Follow all precaution SECTION SS: PREC EXPOSURE LIMITS: Engineering Controls: Monitoring: Personal Protective Equi Eye Protection:	Severe overexposure m Vapors slightly uncomfo Liquid contact may remu- May cause nausea, von : None kno GHTING MEASU edla: Dry chem Media: Dry chem Media: Dry chem Media: Water sp Inhalatior Oxides of s: Self-cont ENTAL' REL' EASE Keep aw Provide s Prevent f Clean up or clean up: Clean up or clean up: Clean up or clean up: Clean up or clean up: Clean up or smoke while hand ted room or shade belo m ignition sources, use a for smoke while hand autionary information or AUTIONSITOCO Component Methyl Ethyl Ketone (M Acctone Use local exhaust as n Maintain breathing zon pment (PPE): Avoid contact with eye etc. as may be approper	Intable. Overexposure may result ove natural skin oils resulting in nithing, diarrhea and mental slugg win to humans <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RES</b> <b>RE</b>	It in severe eye inju skin irritation. Derm jishness. I ame, I ame, on-proof exhaust ve scion 8). with product from er ant material. Transf irrs I ame, ing equipment and e direct sunlight. ammonia, inorgani ts and solvent ceme ERSONAL PRC ELOSHAPEL 1000 ppm rexposure limits. oggles, face shield, th a these adapose the	ry with come autitis may or fog. I ure airline m intilation equ atering sewe er to a closa ensure adeq c acids, chick enting literation or cacids, chick enting literation or cacids, chick ent	Health Health Flammability Reactivity PPE masks. 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Inhalation: S Eye Contact: U Skin Contact: U Ingestion: Chronic (long-term) effects: SECTIONISSETEREE] Suitable Extinguishing M Unsuitable Extinguishing Exposure Hazards: Combustion Products: Protection for Firefighter SECTION/6C/ACCID Personal precautions: Environmental Precaution Methods for Cleaning up: Materials not to be used f SECTION/76C/HANDI Handling: Avoid breathing Keep away fror Do not eat, drir Storage: Store in ventila Keep away fror Do not eat, drir Storage: Store in ventila Keep away fror Pollow all prece SECTION 85, PRECO EXPOSURE LIMITS: Engineering Controls: Monitoring: Personal Protective Equit Eye Protection: Skin Protection:	Severe overexposure m Vapors slightly uncomfo- liquid contact may remu- May cause nausea, von : None kno GHTING MEASUI edla: Dry chem Media: Dry chem Media: Dry chem Media: Dry chem Media: Dry chem Severe state inhalation Oxides of s: Self-cont ENTAL'S REL'EASE Keep aw Provide s Prevent of Clean up or clean up: CINCIANDISTOR g of vapor, avoid contact m ignition sources, use k or smoke while had be or mor shade belo m ignition sources and autionary information or AUTIONSCOCO Component Methyl Ethyl Ketone (M Acetone Use local exhaust as n Maintain breathing zon pment (PPE): Avoid contact with eye etc. as may be approp Prevent contact with eye	Intable. Overexposure may result ove natural skin oils resulting in nithing, diarrhea and mental slugg win to humans <b>RES</b> ical powder, carbon dioxide gas ray or stream. In and dermal contact f carbon and smoke alined breathing apparatus or ful <b>IMEASURES</b> interfeating apparatus or ful interfeating apparatus or ful <b>IMEASURES</b> interfeating apparatus or ful interfeating apparatus or ful <b>IMEASURES</b> interfeating apparatus or ful interfeating apparatus or ful aluminum or plastic contal interfeating interfeating interfeating incompatible materials: caustics in container label, product bulletir <b>NTROLSEXPOSURE/IPP</b> ACGIH TLV ACGIH STI IEK) 200 ppm 750 ppm eeded. e airborne concentrations below s, wear splash-proof chemical g riate for the exposure. e skin as much as possible. But it gloves or solvent-resistant ban	It in severe eye injui skin irritation. Derm jishness. 	ry with come atilits may or r fog. I ure airline n ure airline n thering sewe er to a closa ensure adeq c acids, chick enting literatu DTECTIO DSHASTEL N/E N/E Safety glass puild be used rovide adeq	Health Flammability Reactivity PPE nasks.	HMIS 2 3 0 B ar suitable res t or open wate sel. 0 CAL/OSHA PEL 200 ppm 500 ppm 500 ppm	sal passages. ion on contact NFPA 2 3 0 vitikity of the piratory protect or course. st hoods. oxidizers and CAL/OSHA Ceiling N/E 3000 ppm uards and side i adhesive app	t with the liquid. 0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe tive equipment. isocyanates. CAL/OSHA STEL 300 ppm 750 ppm e shields, plication	
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Inhalation: S Eye Contact: U Ingestion: C Chronic (long-term) effects: SECTION(5%) FIREFJ Suitable Extinguishing M Unsuitable Extinguishing M Unsuitable Extinguishing M Exposure Hazards: Combustion Products: Protection for Firefighterr SECTION(6%) ACCID Personal precautions: Environmental Precaution Methods for Cleaning up: Materials not to be used f SECTION/6% ACCID Handling: Avoid breathing Keep away fror Do not eat, drif Storage: Store in ventila Keep away fror Do not eat, drif Storage: Store in ventila Keep away fror Follow all prece SECTION: 8% PRECO EXPOSURE LIMITS: Engineering Controls: Monitoring: Personal Protective Equit Eye Protection:	Severe overexposure m Vapors slightly uncomfo Liquid contact may remu May cause nausea, von : None kno GHTING MEASUI edla: Dry chem Media: Water sp Inhalatior Oxides of s: Self-cont ENTAL' REL'EASE Keep aw Provide s Self-cont ENTAL' REL'EASE Clean up or clean up: Cload up: Cl	Intable. Overexposure may result ove natural skin oils resulting in nithing, diarrhea and mental slugg win to humans <b>RES</b> ical powder, carbon dioxide gas ray or stream. In and dermal contact f carbon and smoke alined breathing apparatus or full <b>IMEASURES</b> inficient ventitation, use explosi- contact with skin or eyes (see se oroduct or liquids contaminated with sand or other inert absorb Aluminum or plastic contai incompatible materials: caustics only electrically grounded handi ling. W 44°C (110°F) and away from incompatible materials: caustics on container label, product bulletir <b>NTROBEXPOSURE!</b> (PIEK) 200 ppm 300 ppm 500 ppm 750 ppm eeded. e airborne concentrations below s, wear splash-proof chemical g riste for the exposure.	It in severe eye injui skin irritation. Derm jishness.	ry with come atilits may or internet at the second register at the s	Health Flammability Reactivity PPE nasks. Inpment or were rs, drains, soil bile steel vess uate ventilation prinated comp ure. NoshA PEL-Celling N/E N/E	HMIS 2 3 0 B ar suitable res 1 or open wate sel CAL/OSHA PEL 200 ppm 500 ppm	sal passages. tion on contact NFPA 2 3 0 piratory protect ar course. et hoods. oxidizers and CAL/OSHA Ceiling N/E 3000 ppm		-Minimal -Minimal -Sight -Moderate -Serious -Ser

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WELD	×ON.	]	GHS SA	FETY DATA S	HEET		
		WELI	D-ON® 771™ Low	VOC Pipe Cement f	for ABS Plastic Pipe	Date Revised: APR 2015 Supersedes: OCT 2014	
SECTION(9 - IPHY				and a second second			
Appearance: Odor:			v, medium syrupy liquid		Odor Threshold:	1 nom (Acolono)	
pH:		Ketone Not Applicabi	9		Odor Infesnola:	1 ppm (Acetone)	
Melting/Freezing Po			) Based on first melting c	omponent: Acetone	Boiling Range:	56°C (133°F) to 80°C (176°F)	1
Boiling Point:			Based on first boiling con	nponent: Acetone	Evaporation Rate:	>1.0 (BUAC = 1)	
Flash Point: Specific Gravity:		-20°C (-4°F) 1 0.886 @23°C	C.C. based on Acetone		Flammability: Flammability Limits:	Category 2 LEL: 1.4% based on MEK	
Solubility:			n soluble in water, Resin	portion separates out.	Flammability Limits;	UEL: 12.8% based on Acetor	ne
Partition Coefficien			Not Available	perior copulate can	Vapor Pressure:	190 mm Hg @ 20°C (68°F): A	
Auto-ignition Temp		404°C (759°F			Vapor Density:	> 2.0 (Air = 1)	
Decomposition Ten VOC Content:		Not Applicable		D Dulo 1169 Test Method	Other Data: Viscosity: 316A,VOC content is: < 325 g/l.	Medium bodied	
SECTION 10 - STA							
Stability:		<u> </u>	Stable		and the second secon		
Hazardous decomp		s:			duct gives off oxides of carbon a	nd smoke.	
Conditions to avoid				arks, open flame and othe			
Incompatible Materi				nd bases, amines, ammon	12	1	A OF MALL
SECTION (1/1 STTO)	(ICOLOGIC/		IATION		والمستنب فتصفعه والمستشرة المعدانين والم	and the second	Val and
oxicity:		LD50		LC:	_		
Methyl Ethyl Ketone (MEI Acetone		Oral: 2737 mg Oral: 5800 mg	/kg (rat), Dermal: 6480 m /kg (rat)		ion 8 hrs, 23,500 mg/m³ (rat) ion 50,100 mg/m³ (rat)		
Reproductive Effects Not Established	<u>Teratog</u> Not Esta		<u>Mutagenicity</u> Not Established	Embryotoxicity Not Established		Synergistic Products Not Established	
ECTION 12 - ECO	DLOGICALI	NEORMAT	ION			NA REAL AND AND AND	和大学
Ecotoxicity:	None Known						
Mobility:			olatile organic compound	(VOC's) to the air takes p	lace, typically at a rate of $\leq$ 325	g/i.	
Degradability: Bioaccumulation:	Not readily blo Minimal to non						
SECTIONIS O WA							
ollow local and national re				en de la constante de la const	and a second		
SECTION 14 OTRA			•	No. 1 March 19			
Proper Shipping Name		Adhesives					
Hazard Class:		3			EPTION for Ground Shipping		
Secondary Risk:		None			inner packaging, 30 kg gross w		
Identification Number: Packing Group:		UN 1133 PG II	Consume	Commodity: Depending	on packaging, these quantities n	hay qualify under DOT as ORM	-D <sup>*</sup> .
Label Required:		Class 3 Flamn	nable Liquid		TDG INFORMATION	·]	
Marine Pollutant:	1	NO		TDG CLASS:	FLAMMABL		
				SHIPPING NAME:	ADHESIVES		
ECTION 15 O REG	UITATORY	NEORM'AT	ION	UN NUMBER/PACKI			a tell
Precautionary Label					SA TSCA, Europe EINECS, Car		143 A.S.
Symbols:		F, XI			S, Korea ECL/TCCL, Japan MIT		
<b>Risk Phrases:</b>	R11: Highly flam				e may cause skin dryness or crack	ing	
			espiratory system.		drowsiness and dizziness		
Safety Phrases:	S2: Keep out of			S25: Avoid contact with		leafund water and seek as also to	du da a
	S9: Keep contai S16: Keep away		ntilated place. of Ignition - No smoking.		with eyes, rinse immediately with p y measures against static discharg		avice,
ECTION/16 - OTH							
Specification Inform	ation:						
Department Issuing E-mail address:	data sheet:		IPS, Safety Health & Env <ehsinfo@ipscorp.com></ehsinfo@ipscorp.com>	ronmental Affairs		nt with the requirements of the E tion of Hazardous Substances).	
Training necessary: Reissue date / reaso	n for reinques		Yes, training in practices 4/7/2015 / Updated GHS	and procedures contained Standard Format	in product literature.		

Intended Use of Product: Solvent Cement for ABS Plastic Pipe

·									Zp
WELD×C	DN.	GHS	SAFETY	DATA SHEE	T	F	)ate Revised:	APR 2015	_
	W	ELD-ON® 773™	Low VOC Pi	pe Cement for A	BS Plastic			OCT 2014	
SECTIONII GRRODUC	TANDCOMPAN	VIDENTIFICATIO	N				<u></u>		
	/ELD-ON® 773™ Low ow VOC Solvent Cemer		r ABS Plastic Pi	pe					
PRODUCT USE: La SUPPLIER:			MANUFACTUR	R: IPS Corporatio					
				17109 South N P.O. Box 379,	Aain Street, Gar Gardena, CA 9	dena, CA 90248 0247-0379	3-3127		
				Tel. 1-310-898			2-248-0585 (Ir	nternational)	
EMERGENCY: Transportation	CHEMTEL Tel. 800-2	55-3924,+1 813-248-05	585 (International	) Medical: CHE	MIEL IEI. 800-			The second second	
SEGITON/2000HAZARI	DSIDENTIFICATI	<u>ON AND AND AND AND AND AND AND AND AND AN</u>				Dhuo	lool		
Healt Acute Toxicity: C	th ategory 4	Acute Toxicity:	Environmental None		Flammable Liqui	Phys d		Category 2	
Skin Irritation: C	ategory 3	Chronic Toxicity:	None	Known					
	IO Category 2B								
GHS LABEL:			al Word: Janger	,	WHMIS CLASSIFI	CATION: (	CLASS B, DIV	ISION 2	
	Hazard Statements				Precautiona	ry Statements			
H225: Highly flammable liquid and				Geep away from heat/spa			noking		
1319: Causes serious eye irritation 1336: May cause drowsiness or diz			P261: / P280: \	Avoid breathing dust/fume Wear protective gloves/pr	vgas/mis/vapors/s otective clothing/e	pray ye protection/face	protection		
EUH 066: Repeated exposure may		king.		P313: Get medical advice P233: Store in a well vent		container tightly c	losed		
			P501: 1	Dispose of contents/conta	iner in accordance	with local regulati	on		And a law of a second
SECTION 3 COMPO	SITION/INFORM	ATIONIONINGRE		REACH	ومحصف فيستلعف فسيستحد التراجي	ONCENTRATION	Contract in the second state of the		和國的制作
		CAS# EINE	ECS # Pre-reg	REACH sistration Number		% by Weight			
Viethyl Ethyl Ketone (MEK) Acetone		67-64-1 20	0-662-2 05-21	16297728-24-0000 16297713-35-0000		40 - 55 10 - 15			
	dhesive product are list	ed on the TSCA invent	tory of chemical s	ubstances maintained	i by the US EPA	, or are exempl	t from that listin	ng.	
أدره والمواصيحات باللا يتبار والانتقا	blact to the reporting reg	nuiroments of Section 3							
	is found on Proposition	65's List of chemicals k	313 of the Emera	encv Planning and UC	ommunity rugat•u		1900 (4001 110	(2).	
SECTION	is found on Proposition	65's List of chemicals k	and the Emerg known to the Stat	ency Planning and Co te of California to caus	e cancer or repl	oductive toxicit	y.		
SECTION 4 A FIRST 4 Contact with eyes: F	is found on Proposition	65's List of chemicals k	nown to the Emerg	ency Planning and Co te of California to caus seek medical advice in	e cancer or repl	oductive toxicit	y.		
SECTION 4 CHERST Contact with eyes: F Skin contact: R	Is found on Proposition AID/MEASURES Flush eyes immediately Remove contaminated c	65's List of chemicals k with plenty of water for lothing and shoes. Wa	13 of the Emerg known to the Stat 15 minutes and t ash skin thorough we artificial result	ency Planning and Co te of California to caus seek medical advice in ily with soap and wate ation. If preathing is o	nmunity Kignet e cancer or rep mediately. r. If irritation de difficult, give oxy	velops, seek med	edical advice.		
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WELD	ON	GHS SAF	ETY DATA SHE	EET						
· · · · · · · · · · · · · · · · · · ·		ELD-ON® 773™ Low \	/OC Pipe Cement for	r ABS Plastic Pipe	Date Revised: APR 2015 Supersedes: OCT 2014					
SECTION 9 - PHYS		ALPROPERTIES								
Appearance: Odor: pH:	Black, me Ketone Not Applic	dium syrupy liquid		Odor Threshold:	1 ppm (Acetone)					
Melting/Freezing Pol Boiling Point: Flash Point: Specific Gravity: Solubility: Partition Coefficient Auto-Ignition Tempe Decomposition Temj VOC Content:	int: -95°C (-13 56°C (13 -20°C (-4 0.890 @2 Solvent po n-octanol/water: rature: 404°C (75 perature: Not Applic When app	9°F) Based on first melting com F) Based on first boiling comp F) T.C.C. based on Acetone 3°C (73°F) intion soluble in water. Resin po Not Available 9°F): MEK able lied as directed, per SCAQMD	onent: Acetone ortion separates out. Rule 1168, Test Method 316	Boiling Range: Evaporation Rate: Flammability: Flammability Limits: Vapor Pressure: Vapor Density: Other Data: Viscosity: GA,VOC content is: ≤ 325 g/l.	56°C (133°F) to 80°C (176°F) >1.0 (8UAC = 1) Category 2 LEL: 1.4% based on MEK UEL: 12.8% based on Acetor 190 mm Hg @ 20°C (68°F): A >2.0 (Åi* = 1) Medium bodied					
Stability:	BILINWAND REAC	TIVITA Stable	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		<u> </u>	4 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1				
Hazardous decompo Conditions to avoid: Incompatible Materia	lls:	Keep away from heat, spar Oxidizers, strong acids and	ks, open flame and other Ign	gives off oxides of carbon and lition sources,	smoke.					
Toxicity:	LD50	NIGHTON	LC50	<u>al la malia de Kanadari (a a ba</u> rt						
Methyl Ethyl Ketone (MEK Acetone		mg/kg (rat), Dermal: 6480 mg/l mg/kg (rat)		b hrs. 23,500 mg/m <sup>3</sup> (rat) 60,100 mg/m <sup>3</sup> (rat)		_				
Reproductive Effects Not Established	Teratogenicity Not Established	Mutagenicity Not Established	Embryotoxicity Not Established	Sensitization to Product Not Established	Synergistic Products Not Established					
		ATION	transfer Santana	<u>e </u>	「「「「「「「」」」」	* <b>14</b> 427437				
Ecotoxicity: Mobility: Degradability: Bioaccumulation;	Not readily biodegradable Minimal to none.	•	VOC's) to the air takes place	e, typically at a rate of $\leq$ 325 g/l.						
SECTION 13 GWAS										
Follow local and national re-						and the second second				
SECTION 14 STRAM			<u>Antonio a de la construcción de la constru </u>	<u>an an a</u>	and the second	1970 B				
Hazard Class:	3			PTION for Ground Shipping						
Secondary Risk: Identification Number:	None UN 1133	DOT Limited	Quantity: Up to 5L per inne	er packaging, 30 kg gross weigi	ht per package. • qualify under DOT as "ORM-D"					
Packing Group:	PGII	Consumer o	oninouny. Depending on p	ackaging, mese quantities may	quality bilder DOT as Orthi-D	•				
Label Required: Marine Pollutant:	Class 3 Fla NO	ammable Liquid	TDG CLASS: SHIPPING NAME; UN NUMBER/PACKING G	TDG INFORMATION FLAMMABLE ADHESIVES GROUP: UN 1133, PG						
SECTION 15 REG	ULATORY INFORM	ATION				能被教育的				
Precautionary Label I Symbols: Risk Phrases:	nformation: Highly Flar F, Xi R11: Highly flammable.		AICS, Ke R66: Repeated exposure ma	ISCA, Europe EINECS, Canad orea ECL/TCCL, Japan MITI (E ay cause skin dryness or cracking	NCS)					
Safety Phrases:	R36/37: Irritating to eyes an S2: Keep out of the reach of S9: Keep container in a we S16: Keep away from source	of children II-ventilated place.		s.	ty of water and seek medical advic	e.				
	ER'INFORMATION									
Specification Informa Department Issuing o E-mail address:		IPS, Safety Health & Enviro	nmental Affairs	All ingredients are compliant v Directive on RoHS (Restriction	vith the requirements of the Euro n of Hazardous Substances).	opean				
Training necessary: Reissue date / reasor Intended Use of Prod		÷		-						

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

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WELDXC	DN.	GHS SA	FETY D	ATA SHE	ET				ADD 2045	' ()
	WELD	)-ON® 790™ Lov	v VOC Mul	ti-Purpose l	Plastic Pi	pe Cement		Date Revised: Supersedes:	NOV 2014	
SECTIONII MRODUC	TANDCOM	ANYIDENTIFIC	ATION							
PRODUCT NAME: W	ELD-ON® 790™	Low VOC Multi-Purpo OC solvent cement for	PVC and CP	pe Cement /C .CTURER: II 1 F	P.O. Box 379	Main Street, G , Gardena, CA		0248-3127		
EMERGENCY: Transportation	CHEMTEL Tel.	800.255-3924, +1 813-	248-0585 (inte	ernational)		EMTEL Tel. 80			)585 (Internationa	
SECTION 2 HAZARE	DS IDENTIFIC	ATION								
Healti Acute Toxicity: Ca Skin Irritation: Ca Skin Sensitization: Ni	ategory 4 ategory 3	Acute Toxicity Chronic Toxic		mental None Known None Known		Flammable Lic	-	rsical	Category 2	
Eye: Ca GHS LABEL:			Signal Word: Danger			WHMIS CLASSI		CLASS B, D CLASS D, D		
H225: Highly flammable liquid and vi H319: Causes serious aya initation H332: Harmful II inhaled H336: May cause respiratory initatio H336: May cause drowsiness or dizz H351: Suspected of causing cancer EUH019: May form explosive peroxi	on ziness ides			P337+P313: Get P403+P233: Sto	thing dust/fume ective gloves/pr NHALED: Rem medical advice re in a well vent	rks/open flames/f a/gas/mist/vapors/ otective clothing/e ove victim to fresh a/attention	spray sye protection/fa n air and keep a o container tight	o smoking ce protection rest in a positi y closed	ion comfortable for b	reathing
EUH066: Repeated exposure may c SECTION 3 COMPO	cause skin dryness or SITION/INFO	RMATION ON IN	GREDIEN	TS MARKED	<u>ná 677</u>				<b>MARKAN</b>	
Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK) Cyclohexanone		CAS# 109-99-9 78-93-3 108-94-1	203-726-8 201-159-0 203-631-1	Pre-registration 05-211629772 05-211629772 05-211629771	Number 9-22-0000 8-24-0000		% by Welght 30 - 45 20- 35 10 - 25	•	,	
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Skin Contact: Li Ingestion: M Chronic (long-term) effects:	iquid contact may lay cause nausea Cate	remove natural skin ol , vomiting, diarrhea an gory 2 Carcinogen	ls resulting in a	skin irritation. D Ishness.	injury with co ermatilis may	y occur with pro	blonged conta	ict.	ntact with the liqu	
Skin Contact: Li Ingestion: M Chronic (long-term) effects: SECTION 5 <b>K3 FIREFIC</b> Suitable Extinguishing Me	iquid contact may lay cause nausea Cate <b>SHTING MEA</b> edia: Dry c	remove natural skin ol , vomiting, diarrhea an gory 2 Carcinogen SURES <b>ING SURE</b> S chemical powder, carbo	ls resulting in a d mental slugg	skin irritation. D ishness.	injury with co ermatilis may	y occur with pro	blonged conta	ict.	ntact with the liqu	
Skin Contact: Li Ingestion: M Chronic (long-term) effects: SECTION 5 SECTION 5	iquid contact may fay cause nausea : Cate SHTING MEA adia: Dry c Media: Wate Inhal Oxid	remove natural skin ol , vomiling, diarrhea an gory 2 Carcinogen SURES hemical powder, carbo er spray or stream, ation and dermal conta es of carbon, hydroger	Is resulting in a d mental slugg on dioxide gas, act a chloride and a	skin irritation. D ishness. foam, Halon, w smoke	injury with co ermatilis may ater fog.	y occur with pro Health Flammability Reactivity PPE	HMIS	NFPA	0-Minimal	
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Skin Contact: Li ingestion: M Chronic (long-torm) effects: SECTION/SKI FIREFIC Suitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Unsuitable Extinguishing Me Exposure Hazards: Combustion Products: Protection for Firefighters SECTION/SEACCIDE Personal precautions: Environmental Precautions: Materials not to be used fo SECTION/SEACCIDE Handling: Avoid breathing Keep away from Do not eat, drini Storage: Store in ventilat Keep away from Follow all preca SECTION/SEACCIDE EXPOSURE LIMITS: Engineering Controls: U Monitoring: Personal Protective Equip Eye Protection: A	iquid contact may tay cause nausea cate SHTINGIMEA adia: Dry c Media: Dry c Media: Dry c Media: Wate S: Self- ENTAL®RELE Prov s: Prev s: Prev s: Prev s: Prev s: Prev to f vapor, avoid c n ignition sources, k or smoke while i ed room or shade n ignition sources utionary informatik UTIONSITOX Componer Fetrahydrofuran (T Aethyl Ethyl Keton Cyclohexanone Dse local exhaust Maintain breathing ment (PPE): void contact with to, as may be app	remove natural skin ol , vomiling, diarrhea an gory 2 Carcinogen SURES SURE	Is resulting in a d mental slugg an dioxide gas, act a chloride and a paratus or full a chloride and a paratus or full a chloride and a paratus or full a chloride and a paratus contair a	kin irritation. D ishness. foam, Halon, w smoke -face positive pr -face positive pos	injury with co ermatilitis may ater fog. essure airlin essure airlin essure airlin entering se nsfer to a cic ementing lite <u>correction</u> <u>osha stel</u> <u>N/E</u> <u>N/E</u> <u>N/E</u> <u>N/E</u> <u>N/E</u>	Health Flammability Reactivity PPE e masks. equipment or w wers, drains, sy isable steel ver dequate ventila chlorinated corr rature. DN PEL-Celling N/E N/E N/E N/E N/E	HMIS 2 3 0 B ear suitable r oil or open wasel. tion/fume exh tion/fume e	NFPA 2 3 0 espiratory pr ter course. aust hoods. ng oxidizers CAL/OSHA Ceiling N/E N/E N/E N/E N/E	O-Minimal     O-Minimal     O-Minimal     Sight     O-Minimal     Sight     O-Minimal     Sight     O-Minimal     Sight     O-Minimal     Sight     O-Minimal     O-M	nt.

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WELD <sup>,</sup>	ON	•	GHS SAFET	TY C	DATA SHE	ET	······	Date Revised: APR 2015	
		WELD-ON	® 790™ Low VOC	C Mul	lti-Purpose P	lastic P	ipe Cement	Supersedes: NOV 2014	
SECTION® & CHYS	SICAL/ANI			-					
Appearance: Odor: pH:		Ketone Not Applicab	medium syrupy liquid				Odor Threshold:	0.88 ppm (Cyclohexanone)	
Melting/Freezing Po Boiling Point: Flash Point: Specific Gravity: Solubility: Partition Coefficient Auto-Ignition Tempe Decomposition Tem VOC Content:	n-octanol/wa arature: perature:	-108.5°C (-1 66°C (151°F -20°C (-4°F) 0.934 @23°( Solvent porti ater: 321°C (610° Not Applicab When applie	53.3°F) Based on first or Based on first boiling TCC based on THF ( 73°F) on soluble in water. Re Not Available F) based on THF ie d as directed, per SCA0	compo esin po QMD F	nnent: THF rtion separates o Rule 1168, Test M	ut. Iethod 316	Boliling Range: Evaporation Rate: Flammability: Flammability Limits: Vapor Pressure: Vapor Density: Other Data: Viscosity: A,VOC content is: <u>5</u> 490 g/i		iexanone
SECTION 10 - STA	BILITYAN	ID, REACTI	Stable	مسلمته					
Hazardous decompo Conditions to avoid Incompatible Materia	als:		None in normal use. Keep away from heat, Oxidizers, strong acid	, spark is and	s, open flame an bases, amines, a	d other ign		hydrogen chloride and smoke.	
SECTION 111 OTOX			MATION	i nei s					時利益於於
Tòxicity: Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEH Cyclohexanone	9		g/kg (rat) g/kg (rat), Dermal: 6480 g/kg (rat), Dermal: 948		g (rabbit) in	halation 8	hrs. 21,000 mg/m <sup>3</sup> (rat) hrs. 23,500 mg/m <sup>3</sup> (rat) hrs. 8,000 PPM (rat)	Target Organs STOT SE3 STOT SE3	
Reproductive Effects Not Established	Not Es	ogenicity tablished	Mutagenicity Not Established		Embryoto Not Establ		Sensitization to Product Not Established	Synergistic Products Not Established	]
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 COM AS Follow local and national re	Not readily b Minimal to no STE DISPC	e, emission of lodegradable one. <b>)SALCON</b> S	IDERATIONS		/OC's) to the air t	akes place	e, typically at a rate of ≤ 490	-	
SECTION 14 STRAI			ON		Section of the				
Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant:		Adhesives 3 None UN 1133 PG II Class 3 Flam NO	Consun	ner Co		5L per inne nding on p TD( E;	G INFORMATION FLAMMABLE ADHESIVES	nay qualify under DOT as "OF	M-D" .
SECTION 15 KREG					Stall March 20		a line and a strate of the		
Precautionary Label I Symbols: Risk Phrases:	R11: Highly fl	F, XI ammable. n explosive perc			R36/37: Irritating I R66: Repeated ex	AICS, Ko o eyes and posure may	SCA, Europe EINECS, Can rea ECL/TCCL, Japan MITI respiratory system. y cause skin dryness or cracki rsiness and dizziness	(ENCS)	
Safety Phrases:	S2: Keep out S9: Keep cont S16: Keep aw	of the reach of c ainer in a well-v			S26: In case of co S29: Do not emph S33: Take precau S46: If swallowed,	ntact with e y into drains tionary mea seek medi	yes, rinse Immediately with pl s, isures against static discharge cal advise immediately and sh	ow this container or label.	
SECTION 16 COTH		MATION		<b>松林</b>	Sala positions	S. 21. 6. 1.	a characterilitation	<b>表示的法律的要素的</b>	要素素の学
Specification Informa Department issuing o E-mail address:			IPS, Safety Health & E <ehsinfo@ipscorp.co< td=""><td>m&gt;</td><td></td><td></td><td>Directive on RoHS (Restric</td><td>nt with the requirements of the tion of Hazardous Substances</td><td></td></ehsinfo@ipscorp.co<>	m>			Directive on RoHS (Restric	nt with the requirements of the tion of Hazardous Substances	
Training necessary: Reissue date / reasor Intended Use of Prod			Yes, training in practic 4/21/2015 / Updated G Multi-purpose low VOC	HS SI	andard Format	•			

This product is intended for use by skilled individuals at their own risk. The Information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

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<b>NELDXO</b>		GHS SAFETY					e Rovisod: AP		
	WELD-ON® 7941	Low VOC PVC f	o ABS Plastic P	ipe Trans	ition Ceme	nt Sup	ersedes: NC	DV 2014	
ECTION I: - PRODUCT		and the second							
WEL WEL	D-ON® 794™ Low VO	C PVC to Abb Flasher	Pipe Transition Com	ent					
RODUCT USE: Low'	VOC Transition Cemen	t for PVC to ABS Transil	ion Joint						
JPPLER:		MAN	UFACTURER: IP3	ng South Ma	ain Street, Galo	ena, CA 902	48-3127		
			P.C	. Box 379, G	Sardena, CA 90	247-0379			
				. 1-310-898-3 dical: CHEM	5500 ATEL Tel. 800.2	55-3924, +1	813-248-058	35 (International)	
MERGENCY: Transportation: C	CHEMTEL Tel. 800.255	3924, +1 813-248-0585	(international) ma	<u></u>					
ECTION 2 - HAZARDS	SIDENTIFICATION					Physi	cal		
Health		En Acute Toxicity:	vironmental None Known	FI	lammable Liquid		c	ategory 2	
	egory 4 egory 3	Chronic Toxicity:	None Known						
kin Sensilization: NO									
.901	egory 2	Signal W	ord:	W	HMIS CLASSIFIC		LASS B, DIV		
SHS LABEL:	$\mathcal{O}$	Dang				С	LASS D, DIV	ISION IB	
¥					Precautionary S	Statements			
	Hazard Statements		P210: Keep away i	rom heat/spark	se/open flames/hol:	surfaces - No	smoking	•	
225: Highly flammable liquid and vap 319: Causes serious oyo inflation	~		P261: Avoid break	ing dust/lume/g	jas/mistvapors/spr	ay	e nucleotion		-11-1
332; Harmful if inhaled			P304+P340; IF INF P403+P233; Slore	161 CO: Comos	a viriim in instit al	LUC KOCD OUT	CPI ID & both loss.	a comforlable for bre	រាពលថ្ង
335: May cause respiratory initiation 336: May cause drowsiness or dizzk	ne55		P403+P233; Store P501: Dispose of c	in a well vonia ontenis/contair	nou pace. Noup of 101 in accordance y	with local regula	ation		
351: Suspecied of causing cancer	· ·							<del>.</del>	
SECTION 3 - COMPOS	SITION/INFORMA	CASE EINECS	IENTS REACT	1		CENTRATION			
			Pre-registration F	umbar	*	by Weight 22 - 49			
fetrahydrofuran (THF)		109-99-9 203-72 78-93-3 201-15	9-0 05-2116297728	-24-0000		6 - 24			
Velhyl Elhyl Kelone (MEK)		108-94-1 203-63	1-1 05-2116297716		ad by the US FI	4 - 25 A. or arc ex	empt from th	nat listing.	
Cyclohexanone All of the constituents of this ad Indicates this chemical is subj	hesive product are liste	d on the TSCA Inventor	of chemical substant of the Emergency Pl	ces maintain anning and C	Community Righ	t-to-Know A	ct of 1986 (40	DCFR372).	
Indicates this chemical is subj	lect to the tehoning ter				USA CONTRE OF 18				
# indicates that this chemical is	100110 OIL FIODORIO		wn to the State of Ca	liomia to cat	USE Callour of th				
# indicates that this chemical is	ID MEASURES				Immediately		<u> </u>		
# indicates that this chemical is	ID MEASURES	ih plenty of water for 15	minutes and seek me	dical advice	Immediately.	evelops, set	ek medical er	dvice.	
# indicates that this chemical is SECTION: 4.3 FIRST A Contact with eyes: Fit	ID MEASURES	In plenty of waler for 15 Thing and shoes. Wash	minutes and seek me skin thoroughly with s	dical advice coap and wal	Immedialely. Ier. If imitation d	evelops, see	ek medical adv	dvice. vice,	
# indicates that this chemical is <u>SECTION 4: FIRST A</u> <u>Contact with eyes:</u> Fit Skin contact: Re Inhalation: Re Ingestion: Rin	ID MEASURES ish oyes immediately with move contaminated clo emove to fresh air. If bro- nese mouth with water, (	th planty of water for 15 thing and shoes. Wash eathing is stopped, give Sive 1 or 2 glasses of wa	minutes and seek me skin thoroughly with s	dical advice coap and wal	Immedialely. Ier. If imitation d	evelops, see	ek medical adv	dvice. vice,	
# indicates that this chemican is <u>SECTION 4.2</u> FIRST A Contact with eyes: Fik Skin contact: Re Indication: Re Ingestion: Rin Likely Routes of Exposure:	ID MEASURES ush eyes immediately w move contaminated clo emove to fresh air. If bro- nse mouth with water. ( Inhalation, E	th planty of water for 15 thing and shoes. Wash eathing is stopped, give Give 1 or 2 glasses of w Eye and Skin Conlact	minules and seek me skin thoroughly with s antificial respiration. I ater or mijk to dilute. I	dical advice coap and wal i breathing is Do not induce	Immedialely. Ier. If imitation d difficult, give ov e vomiting. See	evelops, sec cygen. Seck k medical ac	ek medical adv k medical adv Sylco Immedi nasal nassai	dvice. vice, alcly. nes.	
# Indicates that this chemical is <u>SECTION:4</u> FIRST A Contact with eyes: Fit Skin contact: Re Indestion: Re Ingestion: Ri Likely Roules of Exposure: Acute symptoms and offects Inhalition: Sec	ID MEASURES Ish oyes immediately with move contaminated clo amove to fresh air. If bro- nse mouth with water. ( Inhalation, E servero overexposure may	ih plonly of water for 15 thing and shoes. Wash pathing is stopped, give Give 1 or 2 glosses of wa Eye and Skin Conlact y rosult In nausea, dizzir	minutes and seek me skin thoroughly with s artificial respiration. I ater or mijk to dilute. I ress, headacho. Can	dical advice coap and wal i breathing is Do not induce cause drows	Immedialely. ler. If initation d ; difficult, give on e vomUing. See siness, inflation	evelops, see cygen. Seek k medical ac of eyes and ctival inflam	ek medical adv t medical adv dvlco immedi nasal passat malion on Co	dvice. vice, alcly. nes.	iđ.
# indicates that this chemical is <u>SECTION 4 FIRST A</u> <u>SECTION 4 FIRST A <u>SECTION 4 FIRST A</u> <u>SECTION 4 FIRST A <u>SECTION 4 FIRST</u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u></u>	ID MEASURES ID MEASURES Ish oyas immediately wi move to fresh air. II bri nes mouth with water. ( Inhalation, E svere overexposure may apors slightly uncomfort	Ih planty of water for 15 thing and shoes. Wash sathing is stopped, give Sive 1 or 2 glosses of wa Sye and Skin Contect y rosult In nausea, dizzir able. Overoxposure ma e natural skin 0's (settill	minutes and seek me skin thoroughly with s artificial respiration. I ater or milk to dilute. I ess, headacho. Can y resuli in severe eya ng in skin irritation. D	dical advice coap and wal i breathing is Do not induce cause drows	Immedialely. ler. If initation d ; difficult, give on e vomUing. See siness, inflation	evelops, see cygen. Seek k medical ac of eyes and ctival inflam	ek medical adv t medical adv dvlco immedi nasal passat malion on Co	dvice. vice, alcly. nes.	iđ.
# indicates that this chemical is <u>SECTION 4</u> FIRST A <u>SECTION 4</u> FIRS	IDD MEASURES Jish oyes immediately wi move contaminated clo move to fresh air. II bru Inhalation, f is svero overexposure may spors slightly uncomfort quid contact may remoy ay cause nauses, vonil	th planly of waler for 15 thing and shoes. Wash ashing is stopped, give Sive 1 or 2 glasses of wa sye and Skin Conlact y rosull in nausea, dizzir able. Ovcroxposuro ma e natural skin ol's result ing, diarrhea and menta	minutes and seek me skin thoroughly with s artificial respiration. I ater or milk to dilute. I ess, headacho. Can y resuli in severe eya ng in skin irritation. D	dical advice coap and wal i breathing is Do not induce cause drows	Immedialely. ler. If initation d ; difficult, give on e vomUing. See siness, inflation	evelops, see cygen. Seek k medical ac of eyes and ctival inflam	ek medical adv t medical adv dvlco immedi nasal passat malion on Co	dvice. vice, alcly. nes.	id.
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<pre>tindicates that this chemical is SECTION.4.* FIRST.4. Secontact this eyes: Fik Skin contact: Re Inhalation: Re Inhalation: Re Inhalation: Re Inhalation: Re Inhalation: Re Eye Contact: Va Skin Contact: Uk Ingestion: Mit Chronic (Iong-term) effects: SECTION 5 - FIREFIC Suitable Extinguishing Me Unsuitable Extinguishing Me Do not eat, drin Storages: Store in ventilative Keep away from Follow all preceations: Uk Englineering Controls: Uk Materias And And And And And And And And And And</pre>	In Display and the second seco	in plonty of waler for 15 thing and shoes. Wash sabiling is stopped, give Sive 1 or 2 glosses of wi Eye and Skin Conlact y rosull in nausea, dizzir ablo. Overoxposuro ma e natural skin offs result ing, diarthea and menia Carcinogen ESI al powder, carbon dioxic y or stream. Ind dermal conlact arbon, hydrogen choird med broathing apparalus MEASURES Triom heat, sparks and of fildent ventifation, use e nitact with skin or eyes ( douct or fluids contamit ith sand or other inert al Auminum or plastic GE with eyes, skin and cloit nly electrically grounded g. 744°C (110°F) and awa; compatible materials; co container label, product TROL EXPOSURE Accint TLV Accin S0 ppm 100 20 ppm 50 eted.	minutes and seek me skin choroughly with a artificial respiration. I ater or mik to ditute. I ess, headache. Can y result in severe eyo ng in skin tritation. C sluggishness, is gas, foam, Halon, v e and smoke or fulface positive p pan flame, cplosion-proof exhaus es section B). valod with product from sochart material. Tri containers handling equipment a y from direct sunlight. ustics, ammonia, inor bulketins and solven to <i>I</i> PERSONAL P I STEL OstAPEL. ppm 200 ppm ppm 200 ppm ppm 50 ppm	dical advice coap and wait breathing is breathing is Do not induct cause drows injury with co ermailius man ressure aintin ressure aintin ressure ressure aintin ressure ress	Immedialely. Immedialely. Icr. If initiation di difficult, give on e vomiting. See siness, initiation orneal or conjun y occur with pro- Health Flammability Reactivity PPE te masks. equipment or we awers, drains, sc osable steet ves idequate ventilation erature. ION PEL-caiting N/E N/E N/E	iévelops, sei kygen. Seck k medical ac of eyes and ctival Inflam longed contr HMIS 2 3 0 B ear suitable bar suitable bar open w set.	ek medical ac medical adv yvice immedi nasal passag mation on co act. NFPA 2 3 0 vespiratory pu aler course, haust hoods, ong oxidizers CALIOSHA Celling N/E N/E	dvice. ice, ice, atcly, atcly, ges. atcl, wilb the liquing 0-Minimal 1-Silghi 2-Moderate 3-Serious 4-Severa 	ent.
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# Indicates that this chemical is SECTION 4 FIRST A Soniact with eyes: Fik Skin contact: Re Inhalation: Re Inhalation: Re Inhalation: Re Inhalation: Se Eye Contact: Va Skin Contact: Lik Inhalation: Se Eye Contact: Lik Ingestion: Mit Chronic (Iong-term) effects: SECTION 5 - FIREFIC Suitable Extinguishing Me Unsuitable Extinguishing Me SECTION 6 - ACCIDE Porsonal precautions: Environmental Precautions: Exposure Limits: Environmental Precautions: Keep away from Pollow all preca Skin Protection: Environmental Precautions: Environmental Precautions: E	ID MEASURES Ish oyas immediately wi move contaminated clo move to fresh alr. II bin nese mouth with water. ( Inhalation, E is wore overexposure may apors slightly uncomford ist overexposure may apors slightly uncomford Category 2 HTING MEASUR diat Dry chemic Media: Water spra- Inhalation a Oxides of C I Self-contait INTAL RELEASE North Contained NTAL RELEASE North Contained Inhalation a Oxides of C I Self-contait INTAL RELEASE North Contained Inhalation a Oxides of C I Self-contait INTAL RELEASE North Contained Inhalation a Oxides of C I Self-contait INTAL RELEASE North Contained Inhalation a Oxides of C I Self-contait Inhalation a Inhalation a Oxides of C I Self-contait Inhalation a Inhalation a Inhalation a Inhalation a Inhalation a Oxides I Inhalation a Inhalation a Inhal	In planty of waler for 15 thing and shoes. Wash sahing is stopped, give Sive 1 or 2 glasses of wi Sye and Skin Conlact y result in nausea, dizzi- able. Overcoxposuro ma e natural skin off stesult ing, diarrhea and menia Carcinogen ESI al powder, carbon dioxic y or stream. Ind dermal conlact arbon, hydrogen chlorid ned breathing apparativs <b>MEASURES</b> Trom heat, sparks and of fitclent ventilation, use e nact with skin or eyes ( douct of figuids contamir fith sand or other inert al Aluminum or plastic GE/ With eyes, skin and cloul ny electrically grounded g. r44°C (110°F) and away compatible materials: ce container tabel, product TROE EXPOSURE Accent TLV Accel (120 ppm 300 eded. altborne concentrations) wear splasti-proof chen als for the expositire.	minutes and seek me skin choroughly with a artificial respiration. I ater or milk to ditute. I ess, headache. Can y resuli in severe eyo ng in skin tritation. C sluggishness, is gas, foam, Halon, v a and smoke or full-face positive p pan flame, cposion-proof exhaus es section 8). ated with product for seonalment material. Tri containers wing, handling equipment is y from direct sunlight. ustics, ammonia, incr bylictins and solvent i <u>STEL</u> OSHAPEL pppm 200 ppm ppm 200 ppm ppm 50 ppm below exposure limits ated a goggles, face sh ta, Butyl rubber glove ant barrier cream sho ruccural bonds.	dicit advice copa and wait breathing is bo not induct cause drows injury with co ermalitis man ressure airtim ressure airtim r	Immedialely. Immedialely. Icr. If initiation di difficult, pive on e vomiling. See siness, initiation- parent of conjun y occur with pro- Health Flammability Reactivity PPE Reactivity PPE equipment or win awers, drains, st osable steel ves dequate ventilla chilothated com- raturo. ION N/E N/E N/E N/E Itasses (spectac used for frequent dequate protect Vor windows to o	iévelops, ser ygen. Seck k medical ac of eyes and ctival Inflam longed contr HMIS 2 3 0 8 sear sultable of open w sel. cauostra 200 ppm 25 ppm 25 ppm tes) with bro thirmonsion. Jon when no ansure ainflo	ek medical ac medical adv yvico immedi naşal passaş mation on co act. NFPA 2 3 0 0 respiratory pu aler course. CALIOSHA Celling N/E N/E N/E N/E N/E N/E	dvice. ice, ice, atcly, atcly, ges. ntact wilb the liqu 0-Minimal 1-Slight 2-Moderate 3-Serious 4-Sovera 	, ,

IP6 794 2pgs

WELD	XONI	1		T\/			
					DATA SHEET		Date Revised: APR 2015
	WEL	D-ON® 79	4™ Low VOC PV	/C to	o ABS Plastic Pipe Tr	ansition Cement	Supersedes; NOV 2014
SECTION 9 - PHY	SICAL AND	CHEMIC	AL PROPERTIES				
Appearance: Odor:		Green, med Ketone	lium syrupy liquid			Odor Threshold:	0.88 ppm (Cyclohexanone)
pH:		Not Applica					
Melting/Freezing Pe Boiling Point:	oint:	-108.5°C (-' 66°C (151°)	163.3°F) Based on first *) Based on first boiling	melli com	ing component: THF poment: THF	Boiling Range; Evaporation Rate;	66°C (151°F) to 156°C (313'F) > 1.0 (BUAC = 1)
Flash Point:		-20°C (-4°F	) TCC based on THF		•	Flammability:	Calegory 2
Spacific Gravity: Solubility:		0.927 @23* Solvent port	'C ( 73°F) lion soluble in water. F	tesin	portion separates out.	Flammability Limits:	LEL: 1.1% based on Cyclohexanone UEL: 11.8% based on THF
Partition Coefficien		ter:	Not Available			Vapor Pressure:	129 mm Hg @ 20°C (68°F)based on THF
Auto-ignition Temp Decomposition Ten		Not Applical				Vapor Density: Other Data: Viscosity:	>2 (Air = 1) Medium bodiod
VOC Content:				AQMI	D Rule 1168, Test Melhod 31		g/i.
SECTION 10 - ST/ Stability:	ABILITY AN	D REACT	Stable				
Hazardous decomp		:ts:	None in normal use.				n, hydrogen chloride and smoke.
Conditions to avoid Incompatible Mater					arks, open flame and other ig 1d bases, amines, ammonia	nition sources.	
SECTION 11 - TO		AL INFOR		105 21	iu bases, anunes, anunonia		
Toxicity:		LDso			LCso		Targel Organs
Telrahydrofuran (THF)		Oral: 2842 n				hrs. 21,000 mg/m <sup>3</sup> (rai)	STOT SE3 STOT SE3
Melhyl Elhyl Kelone (ME Cyclohexanone	K)		ng/kg (ral), Dermal: 641 ng/kg (ral), Dermal: 944			hrs. 23,500 mg/m <sup>3</sup> (rel) hrs. 8,000 PPM (rel)	\$101 583
Reproductive Effects	Terato	ijënicity	Mulagenicity		Embryotoxicity	Sensitization to Produc	synergistic Products
Not Established	Not Est	ablished	Not Establishe	d	Nol Established	Not Established	Not Established
SECTION 12 - ECO	None Known	INFORMA	TION		<u> </u>	.s.t.	· · · · · · · · · · · · · · · · · · ·
Ecoloxicity: Mobility:		, emission of	volatile organic compt	bunds	(VOC's) to the air takes plac	io, typically at a rate of $\leq 44$	16 g/l.
Degradability: Bioaccumulation:	Not readily bi Minimal to no					-	
SECTION 13 - WA			SIDERATIONS				
Follow local and national r							
SECTION 14 - TRA			ION		·····		
Proper Shipping Name Hazard Class:	:	Adhesives 3	r		EXCEPT	ON for Ground Shipping	
Secondary Risk:		None			d Quantity: Up to 5L per inn	er packaging, 30 kg gross	weight per package.
Identification Number: Packing Group:		UN 1133 PG II	Consu	mer	Commodity: Depending on (	packaging, these quantilies	s may qualify under DOT as "ORM-D".
Label Required:			nmable Liquid			G INFORMATION FLAMMABL	
Marine Pollulant:		NO			TDG CLASS: SHIPPING NAME:	ADHESIVES	
					UN NUMBER/PACKING G	ROUP: UN 1133, P	<u>G II</u>
SECTION 15 - REC Precautionary Label				1.2	Ingredient Listings: USA T	SCA. Europe EINECS. Car	nada DSL. Australia
Symbols:		F, Xi				rea ECL/TCCL, Japan MIT	
Risk Phrases:	R11: Highly Ital R20: Harmful b				R66: Repeated	i exposure may cause skin d	inyness of cracking
			respiratory system.			nay couse drowsiness and di	
Safety Phrases:			ventilated place. 5 of Ignition - No smoking	a.	S25: In case of contact with 6 S33: Take precautionary mea		lonly of water and seek medical advice. 199.
	S25: Avoid con	lact with eyes.			S16: If swallowed, seek medi	cal advise immediately and s	how this container or label.
SECTION 16 - OTH		MATION					
Specification Inform Department issuing			IPS, Safety Health &	Envir	onmental Alfairs		nt with the requirements of the European
E-mail address:			<ehsinfo@ipscorp.c< td=""><td></td><td></td><td>•</td><td>ction of Hazardous Substances),</td></ehsinfo@ipscorp.c<>			•	ction of Hazardous Substances),
Training necessary: Reissue date / reaso			4/21/2015 / Updated	GHS		WWWWW RIGIOUND,	
Intended Use of Pros		individuale of			to ABS Transition Joint ion contained berein is based	on data considered accur	ate based on current state of

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

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WELD×C	<b>NI</b> .	GHS SAFE	TY DAT	A SHEE	ET				
	WELD-ON	® Plumbing Purple Low	VOC Primer	for PVC a	nd CPVC Pla		Date Revised: Supersedes:		
SECTIONII			17. a. 61 -				Section 2		
PRODUCT NAME: WE	LD-ON® Plumbing Purp	ble Low VOC Primer for PV	C and CPVC PI	astic Pipe					
PRODUCT USE: Lov SUPPLIER:	w VOC Primer for PVC ar		ACTURER: I	PS Corporati	on				
SUFFLIER.	ı		1 F T	7109 South P.O. Box 379 Fel. 1-310-89	Main Street, G , Gardena, CA 8-3300	90247-0379			
EMERGENCY: Transportation: ( SEGITION:2:0 HAZARD: GHS CLASSIFICATION:				dical: CH	EMTEL Tel. 80	0-255-3924, +	1 813-248-0	585 (International)	
Health		Enviror Acute Toxicity:	nmental None Known		Flammable Li		ysical	Category 2	
	tegory 4 tegory 3	Chronic Toxicity:	None Known			40.0			
Skin Sensitization: NO Eye: Cal	tegory 2								
GHS LABEL:		Signal Word: Danger	l		WHMIS CLAS	SSIFICATION:	CLASS B, D CLASS D, D		
	Hazard Statements	<u> </u>	P210: Keep away			ry Statements			
H225: Highly flammable liquid and va H319: Causes serious eye irritation	apor		P261: Avoid brea	athing dust/fun	ne/gas/mlst/vapor	rs/spray			
H332: Harmful if inhaled H335: May cause respiratory irritation	n		P280: Wear prote P304+P340: IF II	ective gloves/p NHALED: Ren	protective clothing nove victim to free	g/eye protection sh air and keep	riace protection at rest in a pos	n ition comfortable for	breathing
H336: May cause drowsiness or dizz			P403+P233: Stor P501: Dispose of	re in a well ver	ntilated place. Ke	eep container tig	htiy closed		
H351: Suspected of causing cancer EUH019: May form explosive peroxid	ies								
SECTIONIS INCOMPOS	SITION/INFORMAT	ON ON INGREDIENT CAS# EINECS #	REAC	CH	C	ONCENTRATIO			
Tetrahydrofuran (THF)		109-99-9 203-726-8	Pre-registration 05-211629772	Number 9-22-0000		% by Weight 10 - 25			
Methyl Ethyl Kelone (MEK)		78-93-3 201-159-0 108-94-1 203-631-1	05-211629772 05-211629771	8-24-0000		15 - 25 10 - 30			
Cyclohexanone Acetone		67-64-1 200-662-2	05-211629771	3-35-0000		30 - 50			
All of the constituents of this adl * Indicates this chemical is subje	ect to the reporting requir	rements of Section 313 of the	e Emergenov Pla	anning and (	Community Rid	Int-to-Know Ad	21 01 1980 (41	at listing. )CFR372).	
# indicates that this chemical is SECTION/4 CFIRSTAL	found on Proposition 65	s List of chemicals known to	the State of Ca	lifornia to ca	use cancer or i	reproductive t	oxicity.		
Contact with eves' Elu	ish eves immediately with	a plenty of water for 15 minut	tes and seek me	adical advice	immediately.				Can be a second second second
Inhalation: Re	move to fresh air. If brea nse mouth with water. G	ling and shoes. Wash skin t athing is stopped, give artifici ive 1 or 2 glasses of water of ve and Skin Contact	al respiration.	f breathing is	s difficult, give	oxygen. Seek	k medical adv	rice.	
Acute symptoms and effects: Inhalation: Se	vere overexposure may a	esult in nausea, dizziness, h	eadache. Can	, cause drows	iness, irritation	ı of eyes and ı	nasal passag	es.	
Eye Contact: Va Skin Contact: Liq	pors slightly uncomfortat	ole. Overexposure may result natural skin oils resulting in	It in severe eye i skin irritation. D	injury with co ermatitis ma	omeal or conju ay occur with pr	nctival inflamm rolonged conta	nation on cor act.	ntact with the liqui	<b>J.</b>
	v cause nausea vomitin	diambea and mental slugg	rishness.					tem.	
(1	THF) Category 2 Carcino	gen							LE MIRTER A A
SECTION 553 FIREFIGE Suitable Extinguishing Medi		powder, carbon dioxide gas,				HMIS	NFPA	0-Minimal	<b>CARACTER</b>
Unsuitable Extinguishing Me	edia: Water spray				Health Flammability	2 3	2 3	1-Slight 2-Moderate	
Exposure Hazards: Combustion Products:		bon and smoke			Reactivity	ů B	õ	3-Serious 4-Severe	
Protection for Firefighters:	Self-containe	d breathing apparatus or full	-face positive pr	ressure airlin	e masks.				and the second
SECTION 6 CACCIDEN Personal precautions:	Keen away fr	om heat, sparks and open fi	ame,						
, craottat hiscardinis;	Provide suffic	cient ventilation, use explosic	on-proof exhaust	t ventilation	equipment or w	vear suitable r	espiratory pr	otective equipmen	t.
Environmental Precautions:	Prevent prod	act with skin or eyes (see se uct or liquids contaminated v	with product from	n entering se	wers, drains, s	soil or open wa	ater course.		
Methods for Cleaning up: Materials not to be used for (	clean up:	sand or other inert absorbe Aluminum or plastic contain	ners					141 00 000	Martin Contractor
SECTION 7 HANDLIN	GANDISTORAGE	h eyes, skin and clothing.							NORTH AND A
Keep away from I	gnition sources, use only	electrically grounded handlin	ng equipment ar	nd ensure ad	lequate ventilat	tion/fume exh	aust hoods.		
of a second data and the second data and	or smoke while handling. I room or shade below 4	(°C (110°E) and away from a	lirect sunlight.				an avidinara d	and incompanying	
Follow all precaut	tionary information on col	mpatible materials: caustics, ntainer label, product bulletin	s and solvent ce	ementing lite	rature.				
SECTION 8 PRECAU	TIONS TO CONTR	OBEXROSURE// REI	RSONAL	OTECTIC	DN NAME AND			anti nortano	an an anna an
EXPOSURE LIMITS:	Component	ACGIH TLV ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Celling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL	
Te	etrahydrofuran (THF)	50 ppm 100 ppm 200 ppm 300 ppm	200 ppm 200 ppm	N/E N/E	N/E N/E	200 ppm 200 ppm	N/E N/E	250 ppm 300 ppm	
Cy	ethyl Ethyl Ketone (MEK) /clohexanone	20 ppm 50 ppm	50 ppm 1000 ppm	N/E N/E	N/E N/E	25 ppm 500 ppm	N/E 3000 ppm	N/E 750 ppm	
Engineering Controls: Us	cetone se local exhaust as neede	500 ppm 750 ppm ed. borne concentrations below				1 000 ppm	1 pp.m		I
Personal Protective Equipme	and (BBE)	ear splash-proof chemical go			isses (speciac	les) with brow	guards and	side shieids,	
- etc	<ul> <li>as may be appropriate</li> </ul>	for the exposure.					J 4110		
Us	se of solvent-resistant gio	in as much as possible. Buty oves or solvent-resistant barr	ier cream should	should be us d provide ad	sed for frequen equate protecti	it immersion. Ion when nom	nal adhesive	application	
pro	actices and procedures a	re used for making structura	l bonds. tod room Onor	a doore and/	or windows to a	ensure airflow	and air char	des. Use local	
	the sure is a second second	ve airborne contaminants fro sure Limit Value will not usua	m employee bre	eathing zone	and to keep C	ontaminants u	BIOM 10ACI2 I	3100 00000	
			,						

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WELD	ON	,	G	HS SAFI	ETY DAI	A SHE	ET	Dale Revised:	APR 2015	
		WELD-ON	l® Plumbing	g Purple Lov	v VOC Prime	r for PVC	and CPVC Plastic Pip			
SECTIONO - PHYS		CHEMICA	RRORER	TIES	1					
Appearance: Odor: pH:		Purple, thin I Ethereal Not Applicab	-				Odor Threshold:	0.88 ppm (C	yclohexanone)	
Meiting/Freezing Pol Boiling Point: Flash Point: Specific Gravity: Solubility: Partition Coefficient Auto-ignition Tempe Decomposition Temp VOC Content:	n-octanol/wate	-108.5°C (-10 56°C (133°F) -20°C (-4°F) 0.846 @23°C Solvent porti ar: 321°C (610°I Not Applicab	53,3°F) Based Based on firs TCC based on C (73°F) on soluble in w Not Available F) based on Ti- le	t bolling compo Acetone vater. Resin po e HF	y component: T pnent: Acetone prtion separates Rule 1168, Tes	out,	Boiling Range: Evaporation Rate: Flammability: Flammability Limits: Vapor Pressure: Vapor Density: Other Data: Viscosity: 3A,VOC content is: ≤ 542 §	> 1.0 (BUAC Category 2 LEL: 1.1% I UEL: 12.8% 190 mm Hg >2.0 (Air = 1 Water-thin	based on Cycloh based on Aceto @ 20°C (68°F) A	exanone DDe
SECTION 10 STA	BILITYAND	REACTIV		<u>.</u>	Sec. 1.		ىرى مەنبىلەر قىلىرىغان يېزىكى			
Stability: Hazardous decompo Conditions to avoid: Incompatible Materia	ls:		Keep away f Oxidizers, st	rom heat, spar rong acids and	ks, open flame bases, amines	and other lg	t gives off oxides of carbor nition sources.			
SECTION 11 STOX	COLOGIC		ATION	and and a second se Second second	and the second				起代动物代码	<b>Manatin</b>
Toxicity: Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK Cyclohexanone Acetone	)		g/kg (rat), Den g/kg (rat), Den	mal: 6480 mg/k mal: 948 mg/kg		Inhalation 8 Inhalation 4	hrs, 21,000 mg/m <sup>3</sup> (rat) hrs, 23,500 mg/m <sup>3</sup> (rat) hrs, 8,000 PPM (rat) 0,100 mg/m <sup>3</sup> (rat)	STO	et Organs DT SE3 DT SE3 DT SE3	
Reproductive Effects Not Established		genicity ablished	Muta	genicity tablished	Embryo Not Esta	oxicity	Sensitization to Produce	t <u>Synergis</u>	tic Products stablished	].
Mobility: Degradability: Bloaccumulation: SECTION/13/STWAS Follow local and national re	Not available Minimal to no	ne.	IDERATIO		VOC's) to the a	ir takes plac	e, typically at a rate of $\leq 5^{\circ}$	_		
SECTION 145TRAN	-	•								
Proper Shipping Name: Hazard Class:	ORONIEIN			cetone, Tetrah	ydrofuran)	میک بیڈ کر وزیر الاس	an ann an an Anna an An Anna an Anna an A	te all second and		<u></u>
Secondary Risk:		None UN 1993		DOTINH	Q		(CEPTION for Ground Sh ar packaging, 30 kg gross			
Identification Number: Packing Group:		PGII					ackaging, these quantities			M-D".
Label Required: Marine Pollutant:		Class 3 Flam NO	mable Liquid							
Marine Polititain;						INFORMA	TION		· · · · · · · · · · · · · · · · · · ·	]
		TDG CLASS: SHIPPING N UN NUMBER		ROUP:	FLAMMABLE Flammable Lic UN 1993, PG	uid, n.o.s. (/	Acetone, Tetrahydrofuran)			
SECTION 15 REG										
Precautionary Label in Symbols: Risk Phrases:	R11: Highly fia	F, Xi mmable.	able, Irritant, (	Carc. Cat. 2	-	AICS, Ko	SCA, Europe EINECS, Ca prea ECL/TCCL, Japan Mi	TI (ENCS)		-
	R20: Harmful t R36/37: Irritatin		respiratory syste	em.			d exposure may cause skin ( nay cause drowsiness and di		ngʻ	
Safety Phrases:	S9: Keep conta S16: Keep awa S25: Avoid cor	y from sources		smoking.	S33: Take prec	autionary mea	eyes, rinse immediately with asures against static discharg ical advise immediately and	jes.		advice.
SECTION 16 SOTHI		ATION								<b>K 23</b> 564
Specification Informa Department issuing d E-mall address:			IPS, Safety H <ehsinfo@ip< td=""><td></td><td>nmental Affairs</td><td></td><td>All ingredients are compli Directive on RoHS (Restr</td><td>ant with the req iction of Hazard</td><td>۱ ulrements of the ous Substances</td><td>European ).</td></ehsinfo@ip<>		nmental Affairs		All ingredients are compli Directive on RoHS (Restr	ant with the req iction of Hazard	۱ ulrements of the ous Substances	European ).
Training necessary: Reissue date / reason Intended Use of Prod			4/20/2015 / U	in practices an Ipdated GHS S /C and CPVC F	tandard Forma	ontained in p	product literature.			

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warrantly is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

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				TPL	1	P-7	D	LPG
WELD×	ON	GHS SAFE	ETY DATA SHE	ET	·			
		® Plumbing Purple Low	VOC Primer for PVC	and CPVC Pla		Dale Revised: Supersedes:	APR 2015 NOV 2014	
	IGT AND COMPANYI	DENTIFICATION						
RODUCT NAME:	WELD-ON® Plumbing Purp Low VOC Primer for PVC ar	ble Low VOC Primer for PV	C and CPVC Plastic Pipe					
RODUCT USE: SUPPLIER:	Low VOC Primer for PVC at		ACTURER: IPS Corpora			040 0407		
			P.O. Box 37	i Main Street, G 9. Gardena, CA		J248-3127		
MEDOENOVI Transportati	on: CHEMTEL Tel. 800-255-	3924, +1 813-248-0585 (inte	Tel. 1-310-8 mational) Medical: Ch		0-255-3924, +	1 813-248-05	i85 (International)	
	RDSIDENTIFICATION							<b>STAR</b>
HS CLASSIFICATION: He	alth	Enviro	nmental		•	sical		
Acute Toxicity: Skin Irritation:	Category 4 Category 3	Acute Toxicity: Chronic Toxicity:	None Known None Known	Flammable Lie	quiđ		Category 2	
Skin Sensitization:	NO Category 2							
Eye: GHS LABEL:		Signal Word		WHMIS CLAS	SIFICATION:	CLASS B, DI	VISION 2	
	$\otimes \otimes \otimes$	Danger				CLASS D, DI	VISION 2B	
	Hazard Statements		P210: Keep away from heat/s		ry Statements Joot surfaces			
1225: Highly flammable liquid a 1319: Causes serious eye imitat			P261: Avoid breathing dust/fu P280: Wear protective gloves	me/gas/mist/vapor	s/spray			
1332: Harmful if inhaled 1335: May cause respiratory irri	italion		P304+P340: IF INHALED: Re	move victim to free	sh air and keep	al rest in a posi	tion comfortable for	breathing
1336: May cause drowsiness or 1351: Suspecied of causing car			P403+P233: Store in a well v P501: Dispose of contents/co					
UH019: May form explosive pe	eroxides POSITION/INFORMAT		C C C C C C C C C C C C C C C C C C C					an a
SECTIONISTICOME	OSTIONINFORMAT	CAS# EINECS #	REACH Pre-registration Number	Ci	ONCENTRATIO % by Weight	N		
Fetrahydrofuran (THF)		109-99-9 203-726-8	05-2116297729-22-0000 05-2116297728-24-0000		10 - 25 15 - 25			
Methyl Ethyl Ketone (MEK) Cyclohexanone		78-93-3 201-159-0 108-94-1 203-631-1	05-2116297718-25-0000	•	10 - 30 30 - 50			
Acelone All of the constituents of this	s adhesive product are listed	67-64-1 200-662-2 on the TSCA inventory of ch	emical substances maintai	ned by the US E	PA, or are ex	empt from the	at listing.	
a state of a state of a state of the state o	subject to the reporting require al is found on Proposition 65	comente of Section 313 of th	e Emergency Planning and	Community Rid	III-IO-NIIOW AL	101 1900 (40	CFR372).	
SECTION 4 FIRST	(AID MEASURES)	348 / B (B (	<b>来来的存在我们到他</b> 办					和的论称
Contact with eyes: Skin contact:	Remove contaminated cloth	plenty of water for 15 minu ing and shoes. Wash skin	horoughly with soap and w	ater. If Irritation	develops, see	sk medical ad	vice.	
Inhalation: Ingestion:	Remove to fresh air. If brea Rinse mouth with water. G	thing is stopped, alva artific	lat recoiration if breathing	is difficult, olve i	oxvoan. Seek	medical adv	ce.	
Likely Routes of Exposure	e: Inhalation, Ey	e and Skin Contact						
Acute symptoms and effe Inhalation:	Severe overexposure may Vapors slightly uncomfortat	esult in nausea, dizziness, h	eadache. Can cause drow	siness, irritation	of eyes and r	hasal passage nation on con	es. tact with the liqui	d.
		ia. Overexhospia may read	ation besterie over injury man	on on on gen	clonged conts		•	· ·
Èye Contact: Skin Contact:	Liquid contact may remove	natural skin oils resulting in	skin imtauon. Dermatus m	ay occur with pr	olonged com	act,		
Eye Contact: Skin Contact:	Liquid contact may remove May cause nausea, vomitin ts: (MEK) Low level chronic e	g, diamhea and mental slugg xposure has been shown to	ishness.	ay occur with pr		act,	em.	
Èye Contact: Skin Contact: Ingestion: Chronic (long-term) effect	Liquid contact may remove May cause nausea, vomitin ts: (MEK) Low level chronic e (THF) Category 2 Carcino	g, diamhea and mental slugg xposure has been shown to gen	jishness. cause decreased memory	ay occur with pr and impairment		act,	em.	
Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION:55:3 FIREF Suitable Extinguishing M	Liquid contact may remove May cause nausea, vomitin ts: (MEK) Low level chronic a (THF) Category 2 Carcino CIGHTING:MEASURES Media: Dry chemical	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas	jishness. cause decreased memory	ay occur with pr and impairment	of the central	nervous syst	0-Minimal	<b>MARKA</b>
Éye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION/5534 FIREF Suitable Extinguishing M Unsuitable Extinguishin Exposure Hazards:	Liquid contact may remove May cause nausea, vonition ts: (MEK) Low level chronic e (THF) Category 2 Carcino TGHTING:MEASURES Wedia: Dry chemical ig Media: Water spray Inhalation an	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d dermal contact	jishness. cause decreased memory	ay occur with pr and impairment <b>CONTRACTOR</b> Health Flammability	of the central HMIS 2 3	act, nervous syst NFPA 2 3	0-Minimal 1-Slight 2-Moderate	
Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect Section: Suitable Extinguishing M Unsuitable Extinguishing	Liquid contact may remove May cause nausea, vornitin Is: (MEK) Low level chronic e (THF) Category 2 Carcino TGHTINGIMEASURES Media: Dry chemical Ig Media: Water spray. Inhalation an Oxides of car	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d dermal contact bon and smoke	jishness. cause decreased memory foam, Halon, water fog.	ay occur with pr and impairment Wealth Flammability Reactivity PPE	of the central HMIS 2	act, nervous syst NFPA 2	0-Minimal 1-Slight	
Éye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION:500 FIREF Suitable Extinguishing M Unsuitable Extinguishing Exposure Hazards: Combustion Products: Brotection for Eirefighte	Liquid contact may remove May cause nausea, vonitin ts: (MEK) Low level chronic e (THF) Category 2 Carcino TGHTING!MEASURES Wedia: Dry chemical g Media: Water spray Inhalation an Oxides of cal	g, diarrhea and mental slugg xposure has been shown to gen ywder, carbon dioxide gas or straam. d demal contact bon and smoke d breathing apparatus or full	jishness. cause decreased memory , foam, Halon, water fog. -face positive pressure airli	ay occur with pr and impairment Health Flammability Reactivity PPE ne masks.	of the central HMIS 2 3 0 B	nervous syst NFPA 2 3 0	0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe	<u>.</u>
Éye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION:500 FIREF Suitable Extinguishing M Unsuitable Extinguishing Exposure Hazards: Combustion Products: Brotection for Eirefighte	Liquid contact may remove May cause nausea, vonitin IS: (MEK) Low level chronic e (THF) Category 2 Carcino (THF) Category 2 Catego	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d dermal contact bon and smoke d breathing apparatus or full EASURES	jehness. cause decreased memory Accession of the second memory foam, Halon, water fog. -face positive pressure airli	ay occur with pr and Impairment Health Flammability Reactivity PPE ne masks.	of the central HIMIS 2 3 0 B	nervous syst NFPA 2 3 0	0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe	
Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION/5673 FIREE Suitable Extinguishing Lunsuitable Extinguishing Exposure Hazards: Combustion Products: Protection for Firefighte SECTION/6737ACCII	Liquid contact may remove May cause nausea, vomitin Is: (MEK) Low level chronic e (THF) Category 2 Carcino IGHTING'MEASURES' Wedia: Dry chemical g Media: Dry chemical g Media: Water spray Inhalation an Oxides of can bers: Self-containe DENTAL'REL'EASEM Keep away fr Provide suffic Provide suffic	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d demat contact bon and smoke d breathing apparatus or full EASURES om heat, sparks and open fi lent ventilation, use explosit	jehness. cause decreased memory foam, Halon, water fog. -face positive pressure airl resource of exhaust ventilation reion 8).	ay occur with pr and impairment Health Flammability Reactivity PPE ne masks. equipment or w	of the central HMIS 2 3 0 B	nervous syst NFPA 2 3 0	0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe	
Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION/5673 FIREF Suitable Extinguishing M Unsuitable Extinguishin Exposure Hazards: Combustion Products: Protection for Firefighte SECTION/663/ACCIII Personal precautions:	Liquid contact may remove May cause nausea, vomitin Is: (MEK) Low level chronic e (THF) Category 2 Carcino IGHTINGIMEASURES: Wedla: Dry chemical g Medla: Dry chemical g Medla: Water spray Inhalation an Oxides of cau ers: Self-containe DENTALERELEASEM Keep away fr Provide suffit Prevent cont ons: Prevent prod	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d dermal contact bon and smoke d breathing apparatus or full EASURES: and year and open fi icent ventilation, use explosi act with skin or eyes (see se uct or liquids contaminated u s and or other inart absorbe	jehness. cause decreased memory foam, Halon, water fog. -face positive pressure airli Grand State (State Construction on-proof exhaust ventilation ction 8). with product from entering a in material. Transfer to a C	ay occur with pr and impairment Health Flammability Reactivity PPE ne masks. equipment or w ewers, drains, s	of the central HMIS 2 3 0 B watchest 2 0 0 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	nervous syst NFPA 2 3 0	0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe	
Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION/56:3 FIREF Suitable Extinguishing hu Unsuitable Extinguishin Exposure Hazards: Combustion Products: Protection for Firefighte SECTION/66:37ACCII Personal precautions: Environmental Procautio Methods for Cleaning up Materials not to be used	Liquid contact may remove May cause nausea, vomitin ts: (MEK) Low level chronic e (THF) Category 2 Carcino IGHTINGIMEASURES Wedla: Dry chemical g Medla: Water spray Inhalation an Oxides of cau ers: Self-containe DENTALERELEASEM Keep away fr Provide suffin Prevent cont ons: Prevent prod c: Clean up witt for clean up:	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d dernal contact bon and smoke d breathing apparatus or full EASURES om heat, sparks and open fi isent ventilation, use explosit act with skin or eyes (see se uct or liquids contaminated i s and or other inert absorbe Aluminum or plastic contai	jehness. cause decreased memory , foam, Halon, water fog. -face positive pressure airli ame. on-proof exhaust ventilation ction 8). with product from entering s mit material. Transfer to a c ners	ay occur with pr and impairment Health Flammability PPE ne masks. equipment or w evers, drains, s isosable steel ve	of the central HMIS 2 3 0 B Vear suitable m soil or open wassel.	nervous syst NFPA 2 3 0 espiratory pro	0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe	<b>MARYSTAE</b>
Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION/553 FIREF Suitable Extinguishing Hu Unsuitable Extinguishing Exposure Hazards: Combustion Products: Protection for Firefighte SECTION/653/ACCII Personal precautions: Environmental Precaution Methods for Cleaning up Materials not to be used SECTION/753 HAND	Liquid contact may remove May cause nausea, vonitin Is: (MEK) Low level chronic e (THF) Category 2 Carcino (THF) Category 2 Carcino (The Category 2 Carcino (The Category 2 Carcino) (The Category 2	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d dermal contact bon and smoke d breathing apparatus or full EASURES ASURES act with skin or eyas (see se uct or liquide contarinated Aluminum or plastic contal	jehness. cause decreased memory foam, Halon, water fog. -face positive pressure airli Grans	ay occur with pr and impairment Health Flammability Reactivity PPE ne masks. equipment or w ewers, drains, s losable steel ve	of the central HMIS 2 3 0 B B state states rear sultable n woil or open wassel.	nervous syst NFPA 2 3 0 espiratory pro-	0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe	<b>MARYSTAE</b>
Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect SECTION/5051 FIREF SUitable Extinguishing M Unsuitable Extinguishing M Exposure Hazards: Combustion Products: Protection for Firefighte SECTION/603/ACCII Personal precautions: Environmental Precaution Methods for Cleaning up Materials not to be used SECTION/7051/ACCII Handiling: Avoid breathin Keep away fin Do not eat, do	Liquid contact may remove May cause nausea, vomitin is: (MEK) Low level chronic e (THF) Category 2 Carcino IGHTINGIMEASURES Wedia: Dry chemical g Media: Water spray Inhalation an Oxides of cau ers: Selef-containe DENTALS RELEASEM Keep away fr Provide suffi Prevent cont to clean up: Clean up: Clean up of vapor, avoid contact wi om ignition sources, use only	g, diarrhea and mental slugg xposure has been shown to gen powder, carbon dioxide gas or stream. d dermal contact bon and smoke d breathing apparatus or full <u>EASURES</u> at with skin or eyes (see se uct or liquids contaminated u s sand or other inart absorbe Aluminum or plastic contai the eyes, skin and clothing. electrically grounded handil	jishness. cause decreased memory toam, Halon, water fog. foam, Halon, water fog. -face positive pressure airli arne. on-proof exhaust ventilation citon 8). with product from entering e ni material. Transfer to a o ners.	ay occur with pr and impairment Health Flammability Reactivity PPE ne masks. equipment or w ewers, drains, s losable steel ve	of the central HMIS 2 3 0 B B state states rear sultable n woil or open wassel.	nervous syst NFPA 2 3 0 espiratory pro-	0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe	<b>MARYSTAE</b>
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VVELD			_	HS SAFI				Date Revised:		
		WELD-ON	® Plumbin	g Purple Lov	v VOC Prime	r for PVC	and CPVC Plastic Pipe	Supersedes:	NOV 2014	
SECTION 9 - PHYS	ICAL AND			THES	<u> 18 78 78</u>					
Appearance: Odor:		Purple, thin it Ethereal	•				Odor Threshold:	0.88 ppm (C	yclohexanone)	
pH: Melting/Freezing Poi Boiling Point: Flash Point: Solubility: Solubility: Partition Coefficient Auto-ignition Tempe Decomposition Temp VOC Content:	n-octanol/wat	56°C (133°F) -20°C (-4°F) 1 0.846 @23°C Solvent portio er: 321°C (610°F Not Applicable	3.3°F) Based Based on firs CC based or (73°F) n soluble in v Not Availabl based on Ti	vater. Resin po e HF	onent: Acetone	out,	Bolling Range: Evaporation Rate: Flammability: Flammability Limits: Vapor Pressure: Vapor Density: Other Data: Viscosity: 6A,VOC content is: ≤ 542 g/l	<ul> <li>&gt; 1.0 (BUAC Category 2</li> <li>LEL: 1.1% I</li> <li>UEL: 12.8%</li> <li>190 mm Hg</li> <li>&gt;2.0 (Air = 1)</li> <li>Water-thin</li> </ul>	based on Cyclohexa based on Acetone @ 20°C (68°F) Aceto	
SECTION 10 - STA	BILITYAN	DREACTIV	TÝ Stable	Sec. 2 4 5						<b>建</b> 制制
Hazardous decompo Conditions to avoid: Incompatible Materia	ils:		None in non Keep away i Oxidizers, si	rom heat, spari rong acids and	ks, open flame bases, amines	and other ig , ammonia		and smoke.		
SECTIONIAL STOX	ICOLOGIC/	LD50	ATION		Lunanered as	LC50		in and the second		
Toxicity: Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEH Cyclohexanone Acetone		Oral: 2842 mg Oral: 2737 mg	/kg (rat), Der /kg (rat), Der	mai: 6480 mg/k mai: 948 mg/kg		Inhalation 3 Inhalation 8 Inhalation 4	b hrs. 21,000 mg/m <sup>3</sup> (rat) brs. 23,500 mg/m <sup>3</sup> (rat) brs. 8,000 PPM (rat) 0,100 mg/m <sup>3</sup> (rat)	STO	et Organs OT SE3 OT SE3 OT SE3	
Reproductive Effects Not Established		genicity tablished		genicity tablished	Embryo Not Esta		Sensitization to Product Not Established		tic Products stablished	
Ecotoxicity: Mobility: Degradability: Bioaccumulation: WSECTION:13:0 WAS	Not available Minimal to no	e, emission of v one. SALCONSI	DERATIO		VOC's) to the a	r takes plac	e, typically at a rate of ≤ 542			
Follow local and national re				ور با مراجع الم					والمشاقة والمراجعات المترجعات أتنا	Million Anatomic
SECTION 14 STRAM Proper Shipping Name:	SPORIUN			cetone, Tetrah	vdrofuran)	يتشد الاست	<u></u>	Sel Berth Cart	No. 1 12 10 1924	
Hazard Class:		3			·					
Secondary Risk: Identification Number:		None UN 1993		DOT Limited	Quantity: Up to		KCEPTION for Ground Ship er packaging, 30 kg gross we		age.	
Packing Group:		PG II					ackaging, these quantities n			۴.
Label Required: Marine Pollutant:		Class 3 Flamn NO	nable Liquid							
						INFORMA	TION			
		TDG CLASS: SHIPPING NA UN NUMBER/		ROUP:	FLAMMABLE Flammable Lic UN 1993, PG	uid, n.o.s, (	Acetone, Tetrahydrofuran)			
SECTION 15 REG	ULATORY	-			h.:					××**
Precautionary Label I Symbols:	nformation:	Highly Flamma F, Xi			Ingredient List		SCA, Europe EINECS, Can brea ECL/TCCL, Japan MITI		iralia	
Risk Phrases:	R11: Highly fla R20: Harmful I R36/37: Irritati		spiratory syst	em.			d exposure may cause skin dr nay cause drowsiness and diza		ng	
Safety Phrases:		ainer in a well-ve ay from sources stact with eyes.		smoking.	S33: Take preci	utionary me	eyes, rinse immediately with pi asures against static discharge ical advise immediately and sh	s.		ж.
ASECTIONI16 GIOTH		-	anter de la composition Anter de la composition de la compositio			With Sta				的制度的
Specification Informa Department issuing o E-mail address:			<ehsinfo@lu< td=""><td>•</td><td></td><td></td><td>All ingredients are compilar Directive on RoHS (Restric</td><td></td><td></td><td>opean</td></ehsinfo@lu<>	•			All ingredients are compilar Directive on RoHS (Restric			opean
Training necessary: Reissue date / reason Intended Lise of Bred			4/20/2015 / L	in practices and Ipdated GHS Si	tandard Formal		product literature.			

Intended Use of Product: Primer for PVC and CPVC Plastic Pipe This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

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# BLACK SWAN MFG. CO.

# GHS SAFETY DATA SHEET



using this product

	SECTION 1 - ID	DENTIFICATION				
Manufacturer: Black Swar	Mfg Co	For any Transportation or Medi	cal Chemical Emergencies call:			
4540 W. TI		INFOTRAC				
Tel.: 800-2. Fax: 773-2	52-5796	(800) 535-5053 <u>OR</u> (352) 323-3500				
Web Site :	www.blackswanmfg.com o@blackswanmfg.com	24 hours per day - 7 days a week				
Product Name: Plumber	s Grease		cates stems of faucets, valves, ball cks, etc.			
	SECTION 2 - HAZAR	D(S) IDENTIFICATION				
Labels None	NFPA HEALTH HAZARD 4 - Deadly 3 - Starene Danger 2 - Hazardous 1 - Slight Heardoos 4 - Deadly 3 - Bidow 100°F. Not	GHS C <u>Health</u> Acute Toxicity: Not Established	lassification Environmental			
Signal Word None	0 - Normal Material SPECIFIC HAZARD SPECIFIC HAZARD C - Will not burn C - REACTIVITY		Acute Aquatic Toxicity: Not Establishe hronic Aquatic Toxicity: Not Establishe			
HMIS HEALTH 1	Oxidian         OX         4 - Mary decrease           Acid         ACID         3 - Shock and heat           Alkal         ALK         usay decrease           Correntive         COR         2 - Violent chemical           Use NO WATER         W         change           Radioncrive         1 - Usstable if benefit	Physica None	1			
FLAMMABILITY 1	0 – Stable	Hazardous Statements	Precautionary Statements			
REACTIVITY 0		H320: Causes eye irritation	P102 : Keep out of reach of children P262: Do not get in eyes P264: Wash thoroughly after handling P270: Do not eat, drink or smoke when			

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS							
Chemicals	CAS#	EINECS#	REACH Pre-registration Number	Approx %			
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	N/A	N/A	40-60%			
Distillates (petroleum), solvent-refined heavy naphthenic	64741-96-4	N/A	N/A	30-50%			

\*Unlisted ingredients are not classified as hazardous according to OSHA 1910.1200.

# SECTION 4 - FIRST-AID MEASURES

Inhalation: Remove into fresh air. If not breathing, give artificial respiration. Call a physician. Skin: Rinse skin with water for at least 15 minutes. Take off contaminated clothing/shoes and wash before reuse. Get immediate medical attention.

Eyes: Flush eyes with large amounts of water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do so. Get immediate medical attention.

Ingestion: If swallowed rinse mouth. DO NOT INDUCE VOMITING. Get immediate medical attention.

# SECTION 5 - FIRE-FIGHTING MEASURES

Fire Hazard: Directly spraying extinguishing media onto hot burning products may cause frothing and spreading of fire. Combustion Products: None.

Extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing Media: None known.

Protective Equipment: Self-contained breathing apparatus {(SCBA), MSHA/NIOSH} and protective clothing.

Special Fire Fighting Procedures: Evacuate enclosed areas, stay upwind. Closed or confined quarters require self-contained breathing apparatus, positive pressure hose masks or airline masks. Use water spray to cool containers, to flush spills from sources of ignition and to disperse vapors.

# GHS SAFETY DATA SHEET

# SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Minimize skin contact. Provide adequate ventilation.

Protective Equipment: None.

**Emergency Procedures:** None.

Environmental Precautions: Avoid runoff into storm sewers, ditches and waterways.

Methods for Cleaning Up: Vacuum dust with equipment fitted with HEPA filter and place in a closed waste container. Add sand, earth, or other absorbent to spill. Prevent entry into sewers, water courses, basements and confined areas.

# SECTION 7 - HANDLING AND STORAGE

<u>Handling</u> Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep containers closed when not in use. Store in a dry, well ventilated place. Keep cool. Keep container tightly closed. Incompatible Materials: Strong oxidants such as Chlorine Gas.

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

	Exposure Limits		
Hazardous Chemicals	ACGIH-TLV	ACGIH-STEL	<b>OSHA-PEL</b>
Distillates (petroleum), solvent-dewaxed heavy paraffinic	TWA: 5mg/m <sup>3</sup>	$10 \text{mg/m}^3$	TWA: 5mg/m <sup>3</sup>
Distillates (petroleum), solvent-refined heavy naphthenic	TWA: 5mg/m <sup>3</sup>	10mg/m <sup>3</sup>	TWA: 5mg/m <sup>3</sup>

Engineering Controls: Sufficient ventilation in order to control worker exposure to airborne contaminates.

Ventilation: Local ventilation is adequate.

Personal Protective Equipment – Respiratory: Use a properly fitted particulate filter respirator. Skin: Oil resistant gloves. Chemical resistant apron. Eyes: Splash goggles/Face shield.

# SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Amber	Flash Point:	380°F	Vapor Pressure:	0.01
Odor:	Petroleum	Specific Gravity:	0.90	Flammability:	Not Established
pH:	Not Established	Solubility (H2O):	Very slight at room temperature	Flammability Limits:	LEL 1%
Melting Point:	Not Established	<b>Evaporation Rate:</b>	<0.01		UEL - 7%
Freezing Point:	Not Established	Vapor Density:	5		
<b>Boiling Point:</b>	500°F	VOC:	0 g/l		

# SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable.

Hazardous polymerization: Will not occur.

Conditions to avoid: None.

Incompatible materials: Strong oxidants such as Chlorine Gas.

Hazardous decomposition products: Fumes, Smoke, COx, SOx, NOx, when combusted.

Toxicity				
Hazardous Chemicals	LD <sub>50</sub>	<u>LC<sub>50</sub></u> N/A		
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Dermal: >5000 mg/kg (rabbit)	N/A		
	Oral: >5000 mg/m <sup>3</sup> (rat)			
Distillates (petroleum), solvent-refined heavy naphthenic	Dermal: >5000 mg/kg (rabbit)	N/A		
	Oral: >5000 mg/kg (rabbit)			
Likely Routes of Exposure: Inhalation, Skin Contact and E				
Symptoms and Effect - Inhalation: Respiratory tract irrita	tion. Skin Contact: Reddening and in	rritation. Eye Contact: May cause mild		
irritation.				
Ingestion: None				

Ingestion: None.

Long-Term Effect: Product has a low order of acute, oral, and dermal toxicity. Product containing the eyes may cause irritation. Repeated skin contact may cause skin irritation or dermatitis because these types of products tend to remove natural emollients from the skin. Pre-Existing Conditions: Pre-existing dermatitis or skin disease.

# SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: None known.

Persistance & Degradability: None known.

Bioaccumulative Potential: None known.

Mobility in soil: In normal use, emission of Volatile Organic Compounds (VOC's) to the air takes place, typically at a rate of 0 g/l.

# SECTION 13 – DISPOSAL CONSIDERATION

Dispose of product or container in accordance with federal, state or local regulations.

## SECTION 14 - TRANSPORTATION INFORMATION

D.O.T. (U.S.): Not Regulated.

# **SECTION 15 – REGULATORY INFORMATION**

Precautionary Label Information: None. Risk Phrases: None. Safety Phrases: S2-Keep out of reach of children.

# SECTION 16 – OTHER INFORMATION

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. Black Swan Mfg. Co. urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on the sheets. DATE: 01/01/2017

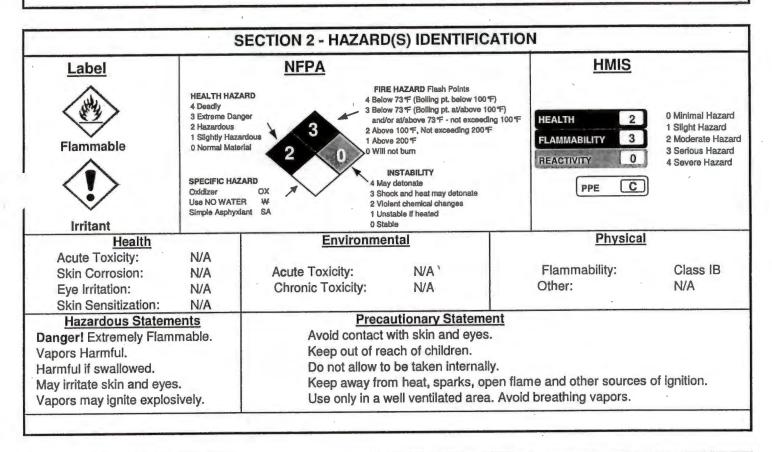


# BLACK SWAN MFG. CO.



# MATERIAL SAFETY DATA SHEET

#### **SECTION 1 - IDENTIFICATION** For any transportation or medical chemical emergencies call: Manufacturer: Black Swan Manufacturing Co. 4540 W. Thomas Street INFOTRAC Chicago, IL 60651-3318 (352) 323-3500 Telephone: 1-800-252-5796 (800) 535-5053 OR Fax: 1-773-227-3705 Web Site: www.blackswanmfg.com 24 hours per day - 7 days a week E-mail: info@blackswanmfg.com **Recommended Use:** Product Name: **Pipe Wrap Primer** Used on underground gas pipe to fill voids and help the pipe wrap tape adhere better to the pipe.



Hazardous Chemicals			Approx %
Acetone	67-64-1	200-662-2	
N-Heptane	142-82-5	205-563-8	
	3988-10-6	258-904-8	

# MATERIAL SAFETY DATA SHEET

	SECTION 4 - FIRST-AID MEASURES	
Inhalation:	Remove to fresh air immediately. If breathing has stopped give artificial respiration. Keep warm and quiet.	
	Get medical attention immediately.	
Skin:	Immediately flush the contaminated area with large amounts of water. Remove contaminated clothing as water is applied. Consult a physician.	
Eyes:	Flush with large amounts of water, lifting upper and lower lids occasionally. Continue for at least 15 minutes. Get medical attention immediately.	
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call Poison Control Center, Hospital Emergency Room, or Physician immediately.	

SECTION 5 -	FIRE-FIGHTING	MEASURES
-------------	---------------	----------

# Specific Hazards

Extinguishing Media Suitable Uns Carbon Dioxide W Dry Chemical Fo Alcohol Foam

<u>Unsuitable</u> Water Foam

During emergency conditions, overexposure to decompostion may cause health hazard. Protective Equipment

Self-contained breathing apparatus. {(SCBA), MSHA/NIOSH}. Full protective gear.

# **Special Firefighting Procedures**

Water may be ineffective, but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

SECTION 6	ACCIDENTAL	RELEASE	MEASURES
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Personal Precautions:	Use normal good safety and health procedures.
Protective Equipment:	Use appropriate respirators, and body protection apparel.
Emergency Procedures:	Keep people away. Eliminate all ignition sources (flames, hot surfaces, and sources of electrical,
	static or frictional sparks). Dike and contain spill with inert material (sand).
Environmental Precautions:	Prevent contamination of sewers, streams, and groundwater with spilled material.
Methods for Cleaning-Up:	Transfer liquids to covered metal containers for recovery or disposal, or remove with inert absorbent.
inerre rei erennig ett	Use non-sparking tools. Place absorbent diking materials in covered metal containers for disposal.
Other Precautions:	None.

SECTION 7 - HANDLING AND STORAGE				
Handling				
Do not take internally. Close container after each use. Avoid skin contact. Empty containers must not be washed and re-used for any purpose. Containers should be grounded and bonded to the receiving container. Do not weld, braze or cut on empty container. Never use pressure to empty. Drum is not a pressure vessel.	Do not store above 115 ℉ (46 ℃) store large quantities i compliance with OSHA 29CFR1910.106.			

# **MATERIAL SAFETY DATA SHEET**

	OSHA	Exposure Limits		
Hazardous Components Acetone		ACGIH-TLV	OSHA-PEL	
		500 ppm	750 ppm	
N-Heptane		400 ppm	400 ppm	
Mercaptotoluimidazo	le	N/A	N/A	
	Pers	onal Protective Equipment		
Respiratory Protection: NIO	SH approved respirator is	required.		
Ventilation: Loca	al exhaust and mechanical	(general) exhaust.		
Other Protective Equipment:	Protective Gloves Impermeable Gloves.		Other Protective Equipment None.	
Other Precautions: Non	e.			
		eering Controls	a a a a a a a a a a a a a a a a a a a	
	Eye wash f	facility and safety showers.		

Appearance:	Light Amber	Volatile by Volume:	68%
Odor:	Ether	Vapor Pressure:	N/A
Odor Threshold:	N/A	Vapor Density:	Heavier than air
pH:	N/A	Relative Density:	N/A
Melting/Freezing Point:	N/A	Solubility:	Negligable
Boiling Point:	130 °F to 210 °F	Partition Coefficient: n-octanol/water:	N/A
Boiling Range:	N/A	Auto-ignition Temperature:	N/A
Flash Point:	-1°F	Specific Gravity (H20=1):	0.8
Evaporation Rate:	Slower than diethyl ether	Viscosity:	N/A
Flammability:	N/A	VOC:	376 g/l
Flammability Limits:	LEL: 1.0% ; UEL:13%		

		SECTION 10 - STA	BILITY AND REACTIVITY
Stability Hazardous Polymerization		Hazardous Polymerization	Conditions To Avoid
Stable	Unstable	May Occur Will Not Occur	
~			Avoid excess heat of 115 °F and sources of ignition.
	Incomp	patible Materials	Hazardous Decomposition Products
Strong a	icids, alkaline n	naterials and oxidizing materials.	Burning, including when heated by welding or cutting, will produce smoke, Carbon Monoxide and Carbon Dioxide.

# MATERIAL SAFETY DATA SHEET

	SECTION 11 - TOXICO	LOGICAL I	NFORMATION	
Likely Routes of Exposure Symptoms/Effects				
Inhalation May cause nose or throat irritation. High concentrations may cause acute central system depression characterized by headaches, dizziness, nausea and confus				
Skin Contact		skin sensitization. May cause defatting and irritation of the skin.		
Eye Contact 🖌 May cause eye irriation.				
Ingestion	Can cause gastrointestinal irritation, nausea, and vomiting. Aspiration of material into			
	lung may cause chemical			
Long-Term Effects:		tem damage.	ed occupational overexposure to solvents with Intentional misuse by deliberately concentrating al.	
Pre-Existing Conditions:	Persons with pre-existing skin, lur	ng, kidney, or l	liver disorders may be at increased risks.	
	To	xicity		
Hazardous Co	nponents	LD <sub>50</sub>	LC50	
Aceton		N/A	N/A	
N-Hepta	ne	N/A	N/A	
Mercaptotolui	nidazole	N/A	N/A	

	SECTION 12 - ECOLOGICAL INFORMATION	
Ecotoxicity:	None.	
Persistance & Degradability:	None.	
Bioaccumulative Potential:	None.	
Mobility in Soil:	None.	
Other Adverse Effects:	None.	

# **SECTION 13 - DISPOSAL CONSIDERATIONS**

Disposal should be made in accordance with federal, state and local regulations.

# **SECTION 14 - TRANSPORTATION INFORMATION**

### **Shipping Information**

Shipping Name: Hazardous Class: I.D. Number: Packing Group: Label Required: Marine Pollutant:

Adhesives, Containing a Flammable Liquid 3 UN1133 II Flammable Liquid

No

# Exception to the rule: If the package that contains the hazardous material is in a small consumer size (Less than 1L) then the rules that apply to shipping hazardous materials do not apply. This is called an "Exception". This is classified as Consumer Commodity ORM-D.

# **SECTION 15 - REGULATORY INFORMATION**

None.

# **SECTION 16 - OTHER INFORMATION**

Disclaimer: Revision Date: JULY 2010 Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. Black Swan Manufacturing Co. urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents, and contractors of the information on the sheets.

LC COOL Gel 5 pgs

Cool Gel®
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Factor Hager Vol Products Regulations (HPR) Date of issue: 11/03/1998Revision date: 03/05/2015Supersedes: 02/26/2013 Version: 3.0

LA-CO Industries, Inc.

# SECTION IS Identification of the substance/infuture and of the company/under elding

Product identifier 1.1.

Product form Trade name

: Mixture ; Cool Gel®

Relevant identified uses of the substance or mixture and uses advised against 1.2. : Heat-absorbing compound

Use of the substance/mixture

1.3.	Details of the supplier of the safety data sheet	
1201 Pi Elk Gro	Industries, Inc. ratt Boulevard ve Village, IL. 60007-5746 vara oc 7600	
Fax: (84	(847) 956-7600 47) 956-9885 customer_service@laco.com	

Emergency telephone number 1.4.

Emergency number

: 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

# SECTION 2: Hezends Identification

Classification of the substance or mixture 2.1. Classification in accordance with the Globally Harmonized Standard Not classified

2.2 Label elements

**GHS-US** labelling No labelling applicable

Other hazards 2.3.

No additional information available

# SECTION 3: Composition/information onlingredients

Substance 3.1.

Not applicable

Mixture 3.2.

No hazardous components.

# SECTION 4: First ald measures

1.2. 4

4.1. Description of first aid measures First-aid measures general :	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after skin contact : First-aid measures after eve contact :	Allow victim to breathe fresh air. Wash skin with mild soap and water. Rinse eyes with water as a precaution. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>4.2.</b> Most important symptoms and effects, Symptoms/injuries	both acute and delayed Not expected to present a significant hazard under anticipated conditions of normal use.

#### Indication of any immediate medical attention and special treatment needed 4.3.

No special procedures required.

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR) Ξ

SECTION SURVEY	Imersures
5.1. Extinguishing media Suitable extinguishing media Unsuitable extinguishing media	<ul> <li>Use extinguishing media appropriate for surrounding fire.</li> <li>None known.</li> </ul>
5.2. Special hazards aris Fire hazard Reactivity	ing from the substance or mixture : Not flammable. : No dangerous reactions known.
5.3. Advice for firefighter Firefighting instructions Protection during firefighting	<ul> <li>rs</li> <li>Do not allow run-off from fire fighting to enter drains or water courses.</li> <li>Do not enter fire area without proper protective equipment, including respiratory protection. Fire-resistant protective clothing. Wear a self contained breathing apparatus.</li> </ul>
SECTION & Accidental	referesomensures
6.1. Personal precaution General measures	s, protective equipment and emergency procedures : This product is not hazardous.
6.1.1. For non-emergency Emergency procedures	personnel : Evacuate unnecessary personnel.
6.1.2. For emergency resp Emergency procedures	onders 7 : No additional risk management measures required.
6.2. Environmental preca Contains no substances known	autions to be hazardous to the environment.
6.3. Methods and materia Methods for cleaning up	al for containment and cleaning up : Wipe up with absorbent material (for example cloth).
6.4. Reference to other s Section 13: disposal information	ections . Section 7: safe handling. Section 8: personal protective equipment.
SECTION 77: Genelling en	distorage
7.1. Precautions for safe Precautions for safe handling Hygiene measures	<ul> <li>handling</li> <li>Does not necessitate any specific/particular technical measures.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.</li> </ul>
7.2. Conditions for safe s Storage conditions	torage, including any incompatibilities : Store in original container.
7.3. Specific end use(s) Metal Working Fluids.	·
(SECTION & Exposure α	antrols/personal/protection
8.1. Control parameters	
Cool Gel®	Not applicable
OSHA	Not applicable
8.2. Exposure controls Appropriate engineering controls Personal protective equipment Hand protection Eye protection Respiratory protection	<ul> <li>Ensure good ventilation of the work station.</li> <li>Avoid all unnecessary exposure.</li> <li>None under normal use.</li> <li>No special eye protection equipment recommended under normal conditions of use.</li> <li>No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.</li> </ul>

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

### SECILONS: Physical and chamical proparities

#### Information on basic physical and chemical properties 9.1.

•••			• •
Pł	iysical state	:	Liquid
Aŗ	pearance	:	Gel.
Co	blour	:	clear. Colorless.
00	iour	:	odourless.
0	lour threshold	:	No data available
p۲	I .	:	7
Re	elative evaporation rate (butyl acetate=1)	:	No data available
M	elting point	:	0°C
Fr	eezing point	:	No data available
В	iling point	:	100
Fl	ash point	:	No data available
A	to-ignition temperature	:	No data available
De	ecomposition temperature	:	No data available
F١	ammability (solid, gas)	:	No data available
Va	apour pressure	:	No data available
R	elative vapour density at 20 °C	:	No data available
R	elative density	:	No data available
S	blubility	:	No data available
Lo	ng Pow	:	No dàta available
Lo	g Kow	:	No data available
Vi	scosity, kinematic	:	No data available
Vi	scosity, dynamic	:	No data available
E	plosive properties	:	No data available
0	xidising properties	:	No data available
E	plosive limits	:	No data available
9.	2. Other information		
	2. Other Information		0 %
V	JO COMEIN	•	<b>U</b> 75

# ASECTION 10. Stability and reactivity

10.1. Reactivity No dangerous reactions known.

**Chemical stability** 10.2. Stable under normal conditions.

Possibility of hazardous reactions 10.3. Hazardous polymerization will not occur.

Conditions to avoid 10.4. None known.

Incompatible materials 10.5. Water reactive.

Hazardous decomposition products 10.6. No dangerous decomposition products known.

### SECTION (KI: Toxteologited) Information

11.1. Information on toxicological ef Acute toxicity	fects : Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
05/00/0045	ENI (English)

3/5

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monda according to Canadian Hazardous Products Regulation	ay, March 26, 2012 / Rules and Regulations is (HPR)
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and	symptoms
Likely routes of exposure	: Skin and eye contact
SECTION 12: Ecolopher Informatio	m
12.1 Toxicity No additional information available	22 marget (12 marget 12 marget) des de régiones de la familie de series de la serie de la partie de la familie de 2002 de 20
12.2. Persistence and degradability No additional information available	
12.3. Bioaccumulative potential No additional information available	
<b>12.4. Mobility in soil</b> No additional information available	
12.5. Other adverse effects No additional information available	
SECTION 18 Disposed constituents	onsus a sub-
13.1 Waste treatment methods Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
SECTION 149: Then sport sufformation	
In accordance with DOT and TDG Not considered a dangerous good for transport Proper Shipping Name (ADR)	
<b>Transport by sea</b> No additional information available	
Air transport	
No additional information available	f
SECTION 15: Regulatory informatio	
15.1. US Federal regulations	
No additional information available	
15.2. International regulations	
CANADA No additional information available	
EU-Regulations No additional information available	
All components are listed on the EEC inventor All ingredients are listed in the Toxic Substance	y European Inventory of Existing Commercial Chemical Substances (EINECS). ses Control Act (TSCA). testic Substances List (DSL) or Non-Domestic Substances List (NDSL).
15.3. US State regulations No additional information available	
SECTION:16: Other information	: Revised format.
<del>.</del>	

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Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Data sources	: ACGIH 2000.
	Canadian Centre for Occupational Health and Safety. Accessed at: http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html.
	ESIS (European chemincal Substances Information System; accessed at: http://esis.jrc.ec.europa.eu/index.php?PGM=cla.
	European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
	National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.
	OSHA 29CFR 1910.1200 Hazard Communication Standard.
	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
	TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.
Abbreviations and acronyms	: ACGIH (American Conference of Governement Industrial Hygienists).
	ATE: Acute Toxicity Estimate.
	CAS (Chemical Abstracts Service) number.
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population.
	OSHA: Occupational Safety & Health Administration.
	PBT: Persistent, Bioaccumulative, Toxic.
	STEL: Short Term Exposure Limits.
	TSCA: Toxic Substances Control Act.
	TWA: Time Weight Average.
Other information	: None.
NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.
	V

SDS Prepared by: The Redstone Group, LLC 6397 Emerald Pkwy. Suite 200 Dublin, OH USA 43016 T 614-923-7472 www.redstonegrp.com

#### LACO NA GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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LC Flux Liquid 10 pgs

LA-CO Industries, Inc.

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR) Date of issue: 06/03/1993Revision date: 03/05/2015Supersedes: 02/04/2013 Version: 3.0

# SECTION is the attaction of the substance/inixing and of the company/undertabling

Product identifier 1.1. Product form

: Mixture

Trade name

: BRITE Regular Soldering Flux Liquid

Relevant identified uses of the substance or mixture and uses advised against 1.2. : Soldering flux Use of the substance/mixture

Details of the supplier of the safety data sheet 1.3. LA-CO Industries, Inc. 1201 Pratt Boulevard Elk Grove Village, IL. 60007-5746 Phone: (847) 956-7600 Fax: (847) 956-9885 E-mail: customer\_service@laco.com

1.4. Emergency telephone number Emergency number

: 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

#### SECTION 24 Harando Iden III de Ilon

Classification of the substance or mixture 2.1.

Classification in accordance with the Globally Harmonized Standard

Flam. Liq. 3 H226 STOT SE 3 H335 Full text of H-phrases: see section 16

#### Label elements 2.2

**GHS-US** labelling Hazard pictograms (GHS-US)

Signal word (GHS-US) Hazard statements (GHS-US)

Precautionary statements (GHS-US)



#### : Warning

- H226 Flammable liquid and vapour
- H335 May cause respiratory irritation
- : P210 Keep away from heat, open flames, sparks. No smoking
- P233 Keep container tightly closed
- P240 Ground/bond container and receiving equipment
- P241 Use explosion-proof lighting, ventilating, electrical equipment
- P242 Use only non-sparking tools
- P243 Take precautionary measures against static discharge
- P261 Avoid breathing mist, spray, vapours
- P271 Use only outdoors or in a well-ventilated area
- P280 Wear protective clothing, protective gloves

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse

skin with water/shower

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P312 - Call a doctor if you feel unwell

P370+P378 - In case of fire: Use Suitable extinguishing media to extinguish

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P403+P235 - Store in a well-ventilated place. Keep cool

P405 - Store locked up

P501 - Dispose of contents/container to an approved waste disposal plant

#### Other hazards 2.3.

No additional information available

### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

#### SECTION 3: Composition/Information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	% (W/W)	GHS-US classification
Ethanolamine hydrochloride	(CAS No) 2002-24-6	27.27	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
ammonium chloride	(CAS No) 12125-02-9	6.95	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
ethanol	(CAS No) 64-17-5	5.09	Flam. Liq. 2, H225
Isopropanol	(CAS No) 67-63-0	0.90	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
polythylene glycol trimethylphenylnonyl ether	(CAS No) 60828-78-6	0.33 - 0.38	Eye Dam. 1, H318
propyl acetate	(CAS No) 109-60-4	0.30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

Full text of H-phrases: see section 16

### SECTION 4x First ald measures

4.1. Description of first aid measures	
First-aid measures general	<ul> <li>Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).</li> </ul>
First-aid measures after inhalation	<ul> <li>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.</li> </ul>
First-aid measures after skin contact	: Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
First-aid measures after eye contact	<ul> <li>If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> </ul>
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

# 4.2. Most important symptoms and effects, both acute and delayed Symptoms/injuries after inhalation : May cause respiratory irritation.

4.3. Indication of any immediate medical attention and special treatment needed

All treatments should be based on observed signs and symptoms of distress in the patient.

5.1.	Extinguishing media	
Suitabl	e extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuita	ble extinguishing media	: None known.
5.2.	Special hazards arising from	he substance or mixture
Fire ha	zard	: Flammable liquid and vapour.
Explosi	on hazard	: May form flammable/explosive vapour-air mixture.
Reactiv	ity	: No dangerous reactions known.
5.3.	Advice for firefighters	
irefigh	ting instructions	: Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
rotect	on during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.
TOT	ION 6: Acatelantal celeas	

General measures

: Avoid all eye and skin contact and do not breathe vapour and mist. Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

# BRITE Regular Soldering Flux Liquid Safety Data Sheet

6.1.1.	For non-emergency person	nnel
	e equipment	: In case of inadequate ventilation wear respiratory protection.
	ncy procedures	: Evacuate unnecessary personnel.
6.1.2. Brotoctiv	For emergency responders	: Where excessive vapour, mist, or dust may result, use approved respiratory protection
FIOLECLIV	e equipment	equipment.
Emergen	ncy procedures	: Ventilate area.
6.2.	Environmental precautions	S v
Do not di	lischarge into drains or the env	vironment.
6.3.	Methods and material for o	containment and cleaning up
For conta	ainment	: Stop the flow of material, if this is without risk. Contain and/or absorb spill with inert material, then place in suitable container.
Methods	s for cleaning up	: Take up in non-combustible absorbent material and shove into container for disposal.
6.4.	Reference to other section	
	13: disposal information. Section	ion 7: safe handling. Section 8: personal protective equipment.
A	A COMPANY OF A COMPANY OF A COMPANY OF A COMPANY OF A COMPANY	
SECIL	ON 7/2 (Handling) and st	<u>orege</u>
7.1.	Precautions for safe hand	ling
	Precautions for safe hand al hazards when processed	: Handle empty containers with care because residual vapours are flammable.
Additiona		<ul> <li>Handle empty containers with care because residual vapours are flammable.</li> <li>Avoid breathing mist, spray, vapours. Use only outdoors or in a well-ventilated area. No open flames. No smoking. Take precautionary measures against static discharge. Use only non- sparking tools.</li> </ul>
Additiona Precaution	al hazards when processed	<ul> <li>Handle empty containers with care because residual vapours are flammable.</li> <li>Avoid breathing mist, spray, vapours. Use only outdoors or in a well-ventilated area. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-</li> </ul>
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Additiona Precautio Hygiene <b>7.2.</b>	al hazards when processed ions for safe handling measures	<ul> <li>Handle empty containers with care because residual vapours are flammable.</li> <li>Avoid breathing mist, spray, vapours. Use only outdoors or in a well-ventilated area. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or</li> </ul>
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Additiona Precaution Hygiene 7.2. Technica Storage Incompa Incompa Prohibition 7.3. Flux. SECTI 8.1.	al hazards when processed ions for safe handling e measures <b>Conditions for safe storag</b> al measures conditions atible products atible materials ions on mixed storage <b>Specific end use(s)</b> <b>[ONI8:[Exposure:contr. Control parameters</b>	<ul> <li>Handle empty containers with care because residual vapours are flammable.</li> <li>Avoid breathing mist, spray, vapours. Use only outdoors or in a well-ventilated area. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.</li> <li>re, including any incompatibilities <ul> <li>Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/ equipment.</li> <li>Keep container tightly closed. Store in a dry, cool and well-ventilated place.</li> <li>Oxidizer. Cyanides and sulfide salts.</li> <li>Heat sources. Sources of ignition.</li> <li>Keep away from incompatible materials.</li> </ul> </li> </ul>
Precaution Hygiene 7.2. Technica Storage Incompa Incompa Prohibition 7.3. Flux. SEGTI 8.1.	al hazards when processed ions for safe handling measures <b>Conditions for safe storag</b> al measures conditions atible products atible materials ions on mixed storage <b>Specific end use(s)</b> <b>[ONI&amp;REXPOSURECONTR</b> <b>Control parameters</b> <b>E Regular Soldering Flux Lig</b>	<ul> <li>Handle empty containers with care because residual vapours are flammable.</li> <li>Avoid breathing mist, spray, vapours. Use only outdoors or in a well-ventilated area. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.</li> <li>Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/ equipment.</li> <li>Keep container tightly closed. Store in a dry, cool and well-ventilated place.</li> <li>Oxidizer. Cyanides and sulfide salts.</li> <li>Heat sources. Sources of ignition.</li> <li>Keep away from incompatible materials.</li> </ul>

OSHA	Not applicable	
ethanol (64-17-5)	CONTRACTOR CONTRACTOR AND CONTRACTOR	La Malan Martin Contractor State Barray Deletion Contractor
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1884 mg/m³
ACGIH	ACGIH TWA (ppm)	1000 ppm
ACGIH	ACGIH STEL (ppm)	1000 ppm
ACGIH	Remark (ACGIH)	URT irr
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	1880 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (ppm)	1000 ppm
leanrangel (67-63-0)		
ACGIH	ACGIH TWA (mg/m³)	490 mg/m <sup>3</sup>
ACGIH	ACGIH TWA (ppm)	200 ppm

SDS Ref.: LACO1412006

# BRITE Regular Soldering Flux Liquid Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

ACGIH ACGIH ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	960 mg/m <sup>3</sup>
	ACGIH STEL (ppm)	400 ppm
ACGIH		Eye & URT irr; CNS impair
	Remark (ACGIH)	
OSHA	OSHA PEL (TWA) (mg/m³)	980 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
Canada (Quebec)	VECD (mg/m³)	1230 mg/m <sup>3</sup>
Canada (Quebec)	VECD (ppm)	500 ppm 983 mg/m³
Canada (Quebec) Canada (Quebec)	VEMP (mg/m³) VEMP (ppm)	400 ppm
propyl acetate (109-60-4)	and the second secon	
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	835 mg/m³
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	1040 mg/m³
ACGIH	ACGIH STEL (ppm)	250 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	840 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
	VECD (mg/m <sup>3</sup> )	1040 mg/m <sup>3</sup>
Canada (Quebec) Canada (Quebec)	VECD (ppm)	250 ppm
Canada (Quebec)	VEMP (mg/m³)	835 mg/m³
Canada (Quebec)	VEMP (ppm)	200 ppm
**************************************	25-02-9)	
ACGIH	ACGIH TWA (mg/m³)	10 mg/m <sup>3</sup>
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
		Eye & URT irr
ACGIH	Remark (ACGIH)	
OSHA	Not applicable	
Canada (Quebec)	VECD (mg/m <sup>3</sup> )	20 mg/m³ 10 mg/m³
Canada (Quebec)	VEMP (mg/m³)	
polythylene glycol trimet	hylphenylnonyl ether (60828-78-6)	
ACGIH	Not applicable	
OSHA	Not applicable	
and the second		
Ethanolamine hydrochlor ACGIH	Not applicable	에 있는 것은 이것은 이번 것은 것이다. 유가 가장은 것은 것은 것은 것은 것은 것은 것은 것은 것을 가지 않는다. 이것은 것은 것은 것은 것을 가지 않는다. 이것은 것은 것은 것은 것은 것은 것은 같은 것은
OSHA	Not applicable	

#### Information on basic physical and chemical properties 9.1.

Physical state	· .	: Liquid
Colour		: Yellow. light brown.

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

: No data available Odour threshold : 6.5 - 7 pН No data available Relative evaporation rate (butyl acetate=1) : : No data available Melting point : No data available Freezing point : 100 °C Boiling point : 42.2 °C Flash point : No data available Auto-Ignition temperature : No data available Decomposition temperature : No data available Flammability (solid, gas) : No data available Vapour pressure : No data available Relative vapour density at 20 °C : No data available Relative density : Soluble in water. Solubility : No data available Log Pow : No data available Log Kow : No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive properties : No data available Oxidising properties : No data available Explosive limits

#### Other information 9.2. VOC content

: 6%

Reactivity 10.1.

No dangerous reactions known.

Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

Possibility of hazardous reactions 10.3.

SECTION 10: Stability and reactivity

Hazardous polymerization will not occur.

Conditions to avoid Avoid excessive heat or cold. Open flame. Overheating. Direct sunlight. Heat. Sparks.

incompatible materials

10.5. Oxidizing agent. Cyanides and sulfide salts.

Thermal decomposition generates : Carbon dioxide. Carbon monoxide. ammonia. hydrogen chloride. ammonium chloride. May release flammable gases. AND ADDRESS OF A DECK OF A DECK

Sec. A.

SECTION IN TRANSCOLOTION INFORMATION	
A STATE OF THE OWNER	

#### Information on toxicological effects 11.1.

Not classified

Acute toxicity		
BRITE Regular Soldering Flux Liqu		
	> 5000 mg/kg male	
LD50 oral rat		references the state of the
ethanol (64-17-5)		
LD50 oral rat	10470 mg/kg	·····
LD50 dermal rabbit	> 20000 mg/kg	
LC50 inhalation rat (mg/l)	133.8 mg/l/4h	
ATE CLP (oral)	10470.000 mg/kg bodyweight	
	133.800 mg/l/4h	
ATE CLP (vapours)	133,800 mg/l/4h	
ATE CLP (dust,mist)		1. 医右侧静脉的 新花 化
Isopropanol (67-63-0)		
LD50 oral rat	5840 mg/kg	
LD50 dermal rabbit	16.4 ml/kg	
LC50 inhalation rat (ppm)	> 10000 ppm/4h	
	EN (English) SDS Ref.: LAC01412006	5/*

05/03/2015

# BRITE Regular Soldering Flux Liquid Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

ording to Canadian Hazardous Products Regulations (	HPR)
sopropanol (67-63-0)	
	5840.000 mg/kg bodyweight
propyl acetate (109-60-4)	A MARKEN AND A CONTRACTOR OF THE REAL AND A CONTRACT OF THE AND A CONTRACT OF THE ADDRESS OF THE
_D50 oral rat	8700 mg/kg
D50 dermal rabbit	> 17800 mg/kg
LC50 inhalation rat (mg/i)	32 mg/l/4h
ATE CLP (oral)	8700.000 mg/kg bodyweight
ATE CLP (vapours)	32.000 mg/l/4h
ATE CLP (dust,mist)	32.000 mg/l/4h
ammonium chloride (12125-02-9)	
LD50 oral rat	1410 mg/kg
D50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	1410.000 mg/kg bodyweight
the strength with the strength on the strength on the strength of the strength	ner (60828-78-6)
	3300 mg/kg
LD50 oral rat	8874 mg/kg
LD50 dermal rat	3300.000 mg/kg bodyweight
ATE CLP (oral)	8874.000 mg/kg bodyweight
ATE CLP (dermal)	
kin corrosion/irritation	: Not classified.
	(Not irritating to rabbits on cutaneous application)
erious eye damage/irritation	: Not classified.
	(Not irritating to rabbits on ocular application)
espiratory or skin sensitisation	: Not classified
erm cell mutagenicity	: Not classified
arcinogenicity	: Not classified
Isopropanol (67-63-0)	and a straight of the straight
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
pecific target organ toxicity (single	: May cause respiratory irritation.
xposure)	
Specific target organ toxicity (repeated	: Not classified
exposure)	
ammonium chloride (12125-02-9)	
NOAEL (subchronic, oral, animal/male, 90	>= 580 mg/kg bodyweight 56 days
days)	
Aspiration hazard	: Not classified
Potential adverse human health effects and	symptoms
Symptoms/injuries after inhalation	: May cause respiratory irritation.
ikely routes of exposure	: Skin and eye contact; Inhalation
SECTION 12: Ecological informatio	$\mathbf{n}$ .
· · · · · · · · · · · · · · · · · · ·	
	14200 mg/l
LC50 fish 1	5012 mg/l
EC50 Daphnia 1	
Isopropanol (67-63-0)	
Isopropanol (67-63-0) LC50 fish 1	10000 mg/l
LC50 fish 1	
LC50 fish 1 propyl acetate (109-60-4)	10000 mg/l
LC50 fish 1 propyl acetate (109-60-4) LC50 fish 1	10000 mg/l 60 mg/l 96 h
LC50 fish 1 propyl acetate (109-60-4) LC50 fish 1 EC50 Daphnia 1	10000 mg/l 60 mg/l 96 h 91.5 mg/l 48 h
LC50 fish 1 propyl acetate (109-60-4) LC50 fish 1	10000 mg/l           60 mg/l 96 h           91.5 mg/l 48 h
LC50 fish 1 propyl acetate (109-60-4) LC50 fish 1 EC50 Daphnia 1	10000 mg/l           60 mg/l 96 h           91.5 mg/l 48 h

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# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

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#### Persistence and degradability 12.2.

12.2.	Persistence and degradability	
othan	ol/(64-17-5)	
51040	the second s	
Isopr	opanol (67-63-0) 20-27	Readily biodegradable.
Persis	tence and degradability	Readily biodegradable.
propy	(acetate (109-60-4)	an a
Persis	stence and degradability	Itedany blocky
		62 % 5 d
Biodegradation         62 % 5 d           pölythýlěné glýcol trimethylphenylnonyl éther, (60826-78-6))         Alexandra (1990)           Not readily biodegradable.         Not readily biodegradable.		
poly	stence and degradability	Not readily biodegradable.
Persi	stence and degradaeinty	

#### **Bioaccumulative potential** 12.3.

ethanol (64-17-5)		
Bioaccumulative potential	Not expected to bioaccumulate.	

The second of th	A het expected to bioaccumulate.	
liconronanol (67-63-0)	and the state of the	
LOOPLO PARA AND A STORE AND	Not expected to bioaccumulate.	_
	Not expected to bloaccumulate.	-
Bioaccumulative potential		1

propulacetate (109-60-4)	
	1.23
Log Pow	

#### 12.4. Mobility in soil

No additional information available

Other adverse effects 12.5.

### No additional information available

# Catolisted Broosel Considerations

SECHORING DISposanconcrete	
13.1Waste treatment methodsWaste disposal recommendationsAdditional informationEcology, - waste materials	<ul> <li>Dispose in a safe manner in accordance with local/national regulations.</li> <li>Handle empty containers with care because residual vapours are flammable.</li> <li>Avoid release to the environment.</li> </ul>
SECTION IC: Themsport Unitermetion	
In accordance with DOT and TDG Transport document description UN-No.(DOT) Proper Shipping Name (DOT) Department of Transportation (DOT) Hazard	<ul> <li>UN1170 Ethanol solutions, 3, III</li> <li>UN1170</li> <li>Ethanol solutions</li> <li>3 - Flammable liquid</li> </ul>

: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

Classes Packing group (DOT)

#### ADR

: UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III, (D/E) Transport document description : ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) Proper Shipping Name (ADR) : 111 Packing group (ADR) : 3 - Flammable liquid Class (ADR)

## Transport by sea

UN-No. (IMDG) Proper Shipping Name (IMDG) Class (IMDG) Packing group (IMDG)

#### Air transport

UN-No.(IATA) Proper Shipping Name (IATA) Class (IATA)

EN (English)

: Ethanol solution

: 3 - Flammable Liquids

: III - Minor Danger

: UN 1170

: UN 1170

: 10

: 3 - Flammable liquids

SDS Ref.: LAC01412006

and the second real meters have been the the state

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Packing group (IATA)

#### · 18

# SECTION IS: Regulatory Information

#### 15.1. US Federal regulations

Listed on the United States TSCA (Toxic Substances Control Act) Inventory

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes Fire hazard

propyl/acetate (109-60-4)) and share the second states in the 14 Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on the United States TSCA (Toxic Substances Control Act) inventory

RQ (Reportable quantity, section 304 of EPA's 5000 lb List of Lists)

Listed on the United States TSCA (Tox	nyl ether (60828-78-6)) c Substances Control Act) inventory
EPA TSCA Regulatory Flag	C Substances Control Act/Inventory           XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e., Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).           N - N - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

Ethanolamine hydrochloride (2002-24-6) Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

#### CANADA

ethanol (64-17-5) 12.1 Sec. Sec. Listed on the Canadian DSL (Domestic Substances List) inventory.

10124-00 Isopropanol (67-63-0) Listed on the Canadian DSL (Domestic Substances List) inventory.

and the second second propy/acetate (109-60-4) Listed on the Canadian DSL (Domestic Substances List) inventory.

ammonium chloride (12125-02-9) Listed on the Canadian DSL (Domestic Substances List) inventory.

polythylene glycol trimethylphenylnonyl ether (60828-78-6) **X**197 - 25 Listed on the Canadian DSL (Domestic Substances List) inventory.

Ethanolamine hydrochloride (2002-24-6) 1 Listed on the Canadian DSL (Domestic Substances List) inventory.

#### **EU-Regulations**

ethanol (64-17-5) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

192 Isopropanol (67-63-0) <u>\_\_\_\_</u> Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

propyl acetate (109-60-4) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

ammonium chloride (12125-02-9) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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-	polythylene glycol trimethylphenylnonyl ether (60828-78-6)	
	Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
	Listed on the EEC inventory EINECS (European Inventory of Existing Commenced Com Commenced Commenced Comme	

1. M. & M. & M. & M. C. Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

BRITE Regular Soldering Flux Liquid All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS).

All ingredients are listed in the Toxic Substances Control Act (TSCA). All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

#### 15.3. US State regulations

ethanol (64-17-5); stat. Total U.S. - New Jersey - Right to Know Hazardous Substance List

Isopropanol (67-63-0)

U.S. - Minnesota - Hazardous Substance List

U.S. - New Jersey - Right to Know Hazardous Substance List

propyl acetate (109-60-4) 12 48 4 5 5 5 5 5 3.6 5.5

U.S. - New Jersey - Right to Know Hazardous Substance List

ammonium chloride (12125-02-9) NEAR STREET, STOR

### U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other Information	
	: GHS classification information. Revised format. Revised sections: 1 - 16.
Indication of changes Data sources	: ACGIH 2000.
	Canadian Centre for Occupational Health and Safety. Accessed at: http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html.
	ESIS (European chemincal Substances Information System; accessed at: http://esis.irc.ec.europa.eu/index.php?PGM=cla.
	European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
	National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.
	OSHA 29CFR 1910.1200 Hazard Communication Standard.
	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
	TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.
At Low influence and apropying	: ACGIH (American Conference of Governement Industrial Hygienists).
Abbreviations and acronyms	ATE: Acute Toxicity Estimate.
	CAS (Chemical Abstracts Service) number.
	CLP, Classification Labelling Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population.
	OSHA: Occupational Safety & Health Administration.
	PBT: Persistent, Bioaccumulative, Toxic.
	STEL: Short Term Exposure Limits.
	TSCA: Toxic Substances Control Act.
	TWA: Time Weight Average.
Other information	: None.

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NFPA health hazard	: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.	
NFPA fire hazard	: 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.	
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.	

#### Full text of H-phrases:

ext of h-philases.			
Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4			
Eye Dam. 1	Serious eye damage/eye irritation, Category 1		
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A		
Flam. Liq. 2	Flammable liquids, Category 2		
Flam. Lig. 3	Flammable liquids, Category 3		
Skin Irrit. 2	Skin corrosion/irritation, Category 2		
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation		
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis		
H225	Highly flammable liquid and vapour		
H226	Flammable liquid and vapour		
H302	Harmful if swallowed		
H315	Causes skin irritation		
H318	Causes serious eye damage		
H319	Causes serious eye irritation		
H335	May cause respiratory irritation		
H336	May cause drowsiness or dizziness		

SDS Prepared by: The Redstone Group, LLC 6397 Emerald Pkwy.

Suite 200 Dublin, OH USA 43016 T 614-923-7472 www.redstonegrp.com

#### LACO NA GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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LC Flux 7pg5

LA	CO Industries, Inc.	according to Federai Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR) Date of issue: 05/26/2011Revision date: 03/09/2015Supersedes: 05/26/2011 Version: 2.1
SECT	ON A leantification of the sub	stance/mixture and of the company/undertaking
1.1.	Product identifier	
Product	form	: Mixture
Trade n	ame	: Regular Soldering Flux Paste
1.2.	Relevant identified uses of the subs	tance or mixture and uses advised against
Use of t	he substance/mixture	: Soldering flux
1.3.	Details of the supplier of the safety	data sheet
	Industries, Inc.	
	att Boulevard ve Village, IL. 60007-5746	
	(847) 956-7600	
Fax: (84	47) 956-9885	
E-mail:	customer_service@laco.com	
1.4.	Emergency telephone number	
Emerge	ency number	: 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887
<b>KSFRT</b>	ION & Harands Identification	
-CI-CA		
2.1.	Classification of the substance or n	
	ication in accordance with the Globali	y Harmonized Standard
Not cla	ssified	
2.2	Label elements	
<b>Z.Z</b>	Laber elements ,	
GHS-U	S labelling	
No labe	elling applicable	
2.3.	Other hazards	
2.4	Unknown acute toxicity (GHS-US)	nt(s) of unknown acute toxicity (Inhalation (Dust/Mist))
0.03 pe	arcent of the mixture consists of ingredier	
SECI	ION 3: Composition/Informatio	onioningredients
3.1.	Substance	
	blicable	
3.2.	Mixture	
V. Marine	Produ	ct identifier

Name Name	Product identifier.	70 (W/W)	GIIG-00 classification
Ethanolamine hydrochloride	(CAS No) 2002-24-6	15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
ammonium chloride	(CAS No) 12125-02-9	9.14	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

# SECTION (A) (First et c) measures

4.1. Description of first aid measures			
First-aid measures general	advice (show the label w	nouth to an unconscious person. If you feel unwell, see here possible).	
First-aid measures after inhalation	comfortable for breathing	s difficult, remove victim to fresh air and keep at rest in a position	
First-aid measures after skin contact	: Remove/Take off immed	iately all contaminated clothing. Rinse skin with water/s	hower.
First-aid measures after eye contact	: Rinse cautiously with wa do. Continue rinsing.	ter for several minutes. Remove contact lenses, if pres	ent and easy to
09/03/2015	EN (English)	SDS Ref.: LC_1407002	1/7

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First-aid measures after ingestion

: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries

s : No significant signs or symptoms indicative of any health hazard are expected to occur.

4.3. Indication of any immediate medical attention and special treatment needed

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION & Flicighting wa	SURES	
5.1. Extinguishing media		
Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.	
Unsuitable extinguishing media	: None known.	
5.2. Special hazards arising fr	2. Special hazards arising from the substance or mixture	
Fire hazard	: No specific fire or explosion hazard.	
Explosion hazard	: Product is not explosive.	
Reactivity	: No dangerous reactions known.	
5.3. Advice for firefighters		
Firefighting instructions	<ul> <li>Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire fighting to enter drains or water courses.</li> </ul>	
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.	

#### SECTION & Accidentel release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel	,
Protective equipment	: Wear suitable protective clothing and gloves. Nitrile gloves. Chemical goggles or safety glasses. In case of inadequate ventilation wear respiratory protection.
Emergency procedures	: Evacuate unnecessary personnel.
6.1.2. For emergency responders	
Protective equipment	: Wear suitable protective clothing and gloves. Neoprene or nitrile rubber gloves. Chemical goggles or safety glasses. Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment.
Emergency procedures	: Ventilate area.
6.2. Environmental precautions	
Avoid release to the environment.	
6.3. Methods and material for contair	
For containment	: Stop the flow of material, if this is without risk. Contain and/or absorb spill with inert material, then place in suitable container.
Methods for cleaning up	: Take up in non-combustible absorbent material and shove into container for disposal. On land, sweep or shovel into suitable containers.

#### 6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

# SECTION 7x Handling and storage 7.1. Precautions for safe handling Precautions for safe handling : Do not eat, drink or smoke when using this product. Provide good ventilation in process area to prevent formation of vapour. Remove all sources of ignition. Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. 7.2. Conditions for safe storage, including any incompatibilities

# Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use.

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- : Strong oxidizing agents. Strong acids. Strong bases. amines. Acid chlorides,. metals. Cyanides and sulfide salts.
- Prohibitions on mixed storage
- : Keep away from incompatible materials.

#### Specific end use(s) 7.3.

Flux.

SECTION 8: Exposure controls/personal protection

#### 8.1. **Control parameters**

	Regular Soldering Flux Paste			
۰	ACGIH	Not applicable		
	OSHA	Not applicable		

ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m³
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	Not applicable	
Canada (Quebec)	VECD (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>

Ethanolamine hydrochloride	(2002-24-6)
ACGIH	Not applicable
OSHA	Not applicable

#### Exposure controls 8.2.

Appropriate engineering controls	: Provide local exhaust ventilation of closed transfer systems to minimize exposures.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: It is a good industrial hygiene practice to minimize skin contact. Wear suitable gloves. Impermeable protective nitrile gloves.
Respiratory protection	<ul> <li>In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.</li> </ul>
Other information	: Do not eat, drink or smoke when using this product.

Other information

SECTION 9: Physical and Chemical properties

Information on basic physical and chemical properties 9.1.

Physical state	: Liquid
Appearance	: Paste.
Colour	: yellowish to white.
Odour	: Faint.
Odour threshold	: No data available
pH	: 6.5 - 7
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 204 °C (TOC)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.1
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
09/03/2015	EN (English)

Section 2 Alton States

17. B. A. Y.

# Regular Soldering Flux Paste Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

ccording to Canadian Hazardous Products Regulat Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
	: No oxidizing properties.
Dxidising properties	: No data available
Explosive limits	
9.2. Other information	
VOC content	: 0 %
SECTION 10: Stebility enducedit	νίιγ
10.1. Reactivity No dangerous reactions known.	
10.2. Chemical stability	
Stable at ambient temperature and under no 10.3. Possibility of hazardous reactio	
10.3. Possibility of hazardous reaction Hazardous polymerization will not occur.	
<b>10.4.</b> Conditions to avoid Contact with incompatible materials. Avoid e	excessive heat or cold.
10.5. Incompatible materials Strong oxidizing agents. Strong bases. Stron	ng acids. amines. aluminum and other metals. Cyanides and sulfide salts.
10.6 Hazardous decomposition prod	lucts
	ia. hydrogen chloride. Burning produces irritating, toxic and noxious fumes.
SECTION IN: Troxicological union	nation
11.1. Information on toxicological eff	ents
This information on texacetegical en	
	: Not classified
Acute toxicity	
Acute toxicity	: Not classified
Acute toxicity Regular Soldering Flux Paste	: Not classified
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l)	: Not classified  > 5000 mg/kg  > 20 mg/l vapours, 1 hour exposure
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9)	: Not classified  > 5000 mg/kg  > 20 mg/l vapours, 1 hour exposure  > 1 Kategorian
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9)	: Not classified
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat	: Not classified  > 5000 mg/kg  > 20 mg/l vapours, 1 hour exposure  > 1 Kategorian
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral)	: Not classified
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral)	: Not classified
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation	: Not classified
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>&gt; 1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified.</li> <li>(Non-irritating to skin in rabbits.)</li> <li>: Not classified.</li> </ul>
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation Serious eye damage/irritation	Not classified      Not classified.     (Non-irritating to skin in rabbits.)     Not classified.     (Slightly irritant but not relevant for classification)
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9)	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Slightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9)	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Siightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Slightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Siightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity          Regular Soldering Flux Paste         LD50 oral rat         LC50 inhalation rat (mg/l)         ammonium chloride (12125-02-9)         LD50 oral rat         LD50 dermal rat         ATE CLP (oral)         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>&gt; 1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Slightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity  Regular Soldering Flux Paste  LD50 oral rat LC50 inhalation rat (mg/l)  ammonium chloride (12125-02-9)  LD50 oral rat LD50 dermal rat ATE CLP (oral)  Skin corrosion/irritation  Serious eye damage/irritation  Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single exposure)  Specific target organ toxicity (repeated	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>&gt; 1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Slightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity           Regular Soldering Flux Paste           LD50 oral rat           LC50 inhalation rat (mg/l)           ammonium chloride (12125-02-9)           LD50 oral rat           LD50 dermal rat           ATE CLP (oral)           Skin corrosion/irritation           Serious eye damage/irritation           Germ cell mutagenicity           Carcinogenicity           Reproductive toxicity           Specific target organ toxicity (single exposure)           Specific target organ toxicity (repeated exposure)	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>&gt; 1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Slightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity  Regular Soldering Flux Paste  LD50 oral rat LC50 inhalation rat (mg/l)  ammonium chloride (12125-02-9)  LD50 oral rat LD50 dermal rat ATE CLP (oral)  Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure) ammonium chloride (12125-02-9) NOAEL (subchronic, oral, animal/male, 90	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Slightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity  Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure) ammonium chloride (12125-02-9) NOAEL (subchronic, oral, animal/male, 90 days)	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>: Not classified. (Non-irritating to skin in rabbits.)</li> <li>: Not classified. (Slightly irritant but not relevant for classification)</li> <li>: Not classified</li> </ul>
Acute toxicity  Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l)  ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure) ammonium chloride (12125-02-9) NOAEL (subchronic, oral, animal/male, 90 days) Aspiration hazard	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>1410.000 mg/kg bodyweight</li> <li>Not classified. (Non-irritating to skin in rabbits.)</li> <li>Not classified. (Slightly irritant but not relevant for classification)</li> <li>Not classified</li> </ul>
Acute toxicity  Regular Soldering Flux Paste LD50 oral rat LC50 inhalation rat (mg/l) ammonium chloride (12125-02-9) LD50 oral rat LD50 dermal rat ATE CLP (oral) Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure) ammonium chloride (12125-02-9) NOAEL (subchronic, oral, animal/male, 90 days)	<ul> <li>Not classified</li> <li>&gt; 5000 mg/kg</li> <li>&gt; 20 mg/l vapours, 1 hour exposure</li> <li>1410 mg/kg</li> <li>&gt; 2000 mg/kg</li> <li>1410.000 mg/kg bodyweight</li> <li>1410.000 mg/kg bodyweight</li> <li>Not classified. (Non-irritating to skin in rabbits.)</li> <li>Not classified. (Slightly irritant but not relevant for classification)</li> <li>Not classified</li> </ul>

#### SECTION 12: Ecological information

12.1 Toxicity Ecology - general

: Avoid undiluted product to come into sewer or surface water.

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Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

according to Canadian Hazardous Products Regulations (HPR)					
ammonium chloride (12125-02-9)					
LC50 fish 1	209 mg/l 96 h				
EC50 Daphnia 1	101 mg/l 48 h				
12.2. Persistence and degradability					
Regular Soldering Flüx Paste					
Persistence and degradability	Not readily biodegradable.				
12.3. Bioaccumulative potential					
Regular Soldering Flux Paste	Not established.				
Bioaccumulative potential	Not established.				
12.4. Mobility in soil					
No additional information available					
12.5. Other adverse effects					
No additional information available	· ·				
SECTION IS: Disposed considerations					
13.1 Waste treatment methods					
	: Do not dispose of waste into sewer.				
	: Dispose in a safe manner in accordance with local/national regulations.				
Ecology - waste materials	: Avoid release to the environment.				
SECTION 1/1: Transport Information					
In accordance with DOT and TDG					
Not considered a dangerous good for transport re	quiations				
	: Not applicable				
Proper Shipping Name (Apro)					
Transport by sea					
No additional information available					
Air transport					
No additional information available					
SECTION 15 Regulatory information					
15.1. US Federal regulations					
ammonium chloride (12125-02-9)					
Listed on the United States TSCA (Toxic Substa					
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb				
Ethanolamine hydrochloride (2002-24-6)	the second s				
Listed on the United States TSCA (Toxic Substances Control Act) inventory					
15.2. International regulations					
CANADA					
ammonlum chloride (12125-02-9)					
Listed on the Canadian DSL (Domestic Substances List) inventory.					
Ethanolamine hydrochloride (2002-24-6)	TATALA A TALAN MATANA ANA ANA ANA ANA ANA ANA ANA ANA AN				

Listed on the Canadian DSL (Domestic Substances List) inventory.

**EU-Regulations** 

ammonium chloride (12125-02-9) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Ethanolamine hydrochloride (2002-24-6) 3.3 Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

## **Regular Soldering Flux Paste**

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

#### National regulations

Regular Soldering, Flux Pasterit, All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS). All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL). All ingredients are listed in the Toxic Substances Control Act (TSCA).

#### 15.3. US State regulations

ammonium chloride (12125-02-9)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

#### SECTION 16: Other Information Indication of changes : Removed. WHMIS. 1998. Data sources : ACGIH 2000. ESIS (European chemincal Substances Information System; accessed at: http://esis.jrc.ec.europa.eu/index.php?PGM=cla. OSHA 29CFR 1910.1200 Hazard Communication Standard, European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition. REGULATION (EC) № 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html. Abbreviations and acronyms : ACGIH (American Conference of Governement Industrial Hygienists). ATE: Acute Toxicity Estimate. CAS (Chemical Abstracts Service) number. CLP: Classification, Labelling, Packaging. EC50: Environmental Concentration associated with a response by 50% of the test population. GHS: Globally Harmonized System (of Classification and Labeling of Chemicals). LD50: Lethal Dose for 50% of the test population. OSHA: Occupational Safety & Health Administration. STEL: Short Term Exposure Limits. TSCA: Toxic Substances Control Act. TWA: Time Weight Average. Other information : None. NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials. NFPA fire hazard : 1 - Must be preheated before ignition can occur. NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.

#### Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Irrit, 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

## **Regular Soldering Flux Paste**

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

SDS Prepared by: The Redstone Group, LLC 6397 Emerald Pkwy. Suite 200 Dublin, OH USA 43016 T 614-923-7472 www.redstonegrp.com

#### LACO NA GHS SDS

This Information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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	-	TE 90® Past		
LA-CO Industries, Inc.	according to Federal according to Canadia Date of issue: 12/02/ Version: 2.0	Register / Vol. 77, No. 58 / N In Hazardous Products Regu 1994Revision date: 03/05/20	Nonday, March 26, 2012 / Rules and Re Jations (HPR) 115Supersedes: 02/04/2013	gulations
scintoly is identification of the	substence/mixturo	and of the company	w/mdeneking	
1. Product identifier	: Mixture			
roduct form rade name	: FLUX-RITE 90®	Paste		
.2. Relevant identified uses of the Ise of the substance/mixture	substance or mixture and substance or mixture and substance or mixture and substance of the	nd uses advised agains	st	
.3. Details of the supplier of the s	afety data sheet			
A-CO Industries, Inc. 201 Pratt Boulevard				
Fik Grove Village, IL. 60007-5746				
Phone: (847) 956-7600 Fax: (847) 956-9885 E-mail: customer_service@laco.com				I
1.4. Emergency telephone number	r L		. 4 800 424 9300 International' +1	-703-527-3887
Emergency number	: 24-hour emerge	ency: CHEMTREC- U.S.	: 1-800-424-9300 International: +1	
2.2 Label elements				
<b>4.2</b>				
GHS-US labelling				
GHS-US labelling No labelling applicable				
GHS-US labelling No labelling applicable 2.3. Other hazards No additional information available				
GHS-US labelling No labelling applicable 2.3. Other hazards No additional information available	mationioningredie	īls		
GHS-US labelling No labelling applicable 2.3. Other hazards No additional information available SEGTIONS Composition/infor 3.1. Substance	mation continencelle	nts		
GHS-US labelling         No labelling applicable         2.3.       Other hazards         No additional information available         SECTIONS: Composition/infor         3.1.       Substance         Not applicable	mationconlingredie	nts		
GHS-US labelling No labelling applicable 2.3. Other hazards No additional information available SECTIONSICOMPOSITION/Infor 3.1. Substance Not applicable 3.2. Mixture	Product identifier	/% (w/w)	GHS-US classification	
GHS-US labelling No labelling applicable 2.3. Other hazards No additional information available SECTIONS Composition/Infor 3.1. Substance Not applicable 3.2. Mixture			Skin Irrit. 2, H315 Eve Irrit. 2A, H319	
GHS-US labelling         No labelling applicable         2.3. Other hazards         No additional information available         SECTIONS (Composition/Infor         3.1. Substance         Not applicable         3.2. Mixture         Name         Ethanolamine hydrochloride	Product identifier (CAS No) 2002-24-6	/% (w/w)	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox, 4 (Oral), H302	
GHS-US labelling         No labelling applicable         2.3. Other hazards         No additional information available         SECTIONS (Composition/Info)         3.1. Substance         Not applicable         3.2. Mixture         Name         Attigate         Ethanolamine hydrochloride         ammonium chloride	Product Identifier (CAS No) 2002-24-6 (CAS No) 12125-02-9	4.56	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Acute Tox. 4 (Oral), H302	
GHS-US labelling No labelling applicable 2.3. Other hazards No additional information available SECTIONS Composition/Infor 3.1. Substance Not applicable 3.2. Mixture Name Ethanolamine hydrochloride	Product identifier (CAS No) 2002-24-6	<b>% (w/w)</b> 4.56 1.65	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319	
GHS-US labelling         No labelling applicable         2.3. Other hazards         No additional information available         SECTIONSICOMPOSITION/Info         3.1. Substance         Not applicable         3.2. Mixture         Name         Ethanolamine hydrochloride         ammonium chloride	Product Identifier (CAS No) 2002-24-6 (CAS No) 12125-02-9	<b>% (w/w)</b> 4.56 1.65	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315	
GHS-US labelling No labelling applicable 2.3. Other hazards No additional information available SECTIONSICOMPOSITION/INTO 3.1. Substance Not applicable 3.2. Mixture Name	Product identifier (CAS No) 2002-24-6 (CAS No) 12125-02-9 (CAS No) 7447-41-8	<b>% (w/w)</b> 4.56 1.65	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315	
GHS-US labelling         No labelling applicable         2.3. Other hazards         No additional information available         SECTIONS:Composition/info         3.1. Substance         Not applicable         3.2. Mixture         Name         Ethanolamine hydrochloride         ammonium chloride         lithium chloride         Full text of H-phrases: see section 16         SECTION/4:Hirstalclimeasure	Product identifier (CAS No) 2002-24-6 (CAS No) 12125-02-9 (CAS No) 7447-41-8	4.56 1.65 1.32	Skin Irrit. 2, H315           Eye Irrit. 2A, H319           STOT SE 3, H335           Acute Tox. 4 (Oral), H302           Eye Irrit. 2A, H319           Acute Tox. 4 (Oral), H302           Skin Irrit. 2, H315           Eye Irrit. 2A, H319	
GHS-US labelling         No labelling applicable         2.3. Other hazards         No additional information available         SECTIONSICOMPOSITION/Info         3.1. Substance         Not applicable         3.2. Mixture         Name         Ethanolamine hydrochloride         lithium chloride         lithium chloride         Full text of H-phrases: see section 16	Product identifier (CAS No) 2002-24-6 (CAS No) 12125-02-9 (CAS No) 7447-41-8 (CAS No) 7447-41-8	4.56 1.65 1.32	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319	
GHS-US labelling         No labelling applicable         2.3. Other hazards         No additional information available         SECTIONSICOMPOSITION/Info         3.1. Substance         Not applicable         3.2. Mixture         Name         Ethanolamine hydrochloride         lithium chloride         lithium chloride         Full text of H-phrases: see section 16         SECTION/AIFITS.talclimeasure         4.1. Description of first aid measures general	Product identifier (CAS No) 2002-24-6 (CAS No) 12125-02-9 (CAS No) 7447-41-8 Sures : Never give a advice (show : Allow victim	4.56 1.65 1.32 nything by mouth to an u v the label where possible to breathe fresh air.	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319	
GHS-US labelling         No labelling applicable         2.3.       Other hazards         No additional information available         SECTIONS: Composition/Infor         3.1.       Substance         Not applicable         3.2.       Mixture         Ethanolamine hydrochlorlde         lithium chloride         lithium chloride         SECTION/4: First ald measure         4.1.	Product identifier (CAS No) 2002-24-6 (CAS No) 12125-02-9 (CAS No) 7447-41-8 Sures : Never give a advice (show : Allow victim ; Wash skin w	4.56 1.65 1.32 nything by mouth to an u	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319	

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FLUX-RITE 90® Paste Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monda according to Canadian Hazardous Products Regulation	ay, March 26, 2012 / Rules and Regulations ns (HPR)
4.2. Most important symptoms and eff Symptoms/injuries after inhalation Symptoms/injuries after eye contact	
No special procedures required.	
5.1. Extinguishing media Suitable extinguishing media Unsuitable extinguishing media	: Dry powder. Foam. Water fog. : None known.
5.2. Special hazards arising from the Fire hazard Reactivity	<ul> <li>substance or mixture</li> <li>No particular fire or explosion hazard.</li> <li>No dangerous reactions known.</li> </ul>
5.3. Advice for firefighters Firefighting instructions Protection during firefighting	<ul> <li>Do not allow run-off from fire fighting to enter drains or water courses.</li> <li>Do not enter fire area without proper protective equipment, including respiratory protection.</li> <li>Fire-resistant protective clothing. Wear a self contained breathing apparatus.</li> </ul>
SECTION & Accidental release on	
6.1. Personal precautions, protective General measures	equipment and emergency procedures : This product is not hazardous.
6.1.1. For non-emergency personnel Protective equipment Emergency procedures	: Chemical goggles or safety glasses. : Evacuate unnecessary personnel.
6.1.2. For emergency responders Protective equipment Emergency procedures	: Chemical goggles or safety glasses. : No additional risk management measures required.

#### Environmental precautions 6.2.

Avoid release to the environment.

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6.3.	Methods and material for containment and cleaning up	
6.3.	Methods and material for containment and obtaining ap	

6.3. Methods and materia	I for containment and cleaning up : Absorb and/or contain spill with inert material, then place in suitable container.
For containment	: Wipe up with absorbent material (for example cloth).
Methods for cleaning up	: Wipe up with absorbent material for example seally.

#### Reference to other sections 6.4.

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment. 

7.1. Precautions for safe handlin Precautions for safe handling Hygiene measures	<ul> <li>g</li> <li>Does not necessitate any specific/particular technical measures.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.</li> </ul>
7.2. Conditions for safe storage, Storage conditions Incompatible products	including any incompatibilities : Store in a dry, cool and well-ventilated place. : None known.
7.3. Specific end use(s) Flux.	

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FI UX-RITE 908 Paste		
ACGIH	Not applicable	
OSHA	Not applicable	A REAL PROPERTY AND
ammonium chloride (121	25-02-9)	10 mg/m³
ACGIH	AUDITITITI	20 mg/m <sup>3</sup>
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	Eye & URT irr
ACGIH	Remark (ACGIH)	
OSHA	Not applicable	20 mg/m³
Canada (Quebec)	VECD (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	
	1-8)	
ACGIH	Not applicable	
OSHA	Not applicable	
	oride (2002-24-6),	Basic Marshelling Landschart and an an an
	Not applicable	
ACGIH	Not applicable	
OSHA		
8.2. Exposure cont Appropriate engineering of Personal protective equip Hand protection Eye protection Respiratory protection	ment : None under norma	I use. g or aerosol production: protective goggles. ory protection equipment is recommended under normal conditions of use

Information on basic physical and chemical properties - -

9.1. Information on basic physical and Physical state Appearance Colour Odour threshold pH Relative evaporation rate (butyl acetate=1) Melting point Freezing point Boiling point Flash point Auto-ignition temperature Decomposition temperature Flammability (solid, gas) Vapour pressure Relative vapour density at 20 °C Relative density Solubility Log Pow Log Kow Viscosity, kinematic Viscosity, dynamic Explosive properties	<ul> <li>Liquid</li> <li>Paste.</li> <li>light yellow.</li> <li>slight.</li> <li>No data available</li> </ul>	ų
Oxidising properties	: No data available	SDS Ref.: LACO150

1.1.1.1.

#### **FLUX-RITE 90® Paste** Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR) : No data available Explosive limits Other information 9.2. :0% VOC content Section Mark SECTION 10: Stebility and readinity Reactivity 10.1. No dangerous reactions known. Chemical stability 10.2. Stable under normal conditions. Possibility of hazardous reactions 10.3. Hazardous polymerization will not occur. Conditions to avoid 10.4. None known. Incompatible materials 10.5. None known. Thermal decomposition generates : ammonia. ammonium chloride. Carbon dioxide. Carbon monoxide. hydrogen chloride. Hazardous decomposition products

SECTION HE TOxicological information

#### Information on toxicological effects 11.1.

Acute toxicity

05/03/2015

: Not classified

Acute toxicity	
ammonium chloride (12125-02-9)	
LD50 oral rat	1410 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	1410.000 mg/kg bodyweight
lithium chloride (7447-41-8)	
I D50 oral rat	526 mg/kg
LD50 dermal rat	> 2000 mg/kg No mortality observed
LC50 inhalation rat (mg/l)	5.57 mg/l/4h
ATE CLP (oral)	526.000 mg/kg bodyweight
ATE CLP (vapours)	5.570 mg/l/4h
	5.570 mg/l/4h
ATE CLP (dust,mist)	
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Carcinogenicity	
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
ammonium'chloride (12125-02-9)	
NOAEL (subchronic, oral, animal/male, 90 days)	>= 580 mg/kg bodyweight 56 days
Aspiration hazard	: Not classified
Potential adverse human health effects and	symptoms
Potential adverse numan notation	: Irritation.
Symptoms/injuries after inhalation	: May cause slight irritation.
Symptoms/injuries after eye contact	: Skin and eye contact;Inhalation
Likely routes of exposure	
SECTION 12: LEcological Informatic	<b>n</b>
12.1 Toxicity	
ammonium chloride (12125-02-9)	
LC50 fish 1	209 mg/l 96 h

EN (English)

SDS Ref.: LACO1501021

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

according to Canadian Hazardous Products Regulation to	· · · · · · · · · · · · · · · · · · ·
11111111111111111111111111111111111111	101 mg/l 48 h
ammonium chioride (12120 da 0) 221	101 mg/l 48 h
EC50 Daphnia 1	101 mg/l 48 h
lithium chloride (7447-41-8) Astronomy	158 mg/l 96 h
LC50 fish 1	
	249 mg/l 48 h
EC50 Daphnia 1	

#### Persistence and degradability 12.2.

No additional information available

#### **Bioaccumulative potential** 40.0

12.3.		
	1 chloride (7447-41-8)	
lithiun	n chloride (7447-41-8)	
	-0,-10	
Log Pe	W	i.

#### Mobility in soil 12.4.

No additional information available

#### Other adverse effects 12.5.

difficient information available

No additional information available	如果是一些,我们们的是一些,我们就是我们的,我们就是我们的,我们就能够了。""你们,你们们就是你们的,你们们就是你们,你们就是你们,你们们就是你们,你们们们,你们
GECTION 18 DISPOSE COnsiderations	

#### SECTION IN T 귀엽남 Waste treatment methods 13.1

: Dispose in a safe manner in accordance with local/national regulations.

#### Waste disposal recommendations $\frac{i^2}{6}$ , $\delta$

# SECTION 14: Mensperi Information

In accordance with DOT and TDG Not considered a dangerous good for transport regulations : Not applicable Proper Shipping Name (ADR)

#### Transport by sea

No additional information available

## Air transport

No additional information available

## SECTION IS Regulatory information

#### مأفصان

5.1. US Federal regulations	·····································		
ammonium chloride (12125-02-9)	Control Act) inventory		
Listed on the United States ISCA (TOXIC Oubstan	5000 lb	-	
RQ (Reportable quantity, section 304 of EPAS	5000 10		
tat af Lioto)			
lithium chloride (7447-41-8)	United the state of the second s		
the United States TSCA (TOXIC Subsidi			
Listed on the crime	TABLE THE REPORT OF THE AREA	and the second	
Ethanolamine hydrochloride (2002-24-6)	nces Control Act) inventory		
Ethanolamine hydrochloride (200225577777777 Listed on the United States TSCA (Toxic Substa		۰.	

## 15.2. International regulations

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CANADA	·····································	
ammonium chloride (12125-02-	2-9)	
Listed on the Canadian DSL (Dor	Smestic Substances	The Article Ar
Land Den Art Art Old		
Canadian DSI (D0)	omestic Substances List internal	
Listed on the Calladian DOL (20	(2002-24-6))	
Ethanolamine hydrochloride (2	(2002-24-6)	
Listed on the Canadian DSL (Do	omestic Substances List) inventory.	

#### **EU-Regulations**

上UT-NUSULTETTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
ammonium chloride (12125-02-9))
ammonium chloride (12125-02-9). Listed on the EEC Inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
and the second s
Listed on the EEC inventory EINLOG (Europen
Listed of the

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## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

according to Canadian Hazardous Products Regulations (1111)	·····································
lithium chloride (7447-41-8)	er of Existing Commercial Chemical Substances)
The second secon	ry of Existing Commercial Chemical Substances
Listed on the EEC inventory EINECS (European Inventor	

Ethanolamine hydrochloride (2002-24-6) and Standy . . Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

## National regulations

 National regulations
 FLUX-RITE 90® Paste

 All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS).

 All ingredients are listed in the Toxic Substances Control Act (TSCA).

 All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

## 15.3. US State regulations

<u> 19 - 19 - 19 -</u> लक के है ammonium chloride (12125-02-9) C, S

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information	
	: Revised sections: 1 - 16.
Indication of changes	ACGIH 2000.
Data sources	Canadian Centre for Occupational Health and Safety. Accessed at:
	http://www.coobs.ca/oshanswers/jegis//withins_classiningenik
	ESIS (European chemincal Substances Information System; accessed at: http://esis.irc.ec.europa.eu/index.php?PGM=cla.
	Lunderba ourong All Arister Fulsberg and Other many
	Chemical Protective Clothing, Finite Editoria National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th
	edition. OSHA 29CFR 1910.1200 Hazard Communication Standard.
	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLamentary of substances and COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and COUNCIL of 16 December 2008 on classificatives 67/548/EEC and 1999/45/EC, and amending
	mixtures, amending and repeating Directives on one repeating the
	Regulation (EC) No 1907/2000.
	TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.
	ACGIH (American Conference of Governement Industrial Hygienists).
Abbreviations and acronyms	ACGIN (Annalization of the Acceleration of the
	CAS (Chemical Abstracts Service) number.
	a response by 50% of the test population associated with a response by 50% of the test population
	EC50: Environmental Concentration associated internation and Labeling of Chemicals). GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	1 D50: Lethal Dose for 50% of the test population.
	OSHA: Occupational Safety & Health Administration.
	PBT: Persistent, Bioaccumulative, Toxic.
	STEL: Short Term Exposure Limits.
	TSCA: Toxic Substances Control Act.
	TWA: Time Weight Average.
Other information	: None.
	: 1 - Exposure could cause irritation but only minor residual
NFPA health hazard	injury even if no treatment is given.
~	<ul> <li>: 1 - Must be preheated before ignition can occur.</li> </ul>
NFPA fire hazard	: 0 - Normally stable, even under fire exposure conditions,
NFPA reactivity	and not reactive with water.

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#### of H-ph Full te

text of H-phrases:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eve Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Irrit, 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
11000	

## SDS Prepared by: The Redstone Group, LLC

6397 Emerald Pkwy. Suite 200 Dublin, OH USA 43016 T 614-923-7472 www.redstonegrp.com

#### LACO NA GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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LC Paste 5pgs **BLOC-IT® HEAT-ABSORBING PASTE** according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR) Date of Issue: 05/23/1991Revision date: 03/05/2015Supersedes: 02/19/2013 LA-CO Industries, Inc. Version: 3.0 SECTION is then the thom of the substance/mixture and of the company/under teking 1.1. Product identifier : Mixture Product form : BLOC-IT® HEAT-ABSORBING PASTE Trade name Relevant identified uses of the substance or mixture and uses advised against 1.2. : Heat-absorbing compound Use of the substance/mixture Details of the supplier of the safety data sheet 1.3. LA-CO Industries, Inc. 1201 Pratt Boulevard Elk Grove Village, IL. 60007-5746 Phone: (847) 956-7600 Fax: (847) 956-9885 E-mail: customer\_service@laco.com Emergency telephone number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887 1.4. Emergency number SECTION 2: Hazards identification Classification of the substance or mixture 2.1. Classification in accordance with the Globally Harmonized Standard Not classified Label elements 2.2 **GHS-US** labelling No labelling applicable Other hazards 2.3. No additional information available SECTION & Composition/Information on Ingredients Substance 3.1. Not applicable 3.2. Mixture **GHS-US** classification Product identifier :% (w/w) 2.35 Name Eye Irrit. 2A, H319 7.72 - 7.80 (CAS No) 12173-47-6 hectorite Full text of H-phrases: see section 16 SECTION A: First ald measures Description of first aid measures : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical 4.1. First-aid measures general advice (show the label where possible). : Allow victim to breathe fresh air. First-aid measures after inhalation : Wash skin with mild soap and water. First-aid measures after skin contact : Rinse eyes with water as a precaution. First-aid measures after eye contact : Call a POISON CENTER or doctor/physician if you feel unwell. First-aid measures after ingestion Most important symptoms and effects, both acute and delayed : Not expected to present a significant hazard under anticipated conditions of normal use. 4.2. Symptoms/injuries

4.3. Indication of any immediate medical attention and special treatment needed

No special procedures required.

## **BLOC-IT® HEAT-ABSORBING PASTÈ**

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Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR)

SECTION & FINITED II	
5.1. Extinguishing media Suitable extinguishing media Unsuitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. : None known.
5.2. Special hazards arising Fire hazard Reactivity	from the substance or mixture : Not flammable. : No dangerous reactions known.
5.3. Advice for firefighters Firefighting instructions Protection during firefighting	<ul> <li>Do not allow run-off from fire fighting to enter drains or water courses.</li> <li>Do not enter fire area without proper protective equipment, including respiratory protection.</li> <li>Fire-resistant protective clothing. Wear a self contained breathing apparatus.</li> </ul>
SECTION 6: Accidental/re	iegsomeesures
6.1. Personal precautions, General measures	protective equipment and emergency procedures : This product is not hazardous.
6.1.1. For non-emergency per Emergency procedures	rsonnel : Evacuate unnecessary personnel.
6.1.2. For emergency respon- Emergency procedures	ders : No additional risk management measures required.
6.2. Environmental precaut Contains no substances known to	
6.3. Methods and material f Methods for cleaning up	or containment and cleaning up : Wipe up with absorbent material (for example cloth).
6.4. Reference to other sec Section 13: disposal information. S	tions ection 7: safe handling. Section 8: personal protective equipment.
SECTION 7/: Handling) and	storage
7.1. Precautions for safe ha Precautions for safe handling Hygiene measures	<ul> <li>andling</li> <li>Does not necessitate any specific/particular technical measures.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.</li> </ul>
7.2. Conditions for safe sto Storage conditions	rage, including any incompatibilities : Store in original container.
7.3. Specific end use(s) Metal Working Fluids.	
	itrols/personal/protection
8.1. Control parameters BLOC-IT® HEAT-ABSORBING	PASTE
	lot applicable
OSHA N	lot applicable
hectorite (12173-47-6)	Jot applicable

#### Exposure controls ~ ~

8.2. Exposure controls		
Appropriate engineering controls	: Ensure good ventilation of the work station.	
Personal protective equipment	: Avoid all unnecessary exposure.	
Hand protection	: None under normal use.	

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OSHA

Not applicable

## **BLOC-IT® HEAT-ABSORBING PASTE**

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Eye protection

Respiratory protection

: No special eye protection equipment recommended under normal conditions of use.

: No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation.

#### SECTION OF Physical and chamical properties

9.1. Information on basic physical and c	hei	mical properties
Physical state	:	Liquid
Appearance		Paste.
Colour	:	pink. Beige.
Odour	:	odourless.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	100 °C
Flash point	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility		Soluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

#### 9.2. Other information

· 0%

VOC content :	0 %
SECTION 10: Stability/and reactivity.	
10.1. Reactivity No dangerous reactions known.	
10.2. Chemical stability Stable under normal conditions.	
10.3. Possibility of hazardous reactions Hazardous polymerization will not occur.	r
10.4. Conditions to avoid None known.	
10.5. Incompatible materials None known.	
10.6. Hazardous decomposition products Carbon monoxide.	
SECTION IN: Toxicological Informatic	n se
11.1. Information on toxicological effects Acute toxicity	Not classified
hectorite (12173-47-6)	

LD50 oral rat	> 5000 mg/kg		
Skin corrosion/irritation	: Not classified	x	
	1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 -		

SDS Ref.: LACO1412019

## **BLOC-IT® HEAT-ABSORBING PASTE**

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g	
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
<b>Carcinogenicity</b>	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single	: Not classified
exposure)	
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and	I symptoms
Likely routes of exposure	: Skin and eye contact
SECTION 12: Electorical Informatio	
12.1 Toxicity No additional information available	
12.2. Persistence and degradability	
No additional information available	
12.3. Bioaccumulative potential	
No additional information available	
12.4. Mobility in soil	
No additional information available	
12.5. Other adverse effects	
No additional information available	
SECTION 13 (Disposal/consideration)	
13.1 Waste treatment methods	
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
SECTION 12: Thensport information	
In accordance with DOT and TDG	
Not considered a dangerous good for transport	tragulations
Proper Shipping Name (ADR)	: Not applicable
,	
Transport by sea	
No additional information available	
Air transport	
No additional information available	
SECTION TO Regulatory informatio	
15.1. US Federal regulations	
hectorite (12173;47;-6)	
Listed on the United States TSCA (Toxic Sub	stances Control Act) inventory
15.2. International regulations	
-	
CANADA	
hectorite (12173-47-6)	
Listed on the Canadian DSL (Domestic Subst	ances List) inventory.
EU-Regulations	
hectorite (12173-47-6)	

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

## **BLOC-IT® HEAT-ABSORBING PASTE**

#### Safety Data Sheet

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#### National regulations

BLOC-IT® HEAT-ABSORBING PASTE All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS). All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL). All ingredients are listed in the Toxic Substances Control Act (TSCA).

#### 15.3. US State regulations

No additional information available

SECTION 16 Other Information	
Indication of changes	: Revised format.
Data sources	: ACGIH 2000.
	Canadian Centre for Occupational Health and Safety. Accessed at: http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html.
	ESIS (European chemincal Substances Information System; accessed at: <u>http://esis.jrc.ec.europa.eu/index.php?PGM≓cla</u> .
	European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
	National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.
	OSHA 29CFR 1910.1200 Hazard Communication Standard.
	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
	TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.
Abbreviations and acronyms	: ACGIH (American Conference of Governement Industrial Hyglenists).
	ATE: Acute Toxicity Estimate.
	CAS (Chemical Abstracts Service) number.
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population.
	OSHA: Occupational Safety & Health Administration.
	PBT: Persistent, Bioaccumulative, Toxic.
	STEL: Short Term Exposure Limits.
	TSCA: Toxic Substances Control Act.
	TWA: Time Weight Average.
Other information	: None.
NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.
,	
	$\checkmark$
Full text of H-phrases:	

Full text of H-phrases:	
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
H319	Causes serious eye irritation

SDS Prepared by: The Redstone Group, LLC 6397 Emerald Pkwy. Suite 200 Dublin, OH USA 43016 T 614-923-7472 www.redstonegrp.com

LACO NA GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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LS Slic-Tite

# Slic-Tite<sup>®</sup> Paste with PTFE

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations according to Canadian Hazardous Products Regulations (HPR) Date of issue: 09/17/2012Revision date: 10/14/2015 Version: 2.0

LA-CO Industries, Inc.

SECTION is Identification of the substance/inixiure and of the company/undertaking.

Product identifier 1.1. Product form

: Mixture

Trade name

: Slic-Tite® Paste with PTFE

Relevant identified uses of the substance or mixture and uses advised against 1.2. : sealant Use of the substance/mixture

1.3. Details of the supplier of the safety data sheet	i		 	
LA-CO Industries, Inc.	(	1		
1201 Pratt Boulevard				
Elk Grove Village, IL. 60007-5746				
Phone: (847) 956-7600				
Fax: (847) 956-9885 F-mail: customer_service@laco.com				
E-mail: customer_service@aco.com		1		

: 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887 Emergency telephone number 1.4. Emergency number

aloniza Harandsidantification SEC

Classification of the substance or mixture

2.1. Classification in accordance with the Globally Harmonized Standard

Not classified

Label elements 2.2

#### **GHS-US** labelling

No labelling applicable

Other hazards 2.3.

No additional information available

# SECTION & Composition/hitormation on Ingredients

Substance 3.1.

Not applicable

Mixture 3.2.

There are no components required to be shown.

#### SECTION 4: First aid measures Never give anything by mouth to an unconscious person. If you feel unwell, seek medical Description of first aid measures 4.1. First-aid measures general advice (show the label where possible). if breathing is difficult, remove victim to fresh air and keep at rest in a position

and easy to do. Continue rinsing.

First-aid measures after inhalation	<ul> <li>If inhaled and if breathing is difficult, remove victim to nesh an and neep and comfortable for breathing.</li> </ul>
First-aid measures after skin contact	: Wash with plenty of soap and water. : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

First-aid measures after skin contact First-aid measures after eye contact

First-aid measures after ingestion

Most important symptoms and effects, both acute and delayed	
 Most important symptons and encoder weather	

4.2.	Wost important of the		None known.
Symptor	ns/injuries	•	None tale

Indication of any immediate medical attention and special treatment needed

: Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

14/10/2015

4.3.

## Safety Data Sheet

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#### SECTIONSIFICATION Extinguishing media 5.1. : Dry powder. Carbon dioxide. Foam. Suitable extinguishing media : Do not use a heavy water stream. Unsuitable extinguishing media Special hazards arising from the substance or mixture 5.2. : No particular fire or explosion hazard. Fire hazard : No dangerous reactions known. Reactivity : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter Advice for firefighters 5.3. Firefighting instructions drains or water courses. : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. Wear fire/flame resistant/retardant clothing. Protection during firefighting

## SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures 6.1. : Avoid contact with skin and eyes. General measures For non-emergency personnel : Wear suitable gloves. Chemical goggles or safety glasses. 6.1.1. Protective equipment : Evacuate unnecessary personnel. Emergency procedures For emergency responders 6.1.2. : Wear suitable gloves. Chemical goggles or safety glasses. Protective equipment ; Ventilate area. Emergency procedures Environmental precautions 6.2. Prevent entry to sewers and public waters.

## Methods and material for containment and cleaning up

6.3.	Wethous and material ter		Absorb and/or contain spill with inert material, then place in suitable container.
For conta	ainment	:	Take up in non-combustible absorbent material and shove into container for disposal.
Methods	for cleaning up	:	Take up in non-comparison account

#### Reference to other sections 6.4. tion 8: personal protective equipment.

Section 13: disposal information. Section 7: SECTION 7: Handlingland Storag	e e la companya de la
7.1. Precautions for safe handling Precautions for safe handling Hygiene measures	<ul> <li>Avoid breathing vapours.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.</li> </ul>
7.2. Conditions for safe storage, in Storage conditions Incompatible products	<ul> <li>Store in a dry, cool and well-ventilated place.</li> <li>Store oxidizing agents. Strong acids. Strong bases.</li> </ul>

#### Specific end use(s) 7.3.

No additional information available

<b>SECT</b>	ION 8. Exposure co	ontrols/personal/protection
8.1.	Control parameters	
Slic-1	Tite® Paste with PTFE	
ACGI	H	Not applicable
OSH/	4	Not applicable

#### Exposure controls 8.2. Appropriate engineering controls

Personal protective equipment

: Ensure good ventilation of the work station.

Avoid all unnecessary exposure.

## Safety Data Sheet

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Hand protection Eye protection Respiratory protection	<ul> <li>Use rubber gloves.</li> <li>In case of splashing or aerosol production: protective goggles.</li> <li>In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.</li> </ul>
Other information	: Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

9.1.	Information on basic p	hysical and chemical properties
••••	al state	: Liquid
Appea		: Paste. Viscous.
Colour		: white.
Odour		: Oily.
		: No data available
Jaour	threshold	

	: No data available
pH	
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 177 °C
Flash point	: 150 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: > 300 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Specific gravity 1.48
Solubility	: insoluble in water.
	: <1
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
-	

Other information 9.2. VOC content

: 0%

ISECTI	ON 101 Stab	lityandreactivity research and second and se
10.1.	Reactivity	

No dangerous reactions known. Chemical stability 10.2. Stable under normal conditions. Possibility of hazardous reactions 10.3. Hazardous polymerization will not occur. Conditions to avoid 10.4. Heat. Open flame. Incompatible materials 10.5. Strong oxidizing agents. Strong bases. Strong acids. Hazardous decomposition products Burning produces irritating, toxic and noxious fumes. Carbon dloxide. Carbon monoxide. SECTIONITINToxicological information No. 10 1 Information on toxicological effects 11.1. : Not classified Acute toxicity : Not classified

Skin corrosion/irritation

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Serious eye damage/irritation	: Not classified		
Respiratory or skin sensitisation	: Not classified		
Germ cell mutagenicity	: Not classified		
Carcinogenicity	: Not classified.	·	
Reproductive toxicity	: Not classified		
Specific target organ toxicity (single exposure)	: Not classified		
Specific target organ toxicity (repeated exposure)	: Not classified		
Aspiration hazard	: Not classified		
Potential adverse human health effects an	d symptoms		
Likely routes of exposure	: Skin and eye contact		
SECTION 12: Beological Informati	6m		
12.1 Toxicity			
No additional information available			
12.2. Persistence and degradability			
No additional information available	`		
12.3. Bioaccumulative potential		·	
Slic-Tite® Paste with PTFE.	<u> </u>		an a
Log Pow	< 1		
12.4. Mobility in soil			
No additional information available			
	i -		
12.5. Other adverse effects			
No additional information available			
SECTION (IS: Disposal considerat	ions.		
13.1 Waste treatment methods			
Sewage disposal recommendations	: Do not dispose of wast	e into sewer.	
Waste disposal recommendations	: Dispose in a safe mann	er in accordance with local/national regulations.	
SECTION 124 Intenspondinformatio	n		
In accordance with DOT and TDG			
Not considered a dangerous good for transpo	rt regulations		
Proper Shipping Name (ADR)	: Not applicable		
Transport hazard class(es) (ADR)	:		
	• •		
Transport by sea			
Transport hazard class(es) (IMDG)	:		
Air transport		<i>'</i>	
Transport hazard class(es) (IATA)	:		
SIECULON (IS: Regulatory information	<u>on</u>		
15.1. US Federal regulations			
No additional information available			
15.2. International regulations			
-			
CANADA			
No additional information available			
EU-Regulations No additional information available National regulations			
Slic-Tite® Paste with PTFE	nces Control Act (TSCA).	ting Commercial Chemical Substances (EINECS). or Non-Domestic Substances List (NDSL).	
14/10/2015	EN (English)	SDS Ref.: LACO1411009	4/5
1012013	mu (muSusu)		4/0

## Safety Data Sheet

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#### 15.3. US State regulations

No additional information available

Echlon 16 Other information	
ndication of changes	: GHS classification information.
Pata sources	: ACGIH (American Conference of Governement Industrial Hygienists).
	European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database.
	Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
	National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.
	OSHA 29CFR 1910.1200 Hazard Communication Standard.
	TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.
bbreviations and acronyms	: ATE: Acute Toxicity Estimate. CAS (Chemical Abstracts Service) number.
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental, Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population.
	OSHA: Occupational Safety & Health Administration.
	PBT: Persistent, Bioaccumulative, Toxic.
、	TWA: Time Weight Average.
	TSCA: Toxic Substances Control Act.
ther information	: None.
NFPA health hazard	: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard	: 1 - Must be preheated before ignition can occur.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.

SDS Prepared by: The Redstone Group, LLC 6077 Frantz Rd. Suite 206 Dublin, OH USA 43016 T 614-923-7472 www.redstonegrp.com

#### LACO NA GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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# NK MURIATIC Acid



# HASA MURIATIC ACID

# **Safety Data Sheet**

Safety Data Sheet (SDS No. 110)

HASA MURIATIC

ACID

Emergency 24 Hour Telephone:

CHEMTREC 800.424.9300

Corporate Headquarters:

Hasa Inc. P. O. Box 802736 Santa Clarita, CA 91355 Telephone • 661.259.5848 Fax • 661.259.1538

10	1	SECTION	1: IDENTIFICATION	
1.1	Produ	ct Identification:		
	1.1.1	Product Name:	HASA MURIATIC ACID	
	1.1.2	CAS # (Chemical Abstracts Service):	7647-01-0	
	1.1.3 <b>RTECS</b> (Registry of Toxic Effects of Chemical Substances):		MW4025000	
	1.1.4	EINECS (European Inventory of Existing Chemical Substances):	231-595-7	
	1.1.5		Hydrochloric Acid, Spirits of Salt	
	1.1.6		Hydrochloric Acid	
	11.7	Chemical Formula:	HCI	
1.2	after and a second	mmended Uses:	Household cleaning, swimming pool water pH control and neutralization.	
1.3	Com	pany Identification:	Hasa Inc. P.O. Box 802736 Santa Clarita, CA 91355	
1.4	Eme	rgency Telephone Number:	CHEMTREC: 1-800-424-9300 (24 hour)	
1.5	Non-	Emergency Assistance:	661-259-5848 (8 AM – 5 PM PST / PDT)	

SECTIO	N 2: HAZARD(S) IDE	NTIFICATION	Safety
Health Hazard	Acute Toxicity (Oral):	Category 4	A.
	Skin corrosion / irritation:	Category 1	Da
	Serious eye damage /	Category 1	a
	irritation	Category 3 (respiratory tract irritation)	us n
	Specific Target Organ	Calegory 3 (respiratory masteria	ee
	Toxicity (Single exposure)	Category 1	1
Physical Hazard	Corrosive to metals.		Č
Symbols			Data Sheet (SDS No: 115)
		DANGER	15
Signal Word	Causes severe skin burns	& eye damage.	
	Harmful if swallowed.		
Hazard Statement	May cause respiratory irrita	ation.	
	Maybe corrosive to metals	Prevention	
<b>Precautionary Statement</b>		ptective clothing/eye protection/face	
	protection. Do not eat, drink or smoke Do not breathe mist or van Use only outdoors or in a Wash hands thoroughly a Keep only in original conta	bor. well-ventilated area. fter handling. ainer.	
		Response	
	If inhaled: Remove person breathing. If on skin (or hair): Take of Rinse skin with water/sho If in eyes: Rinse cautious contact lenses, if present Immediately call a poison clothing before reuse. Ab	n. Do NOT induce vomiting. In to fresh air and keep comfortable for off immediately all contaminated clothing. In wer. In with water for several minutes. Remove and easy to do. Continue rinsing. In center/doctor. Wash contaminated Isorb spillage to prevent material damage.	
		a corrosive resistant container. Store in a	
	Store locked up. Store in well-ventilated place. Ke	ep container tightig elected	-
		Disposal Itents in accordance with local, regional,	
	Dispose of container/con national, international re	gulations as specified.	

1	SECTION 3: COMPOS		Weight % (Approx.)	
	Ingredient	CAS No.	Trongine re (* 11	
		7647-01-0	31.45%	
3.1	Hydrochloric Acid	And a second secon	68.55%	
3.2	Water	7789-20-0		

	THE ALD MEASURES	SI
10-1-2+5 1	SECTION 4: FIRST-AID MEASURES	To D
4.1. IF IN EYES	<ul> <li>Hold eye open and rinse slowly and gently with water for 10 25 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	HASA MURIA Safety Data Sheet (SD
4.2. IF ON SKIN OR CLOTHING	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	S -
4.3. IF INHALED	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>	No. 110)
4.4. IF SWALLOWED	<ul> <li>Call a poison control center of doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>	
going for treatment. You	iner or label with you when calling a poison control center or doctor, or u may also contact 1-800-424-9300 for emergency medical treatment	-
information.	NOTE TO PHYSICIAN	-

Probable mucosal damage may contraindicate the use of gastric lavage.

1.90	1 SEA	SECTION 5	FIRE-FIGHTING MEASURES
5.1	Produ	cts of Combustion:	Hydrogen and chlorine Reacte with many metals to liberate hydrogen gas which
5.2	Variou	azards in Presence of us Substances:	can form explosive mixtures with air.
5.3	Evalo	alon Hazards:	Not sensitive.
5.4	Fire F	ighting Media and Instru	ictions:
5.4	5.4.1	Extinguishing Media:	biroumstances and the surrounding environment.
	5.4.2	Small Fires:	Use carbon dioxide, dry chemical, dry sand, alcohol-
	5.4.3	Large Fires:	Water spray, fog or alcohol-resistant foam. Move containers from fire area if you can do it without risk. Use water spray or fog; do not use straight streams. Dike fire-control water for later disposal; do not scatter the material.
			The first from maximum distance of use utilitating interest
5.5	Fire Involving Tank Cars / Trailer Loads:		Fight fire from maximum distance of doe dimensional holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.

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N. B.	SECT	ION 6: ACCIDENTAL RELEASE MEASURES	Saf
6.1		Gather up with a squeegee and place in pool and spa. If this is not possible, absorb with sand, diatomaceous earth or similar products and ecouvoly bag, and place in trash for collection.	HASA M afety Data
6.2	Large Spill:	Steps to be taken in case material is released or spilled: Spills or discharges into the environment involving large quantities of Hydrochloric Acid should be controlled and cleaned-up according to a pre-determined, affirmative written Spill Prevention and Control Program. Refer to Section 15 for spill/release reporting information. Spills should be handled immediately by neutralization and dilution of the spilled product by the use of Soda Ash (Sodium Carbonate), Lime (Calcium Hydroxide), or Limestone (Calcium Carbonate) with large amounts of water. For an interior (inside a closed space) spill be aware that the use of Soda Ash, Lime and Limestone will evolve heat and carbon dioxide and that ample ventilation must be provided.	A MURIATIC ACID Data Sheet (SDS No. 110)
		If possible without personal risk, stop leak. Try to prevent the materials from entering drains, waterways, or sewers and dispose of in accordance with local regulations. Rinse exposed area with dilute sodium carbonate solution.	

1	SECT	TION 7: HANDLING AND STORAGE
7.1	Handling:	Keep away from skins and eyes. Do not inhale or swallow. Do not mix with chlorine type bleaches or other household chemicals. Whenever handling muriatic acid, wear protective clothing (goggles, old clothing and rubber gloves). Remove protective clothing and
7.2	Storage and Disposal:	wash before reuse. Store muriatic acid in a clean, dry place in the upright position. Keep out of reach of children, pets and other animals. Rinse empty container thoroughly before discarding.

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тĔ	SE	CTION 8: EXPOSURE	CONTROLS / PERSONAL PROTECTION
8.1	Engine	eering Controls:	Exposure Limit (PEL).
8.2		nal Protection:	When necessary, wear splash goggles or safety glasses and gloves.
8.3		nal Protection in case of a Spill:	Wear splash goggles or safety glasses and gloves. If natural ventilation is insufficient, wear a NIOSH approved respirator.
8.4	Expos	sure Guidelines:	
	8.4.1	ACGIH (American Conference of Governmental and Industrial Hygienists) TLV (Threshold Limit Value)	Exposure Limit (PEL). When necessary, wear splash goggles or safety glasses and gloves. Wear splash goggles or safety glasses and gloves. If natural ventilation is insufficient, wear a NIOSH approved respirator. 5 ppm (7 mg/m <sup>3</sup> ) Ceiling
	8.4.2	PEL (OSHA Permissible Exposure Limit)	5 ppm (7 mg/m <sup>3</sup> ) Ceiling Limit
	8.4.3	IDLH (NIOSH Immediate Danger to Life & Health)	50 ppm (75 mg/m <sup>3</sup> )
	8.4.4	AIHA (American Industrial Hygiene Association)	<ul> <li>ERPG – 1 (The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor.): 3 ppm</li> <li>ERPG – 2 (The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action.): 20 ppm</li> <li>ERPG – 3 (The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to other serious health effects or symptoms that could impair an individual's ability to take protective action.): 20 ppm</li> <li>ERPG – 3 (The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects.): 150 ppm</li> </ul>

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2.12.9	SECTION 9: PHYSICAL	AND CHEMICAL PROPERTIES	HASA Safety Dat
0.4		Coloriess liquid.	2 S
9.1	Appearance:	Irritating and pungent odor.	DD
9.2	Odor:	4.7 ppm @ at 25 ℃	A N Data
9.3	Odor Threshold:	<1.0	0
9.4	pH:	Not applicable.	MURI ata Sheet
9.5	Melting Point:	-46.9 °C (-52.5 °F)	je Z
9.6	Freezing point:	85℃ (185°F)	S D
9.7	Boiling Point & Boiling Range:	No information available.	AII (SDS
9.8	Flash Point:	No information available.	S S
9.9	Evaporation Rate:	Nonflammable and noncombustible.	No
9.10	Elammability (solid, gas):	Nonnanimable and noncerna	
9.11	Upper / Lower Flammability or	Not applicable.	110
0	Explosive Limits:	40 mm Hg @ 30°C (86°F)	Ē
9.12	and a second design of the sec	40 mm Hg @ 50 C (00 T )	
9.13	Vener Density:	No information available.	
9.14	In IO anitio (POVITVI)	1.16 @ 15.5 °C (60 °F)	
9.15	Solubility in Water:	Mixes with water in all concentrations.	
		Not applicable.	
9.16			
	water): Auto-ignition Temperature:	Not applicable.	
9.17	The second secon	Not applicable. 85°C. Rate of decomposition increases with heat.	
9.18		36 46 g/mole	-11
9.19		1.55 centipoises @ 30°C (86 °F)	
9.20	Viscosity:		

1.650	SECTION 10: ST/	ABILITY AND REACTIVITY
10.1	Stability:	Stable under normal conditions of storage, that are of
10.2	Instability Temperature:	and Use. 85°C. Rate of decomposition increases with heat. High heat, ultraviolet light.
10.3	Conditions of Instability:	o i listing agents acids nitrogen containing organio,
10.4	Incompatibility with Various Substances:	metals, iron, copper, nickel, cobait, organic materials, and ammonia. Corrosive to most metals with evolution of hydrogen are which may form explosive mixtures with air.
	Depativity	Rate of decomposition increases with heat.
10.5	Special Remarks on Reactivity:	
10.6	Hazardous Polymerization:	Will not occur.

Revision Date: 01/01/2015 (Supersedes previous revisions)

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1	SECTION 11: TOXICO	LOGICAL INFORMATION	fet
1.1	Poutes of Entry:	Eyes, skin, ingestion. Causes eye burns. Contact with this material will	Y I
11.2	Eye damage & skin conservation	Causes eye burns. Contact with the more cause burns to the skin, eyes and mucous membranes. Permanent eye damage including blindness could result. NIOSH: 900 mg/kg (rabbit)	Safety Data Sheet (SDS No. 110)
11.3	Acute Oral Toxicity (LD <sub>50</sub> ):	3124 mg/l, 1 Hour (rat)	1
11.4	Acute Inhalation Toxicity (LC50):	Harmful if swallowed. Causes digestive tract	D
11.5	Toxic Effects on Humans:	Harmful if swallowed. Causes digotation to the lips, burns. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.	S No. 110
110	Carcinogenic [Cancer Potential] Info	Induom	
11.6	NTP (National Toxicological Program 6 <sup>th</sup> Annual Report on Carcinogens):	NUL LISTOU.	
	IARC (International Agency for Research on Cancer Monographs, V. 1-100):	Not Listed.	-
	On Cancer Monographs, V. 1160/ Proposition 65, California only: (Safe Drinking Water and Toxic Enforcement Act of 1986):	Not Listed.	
11.7	Mutagenic Effects:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
	of Exposure	Exposure to hydrochloric acid may cause severe	
11.8	Signs and Symptoms of Exposure:		
11.9	Medical Conditions Generally	Exposure to fumes may aggravate dermatitis and breathing disorders.	_
11.10	Aggravated by Exposure: Health Hazards (Acute and Chronic):	Hydrogen Chloride, both as a gas and in a solution as Hydrochloric Acid, is a corrosive substance and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to the irritating effects of high atmospheric concentrations of Hydrogen Chloride The gas or vapor is so penetrating and pungent that when high concentrations do occur, those exposed should immediately leave the contaminated area.	

SECTION 12: ECOLOGICAL INFORMATION			HAS
12.1	Ecotoxicity General:	This product is toxic to fish and aquatic organisms. Do not comaminate water containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, approximate water board or Regional Office of the EPA.	Data
12.2	Ecotoxicological Information:	LC <sub>50</sub> Shrimp 100 to 330 ppm/48 hr (salt water) LC <sub>50</sub> Mosquito Fish 282 mg/L (24 to 96 hours) LC <sub>50</sub> Green crabs 100 mg/L (96 hr produced no stress effects) LC <sub>50</sub> Gold fish 180 mg/L (96 hours) Aquatic Hazard Concern Level : moderate When hydrochloric acid is spilled onto soil, it will begin to infiltrate. The	Sheet (SDS No.
12.3	Persistence and Degradation:	presence of water in the soil will influence the fate of onemical movement in the soil. During transport through the soil, hydrochloric acid will dissolve some of the soil material, in particular those of a carbonate base. The acid will be expected to remain for transport down toward the ground water table. Hydrogen chloride in water dissociates almost completely, with the hydrogen ion captured by the water molecules to form the hydronium ion.	<b>ACID</b> o. 110)
12.4	Products of Biodegradation:	Not pertinent.	

# SECTION 13: DISPOSAL CONSIDERATIONS

Do not contaminate food or feed by storage, disposal, or cleaning of equipment. Product or rinsates that cannot be used should be diluted with water before disposal in a sanitary sewer. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination system (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Dispose of in accordance with all applicable local, county, State, and Federal regulations.

Card I	SECTIO	N 14: TRANSPORT INFORMATION	HAS Safety
14.1	Shipping Name:	Hydrochloric Acid	
14.2	Hazard Class / Division:	8	A N Data
14.3	Identification No.:	UN 1789	Sheet
14.4	Packing Group:	PG II	E B
14.5	Reportable Quantity (RQ):	5,000 lb (1643 gallons)	
14.6	DOT Special Permit 6614:	Hydrochloric acid may be shipped in deposit 1 gallon polyethylene bottles secured 4 per case in a plastic crate in accordance with DOT-SP-6614. In these cases, the special permit number "DOT- SP-6614" is included in the shipping description. The shipping description for return of empty deposit bottles and crates is "RESIDUE: LAST CONTAINED UN1789, HYDROCHLORIC ACID, 8, PGII, DOT-SP 6614".	ATIC ACID (SDS No. 110)
14.7	Deposit Pails, Carboys and Drums:	8, PGII, DO1-SP 6614. The shipping description for return of empty deposit pails, carboys, and drum is "RESIDUE: LAST CONTAINED UN1789, HYDROCHLORIC ACID, 8, PGII".	
	to less regulation, beca Materials of Trade. The information is not intended to		

1 Mart	SECTION 15: REGULATORY INFORMATION				
5.1		egulations:	This material is considered hazardous under the HAZCOM standard (29 CFR 1910.1200). Not regulated under PSM standard (29 CFR		
	15.1.1	OSHA HAZCOM (Hazard			
		Communication)			
	Management): 15.1.3 EPA EPCRA (EPA Emergency Planning I and Community Bight-to-know Act):		Not regulated under FSW standard (29 OF T		
			1910.119). Not listed on Extremely Hazardous		
			Substances and Their Threshold Planning		
			Quantities. (Appendix A to 40 CFR Part 355)		
		EDA TOOA (Truis Substance Control	All components are listed or exempted.		
	Act):		TSCA 12(b): This product is not subject to export notification.		
	AFAF	EPA CERCLA (Comprehensive	Reportable Quantity (RQ) under CERCLA:		
	15.1.5	Environmental Response, Compensation,	5000 lbs. (1643 gallons).		
		and Liability Act):			
	15.1.6	EPA FIFRA (Federal Insecticide,	Not regulated under FIFRA standard.		
		Fungicide, Fungicide, and Rodenticide			
		Act):			
	15.1.7 EPA RMP (Risk Management Plan): Not regulated under RMP. (40 CFR 68.13		Not regulated under RMP. (40 CFR 68.130)		
5.2	State of California Regulations:				
	15.2.1	CDPR (California Department of	Registration No: 10897-50008-AA (spray		
	Pesticide Regulation):		adjuvant)		
	15.2.2	CalARP (California Accidental Release	Not regulated.		
		Prevention):			
5.3	Canada Regulations:				
	15.3.1	WHMIS (Workplace Hazardous Materials	WHMIS classification:		
		Information System):	D1A - Poisonous and infectious material -		
			Immediate and serious effects - Very toxic		
			E - Corrosive Materials		
	15.3.2	DSL (Domestic Substances List):	All components of this product are on the		
	DSL.				
15.4					
	15.4.1	AICS (Australian Inventory of Chemical	On inventory or in compliance with inventory		
		Substances):			
	15.4.2	KECI (Korean Existing Chemicals	On inventory or in compliance with inventory		
	13.4.2	Inventory):			
	15.40	PICCS (Philippine Inventory of	On inventory or in compliance with inventory		
	15.4.3	Chemicals and Chemical Substances):	On intended of interest		
	45.4.4	IECSC (Inventory of Existing Chemical	On inventory or in compliance with inventory		
	15.4.4	Substances in China):			
	15 4 5	NZIOC (New Zealand Inventory of	On inventory or in compliance with inventory		
	15.4.5	Chemicals):			

16.1	HMIS	II (Hazardous Materials Identification System	):		
	1	HEALTH	3		
	16.1.2	FLAMMABILITY	0		
	16.1.3	PHYSICAL HAZARD	0		
	16.1.4	PERSONAL PROTECTION	See Section 8		
6.2	NFPA 704 (National Fire Protection Association):				
	16.2.1	Health	3		
	16.2.2	Flammability	0	20	
	16.2.3	Instability	0		
	16.2.4	Special	None	$\sim$	
16.3	International Fire Code / International Corrosive Liquid. Building Code:				
6.4	ANSI (American National Standards Institute):				
	16.4.1	Hazardous Industrial Chemicals - MSDSs-Preparation:	Complies with ANS		
		Hazardous Industrial Chemicals - Precautionary Labeling: overt concentrations in air (at 25°C) fro	Complies with ANSI Z129.1 – 2006.		

## **Disclaimer of Liability:**

The information contained herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge and belief. NO WARRANTY OR GUARANTEE, express or implied, is made regarding the product performance, product stability, or as to any other condition of use, handling, transportation, and storage. Customer use, handling, transportation, and storage may involve additional safety and/or performance considerations. Our technical personnel will be happy to respond to questions regarding safe handling, storage, transportation, and use procedures remain the sole responsibility of the customer. No suggestions for handling, storage, transportation, or use are intended as or to be construed as recommendations which may infringe on any existing patents or violate any Federal, State, and/or local law and/or regulation, ordinance, standard, etc. This Safety Data Sheet has been prepared by Hasa, Inc. staff from test reports and other information available in the public domain.

# NK Salammoniac ANY 3 pgs

## JOHNSON MANUFACTURING COMPANY Safety Data Sheet

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To comply with 29CFR 1910.1200 OSHA's Hazard Communication Standard

# Sal Ammoniac Bars, 24-100-00

# 1. PRODUCT AND COMPANY INFORMATION

Johnson Manufacturing Company 114 Lost Grove Road Princeton IA 52768

Emergency Telephone 1-(563)-289-5123 CHEMTREC AFTER HOURS 1-(800)-424-9300 Revised 1/1/2015 by JMC Product Safety

## 2. HAZARD IDENTIFICATION

**GHS Classification:** Acute Tox. 4 Skin Irrit 2 Eye Init. 2

**GHS Label Elements:** 

AMMONIUM CHLORIDE WARNING

H Codes: H302, H319 Harmful if swallowed Harmful if inhaled Causes severe eye irritation

Avoid breathing mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Use in a well ventilated area. Wear protective gloves/protective P264, 280, 301+312, 330, 501, 405, 305+351+338+310, 337+313 clothing/eye protection/face protection. In case of inadequate ventilation use respiratory protection. Do not breathe dust/fume/gas/mist/vapor/spray. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER/Doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. IF INHALED: Remove victim to to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call POISON CENTER/Doctor. Wash thoroughly after use. Wash contaminated clothing before reuse. Store in a closed compatible container in cool dry place. Avoid release to the environment. Dispose of contents/container in accordance with specified local/regional/national/international regulations for disposal. Keep out of the reach of children. Read label and SDS prior to use.

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

-			ACIGH TWA	Other limits	70
Hazardous Component	CAS #	OSHATWA	ACIGITITIA		
nazardous component		10mg/M3			
Ammonium Chloride	12125-02-9	10mg/M3	tonig.		

Only those ingredients listed in this section have been determined to be hazardous as defined in 29CFR 1910.1200. An ingredient marked with an asterisk(\*) is also listed in 29CFR 1910.1200(D) #4 as a known or suspected cancer hazard.

+ denotes a chemical regulated as toxic by the Environmental Protection Agency (EPA) as outlined in 40CFR Part 372 (section 313)

## 4. FIRST AID MEASURES

Signs and symptoms of exposure: Inhalation-Nose & throat initation, headache, dizziness, difficulty breathing, coughing. Ingestion-nausea, vomiting, cramps. Skin-redness, burning, rash, dryness. Eye-redness, burning, tearing, blurred vision.

Medical conditions aggravated by exposure: Skin, kidney and respiratory conditions.

Emergency first aid procedures:

Skin: Flush with water immediately - Seek medical attention if necessary

Ingestion: DO NOT induce vomiting, drink large amounts of water - seek medical attention. Never give anything by mouth to an unconscious person



Inhalation: Remove to fresh air. Support respiration if required - Seek medical attention

## 5. FIREFIGHTING MEASURES

Extinguishing media: dry chemical. Special fire fighting procedures: use self sustaining respiratory suit. Unusual Fire and Explosion Hazards: May release ammonia hydrochloric acid and nitrogen oxides.

# 6. ACCIDENTAL RELEASE MEASURES

Methods and materials: Flush into chemical sewer or soak up with a suitable absorbent. Wear adequate protection as described in section 8. Environmental Precautions: Avoid release to the environment. Collect spillage.

## 7. HANDLING & STORAGE

Wash thoroughly after use. Wash contaminated clothing before reuse. Store in a closed corrosive resistant container, with corrosive resistant liner, in cool dry place. Keep out of the reach of children. Read label and SDS prior to use.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limit Values: See section 3. Respiratory Protection (type): Acid mask required for fumes above TWA. Ventilation: Local Exhaust preferred Special: NE Other: NE Eye Protection: Goggles or face shield Mechanical: OK Protective Gloves: plastic or rubber Other Protective Clothing or Equipment: as required to avoid contact. Work/Hygienic Practices: Wash after use. Follow good industrial hygienic practices.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: 1.53 Boiling Point: 640 C Melting Point: 428 F Vapor Pressure (mm Hg): NE Evaporation Rate: <1 (butyl acetate=1) Vapor Density: NE pH: NE Solubility in water: near 100% Flammable Limits: lel: NE uel: NE Flash Point: NE (TOC) Appearance and odor: White solid, odoriess.

# 10. STABILITY AND REACTIVITY

Conditions to avoid : none Stability : STABLE

Incompatibility (materials to avoid): strong bases & acids, oxidizers, sulfides, halogens. Hazardous Decomposition or Byproducts (incomplete combustion): Ammonia, hydrochloric acid, chlorine, and nitrogen oxides. Hazardous Polymerization: WILL NOT OCCUR Conditions to avoid: none

# 11. TOXICOLOGICAL INFORMATION

Routes of entry: Inhalation: yes Skin: no Ingestion: yes

Health Hazards (acute and chronic): Contact with material or fumes may cause skin, eye and respiratory tract irritation. Ingestion may cause digestive tract initiation. Gross or repeated inhalation may result in asthma like condition. Toxicity is considered low via inhalation and ingestion. Chronic exposure may result in respiratory tract and kidney effects. Studies show that potential health risks vary by individual. Always minimize exposure as a precaution.

Carcinogenicity: not determined NPT? no IARC Monographs? no

## 12. ECOLOGICAL INFORMATION

Toxicity: NE Bio-accumulative Potential: NE PBT & vPvB Assessment: NE

Persistence & Degradability: NE Mobility in Soil: NE Other Adverse Effects: NE

# 13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: dispose of in accordance with all local state and federal regulations

Other Precautions: Avoid skin & eye contact, inhalation & ingestion of fumes and material. Wash contaminated clothing before reuse. Keep away from children.

## **14. TRANSPORT INFORMATION**

DOT Classification: Non-Hazardous Marine Pollutant: NE

## **15. REGULATORY INFORMATION**

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NFPA Classification (NFPA 325M,8 edition)(Health, Flammability, Reactivity): 1-0-0

## **16. OTHER INFORMATION**

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to JOHNSON MANUFACTURING at the time of issue. No warranty, guarantee, or representation is made by JOHNSON MANUFACTURING assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances.

NE = not established NA = not applicable

Form 303.94 Rev.D

# Nu-Calgon

# SAFETY DATA SHEET

	1. Product and Company	Identification
roduct identifier	NU-BRITE (4291-01, 4291-05, 4291-08, 4	891-08)
ther means of identification	Not available.	
ecommended use	Coil Cleaner / Degreaser	×
ecommended restrictions	None known.	<u> </u>
lanufacturer information	Nu-Calgon 2008 Altom Court St. Louis, MO 63146 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHI	EMTREC)
	2. Hazards Identific	ation
	Corrosive to metals	Category 1
Physical hazards		Category 1
lealth hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		
	Danger	
Signal word	May be corresive to metals.	
Hazard statement	Causes severe skin burns and eye dar	nage.
Precautionary statement		
Prevention	clothing/eve protection/lace protection	oroughly after handling. Wear protective gloves/protective
Response	Absorb spillage to prevent material dar If swallowed: Rinse mouth. Do NOT in If on skin (or hair): Take off immediate If inhaled: Remove person to fresh air If in eyes: Rinse cautiously with water easy to do. Continue rinsing. Immediately call a poison center/doct	nage. Induce vomiting. Induce vomiting. Induce vomitated clothing. Rinse skin with water/shower. and keep comfortable for breathing. Induce for several minutes. Remove contact lenses, if present and or. In this label).
	Store in corrosive resistant container	with a resistant inner liner.
Storage	Store locked up.	dense with local/regional/national/international regulations
Disposal	Dispose of contents/container in acco	rdance with local/regional/national/international regulations
Hazard(s) not otherwise classified (HNOC)	None known.	
	Not applicable.	

Mixture	1	CAS number	%
Chemical name	Common name and synonyms	1310-73-2	15-40
Sodium hydroxide		110615-47-9	1-5
Alkyl polyglycoside		an) of composition has been	withheld as a trad
<b>Composition comments</b>	US GHS: The exact percentage (concentration secret in accordance with paragraph (i) of §1	910.1200.	

secret in accordance with paragraph (i) of §1910.1200.

NUC 4291-08 9 Pgs.

	4. First Aid Measures
nhalation	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor/.
Skin contact	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Specific treatment (see information on this label). Immediately call a poison center/doctor/.
Eye contact	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and event to do. Continue rinsing, Immediately call a poison center/doctor.
ngestion	If availaged Rinse mouth Do NOT induce vomiting. Immediately call a poison center/doctory.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
ndication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the matenal(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Use of an impervious apron is recommended. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.
	5. Fire Fighting Measures
	Treat for surrounding material.
Suitable extinguishing media Unsuitable extinguishing	Do not use water jet as an extinguisher, as this will spread the fire.
media Specific hazards arising from the chemical	Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	No.
Sensitivity to static discharge	No.
	6. Accidental Release Measures
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind or spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with wat
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
	Never return spills to original containers for re-use.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.
	7. Handling and Storage
Precautions for safe handling	Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Do not get in eyes, on skin or on clothing. Use good industrial hygiene practices in handling this material. Keep container tightly closed. Avoid breathing vapors or mists of this product.

Conditions for safe storage, including any incompatibilities

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Store locked up. Store in corrosive resistant container with a resistant inner liner. Store in a closed container away from incompatible materials. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS).

# 8. Exposure Controls/Personal Protection

	8. Exposure Controls	s/Personal Plotection
occupational exposure limits		4040 (000)
us. OSHA Table Z-1 Limits for	Air Contaminants (29 CFR	Value
Components		2 mg/m3
Sodium hydroxide (CAS 1310-73-2)	PEL	
US. ACGIH Threshold Limit Va	lues	Value
Components	-75-	2 mg/m3
Sodium hydroxide (CAS 1310-73-2)	Ceiling	
US. NIOSH: Pocket Guide to C	hemical Hazards	Value
Components		2 mg/m3
Sodium hydroxide (CAS 1310-73-2)	Ceiling	a poted for the ingredient(s).
Biological limit values	No biological exposure limits	s noted for the ingredient(s). I that are not listed here do not have established limit values for
Exposure guidelines		
Appropriate engineering controls	or other engineering control	pically 10 air changes per hour) should be used. Ventilation rates tions. If applicable, use process enclosures, local exhaust ventilation, is to maintain airborne levels below recommended exposure limits. If then established, maintain airborne levels to an acceptable level.
Individual protection measures,	such as personal protective	equipment
Individual protection measurer,	Wear chemical goggles.	
Eye/face protection		the East
Skin protection	Rubber gloves. Confirm wi	ith a reputable supplier first.
Hand protection Other	Weer appropriate chemical resistant clothing. As required by	
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA). Avoid breathing mists or vapors. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.	
	Not applicable.	tion effort handling the material
Thermal hazards General hygiene considerations	equipment to remove con the product.	sonal hygiene measures, such as washing after handling the material g, and/or smoking. Routinely wash work clothing and protective taminants. Wash hands before breaks and immediately after handling
	9. Physical an	nd Chemical Properties
Appearance	Liquid	
Physical state	Liquid.	
Form	Liquid.	
Color	Blue	
Odor	Characteristic, Mild	
Odor threshold	Not available.	
	12.7 (1%)	
рН	14 (Concentrate)	
Meiting point/freezing point	32 °F (0 °C)	
Initial boiling point and boilin	g 212 °F (100 °C)	
range	Not available.	
Pour point	1.24	
Specific gravity Partition coefficient	Not available	
(n-octanol/water)	None to boiling	
Flash point	Equal to water	
Evaporation rate	Not applicable.	issue date 10-February-20
Flammability (solid, gas)	town white a second second	Page: 3 of 9 4291-01, 4291-05, 4291-05, 4891-0

Upper/lower flammability or exp	losive limits	•	
Flammability limit - lower (%)	Not available	·	
Flammability limit - upper (%)	Not available		
Explosive limit - lower (%)	Not available.		
Explosive limit - upper (%)	Not available.		
Vapor pressure	Not available		
Vapor density	Not available		
Relative density	Not available.		
Solubility(ies)	Complete		
Auto-ignition temperature	Not available		
Decomposition temperature	Not available.		
Viscosity	Water thin		
Other information			
Bulk density	10.36 lb/gal		
VOC (Weight %)	None		
	10. Stability and	I Reactivity	
Reactivity	Reacts violently with acids. This pr	oduct may react with oxidizing agents.	
Possibility of hazardous reactions	Hazardous polymerization does not occur.		
Chemical stability	Stable under recommended storag	ge conditions.	
Conditions to avoid	Do not mix with other chemicals. Hazardous vapours may be produced when mixed with chlorinated detergents or sanitizers.		
Incompatible materials	Oxidizing agents. Acids.		
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.		
	11. Toxicological	Information	
Routes of exposure	Eye, Skin contact, Inhalation, Inges	stion.	
Information on likely routes of e	exposure		
Ingestion	Causes digestive tract burns.		
Inhalation	Prolonged inhalation may be harm	ful. May cause irritation to the respiratory system.	
Skin contact	Causes severe skin burns.		
Eye contact	Causes serious eye damage.		
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.		
Information on toxicological eff	ects		
Acute toxicity			
Components	Species	Test Results	
Alkyl polyglycoside (CAS 110615			
Acute			
Dermal			
LD50	Rabbit	> 2000 mg/kg	
Inhalation		1	
LC50	Not available		
Oral			
LD50	Rat	> 5000 mg/kg	
Sodium hydroxide (CAS 1310-73	-2)		

Acute Dermal LD50

Rabbit

#18522

1350 mg/kg

## **Test Results**

		Test	Results
Components	Species		
Inhalation	1		
LC50	Not available		
Oral	Not available		
LD50 .		in burns and eye damage.	
Skin corrosion/initiation			
Exposure minutes	Not available.		١
Erythema value	Not available.		•
Oedema value	Not available. Causes serious e	ave damage.	
Serious eye damage/eye irritation		390 Gameger	1
Corneal opacity value	Not available.		
iris lesion value	Not available.		
Conjunctival reddening value	Not available.		
Conjunctival oedema value	Not available.		
Recover days	Not available.		
Respiratory or skin sensitization	n .		
Respiratory sensitization	Not available.	to data source skin sensitization.	
Skin sensitization	This product is	not expected to cause skin sensitization.	
Germ cell mutagenicity	Non-hazardous	by WHMIS/OSHA criteria.	
Mutagenicity	Non-hazardous	s by WHMIS/OSHA criteria.	
	Non-hazardous	s by WHMIS/OSHA criteria.	
US OSHA Specifically Reg	gulated Substance	es (29 CFR 1910.1001-1050)	
Not listed.			
Reproductive toxicity	Non-hazardou	s by WHMIS/OSHA criteria.	
Teratogenicity	Non-hazardou	is by WHMIS/OSHA criteria.	
Specific target organ toxicity - single exposure			
Specific target organ toxicity - repeated exposure			
Aspiration hazard	Not available.	halation may be harmful. Non-hazardous	by WHMIS/OSHA criteria.
Chronic effects	Prolonged int	halation may be harmidi. Not the	
Further information	Not available		
Name of Toxicologically	Not available		
Synergistic Products		L'information	
		12. Ecological Information	eving potential environmental concerns. See
	Components	s of this product have been identified as h	aving potential environmental concerns. See
Ecotoxicity	below		
Ecotoxicological data Components		Species	Test Results
Sodium hydroxide (CAS 1310	-73-2)		
Aquatic		Water flea (Ceriodaphnia dubia)	34.59 - 47.13 mg/L, 48 hours
Crustacea	EC50	Western mosquitofish (Gambusia aff	inis) 125 mg/L, 96 hours
Fish	LC50	Western mosquitonsin (Games and	uct.
Persistence and degradabil	ity No data is	available on the degradability of this prod	
Persistence and degrade	No data av	vailable.	

No data available. **Bioaccumulative potential** 

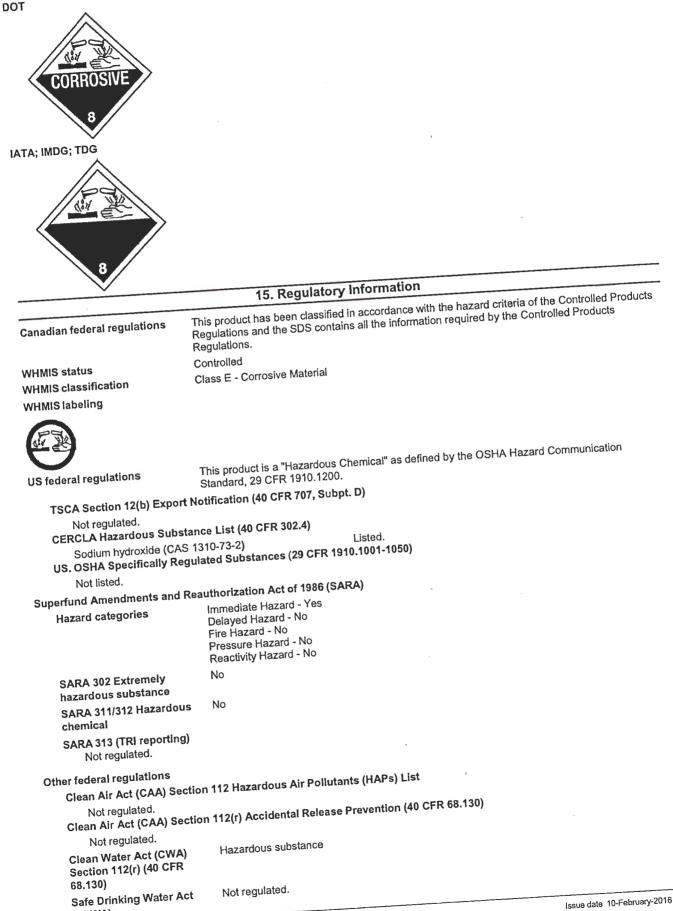
No data available.

Mobility in general Other adverse effects

Mobility in soil

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

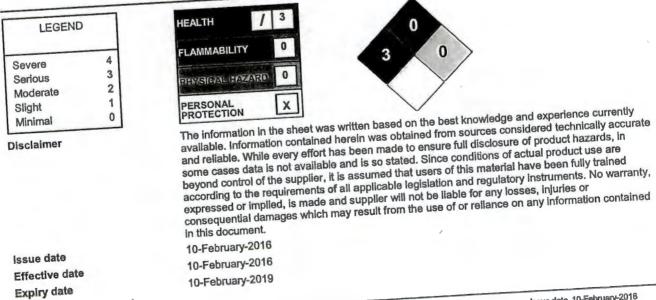
	13. Disposal Considerations
isposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposed order and into and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international
ocal disposal regulations	regulations. Dispose in accordance with all applicable regulations. The waste code should be assigned in discussion between the user, the producer and the waste
lazardous waste code	The waste code should be assigned in an
	The waste code should be assigned and disposal company. disposal company. Dispose of in accordance with local regulations. Empty containers or liners may retain some dispose of in a safe manner (see:
Waste from residues / unused	product residues. This material
products	Disposal instructions).
Contaminated packaging	product residues. This material and its composition of the product residues. This material and its composal instructions). Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
	14. Transport Information
	in the accordance with Part 2.2.1 (SUR/2014 to of this product
General	14. Transport information Canada: TDG Proof of Classification: In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue. If applicable, the technical name and the classification of the product will appear below.
U.S. Department of Transporta	ition (DOT)
Basic shipping requireme	
UN number	UN3266 Corrosive liquid, basic, inorganic, n.o.s.
Proper shipping name	Sodium hydroxide
Technical name	8
Hazard class	1
Packing group	B2, IB2, T11, TP2, TP27
Special provisions	154
Packaging exceptions	202
Packaging non bulk Packaging bulk	242
Packaging bulk Transportation of Dangerou	s Goods (TDG - Canada)
Basic shipping requiren	lettes.
UN number	UN3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Proper shipping name	CORROSIVE LIQUID, BASIC, MEDI
Technical name	SODIUM HYDROXIDE
Hazard class	8
Packing group	16
Special provisions	<1L - Limited Quantity
Packaging exceptions	
IATA/ICAO (Air)	ments:
Basic shipping require	UN3266
UN number	Corrosive liquid, basic, inorganic, n.o.s.
Proper shipping name	Sodium hydroxide
Technical name	8
Hazard class Packing group	1
Marine Transport)	
Basic shipping requir	ements:
UN number	UN3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Proper shipping nam	e CORROSIVE LIQUID, States
Technical name	
Hazard class	8
Packing group	II.



(SDWA)

		us Chamicals (21 CFR 1310.02(b) and 1	310.04(f)(2) and
Drug Enforcement Ac	iministration (DEA). List 2, Essent	tial Chemicals (21 CFR 1310.02(b) and 1	
Chemical Code Num	ber	(24 CEP 1310.1	(2(c))
Not listed. Drug Enforcement A	dministration (DEA). List 1 & 2 Exe	empt Chemical Mixtures (21 CFR 1310.1	
Not regulated. DEA Exempt Chemic	cal Mixtures Code Number		
Not regulated.			
Food and Drug Administration (FDA)	me that does not contain	a chemical known to the State of Californi harm.	a to cause cancer, birth
US state regulations	defects of other reproducer of	nam.	
Sodium hydroxic US - Minnesota Haz	al Safety Act: Listed substance de (CAS 1310-73-2) z Subs: Listed substance de (CAS 1310-73-2) TK - Substances: Listed substanc	SODIUM HYDROXIDE	
Sodium hydroxi US - New York Rele Sodium hydroxi	ide (CAS 1310-73-2) ease Reporting: Hazardous Subst ide (CAS 1310-73-2)	ances: Listed substance SODIUM HYDROXIDE tances: Reportable quantity for releases SODIUM HYDROXIDE ent of Justice (California Health and Safe	s to air ety Code Section 11100)
Not listed. US. Massachusett Sodium hydro: US. New Jersey V	ts RTK - Substance List xide (CAS 1310-73-2) Vorker and Community Right-to-K		
US. Pennsylvania Sodium hydro US. Pennsylvania Sodium hydro	a RTK - Hazardous Subsamble oxide (CAS 1310-73-2) a Worker and Community Right-to oxide (CAS 1310-73-2)	-Know Law	On inventory (yes/no)*
Inventory status	Luceton name		On inventory () contrary Yes
Country(s) or region		t (DSL)	No
Canada	Non-Domestic Substance	es List (NDSL)	Yes
Canada United States & Puer	to Rico Toxic Substances Contro all components of this product comply with	I Act (TSCA) Inventory th the Inventory requirements administered by t	he governing country(s)

"A "Yes" indicates that all components of this product comply with the inventory requirements administered by the 16. Other Information



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Further information

Prepared by Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Nu-Calgon Technical Service Phone: (314) 469-7000

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

«Nu-Calgon

# NUC: 4330-08 8pgs

## SAFETY DATA SHEET

Issue Date 02-Jan-2015

Revision Date 02-Jan-2015

Version 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier Product Name

Liquid Scale Dissolver

Other means of identification Product Code Synonyms

4330-01, 4330-05, 4330-08 4845-01, 4845-05

Details of the supplier of the safety data sheet Company Name Nu-Calgon

2008 Altom Court St. Louis, MO 63146 (800) 554-5449 http://www.nucalgon.com/

Emergency telephone number Emergency Telephone

Chemtrec 1-800-424-9300

## Classification\_

## **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 5
Acute toxicity - Dermal	Not classified
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

2. HAZARDS IDENTIFICATION

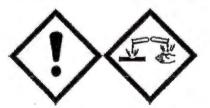
Label elements

**Emergency Overview** 

## Danger

Hazard statements

May be harmful if swallowed Harmful if inhaled Causes severe skin burns and eye damage May cause respiratory irritation. May cause drowsiness or dizziness



Appearance Clear Orange

Physical state Liquid

**Odor** Pungent Acidic

#### **Precautionary Statements - Prevention**

Use only outdoors or in a well-ventilated area Do not breathe dust/fume/gas/mist/vapors/spray Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection

## **Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician Specific Treatment (See Section 4 on the SDS) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continuerinsing Immediately call a POISON CENTER or doctor/physician IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell Immediately call a POISON CENTER or doctor/physician IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

## **Precautionary Statements - Storage**

Store locked up Store in a well-ventilated place. Keep container tightly closed

## **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

## Hazards not otherwise classified (HNOC)

Other Information

0.95% of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Hydrochloric Acid	7647-01-0	10-30	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. FIRST AID MEASURES

First aid measures	
General advice	Immediate medical attention is required.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Eye contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Inhalation	Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.
Most important symptoms and eff	ects, both acute and delayed

Symptoms	Any additional important symptoms and effects are described in Section 11: Toxicology Information.
Indication of any immediate	medical attention and special treatment needed
Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

## **5. FIRE-FIGHTING MEASURES**

## Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

## Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

## Explosion data Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

## Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	
Environmental precautions	Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
Methods and material for conta	inment and cleaning up
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces

## 7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

## Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible materials

Incompatible with oxidizing agents. Strong bases. Ammonia. Chlorinated compounds. Contact with metals may evolve flammable hydrogen gas. Metals. Incompatible with strong acids and bases.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	
Hydrochloric Acid 7647-01-0	Ceiling: 2 ppm (vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m <sup>3</sup> Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>		IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>	
2-Propanol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m <sup>3</sup> (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m <sup>3</sup>	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1225 mg/m <sup>3</sup>	

NIOSH IDLH Immediately Dangerous to Life or Health

**Other Information** 

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

Physical state Appearance Color Odor Odor threshold

**General Hygiene** 

Liquid Clear Orange Orange Pungent Acidic No Information available

Property pH Values <1 **Remarks** • Method

## Revision Date 02-Jan-2015

I.

## 4330-01 Liquid Scale Dissolver

Specific Gravity
Viscosity
Melting point/freezing point
Flash point
Boiling point / boiling range
Evaporation rate
Flammability (solid, gas)
Flammability Limits in Air
Upper flammability limit:
Lower flammability limit:
Vapor pressure
Vapor density
Water solubility
Partition coefficient
Autoignition temperature
Decomposition temperature

1.107 Water Thin No Information available None No Information Available No Information available

Not Applicable Not Applicable No Information available Complete No Information available No Information available No Information available

## **Other Information**

Density Lbs/Gal VOC Content (%) 9.22 0.09296

Reactivity No data available

and the second second

<u>Chemical stability</u> Stable under recommended storage conditions.

## **Possibility of Hazardous Reactions**

Hazardous polymerization does not occur.

#### Conditions to avoid

Exposure to air or moisture over prolonged periods. Keep out of reach of children.

## Incompatible materials

Incompatible with oxidizing agents. Strong bases. Ammonia. Chlorinated compounds. Contact with metals may evolve flammable hydrogen gas. Metals. Incompatible with strong acids and bases.

**10. STABILITY AND REACTIVITY** 

## **Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## **11. TOXICOLOGICAL INFORMATION**

## Information on likely routes of exposure

Product Information	The primary effects and toxicity of this material are due to it corrosive nature.
Inhalation	Harmful by inhalation.
Eye contact	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	Corrosive. Contact with skin may cause severe irritation and burns.
Ingestion	Harmful if swallowed. Ingestion causes acute irritation and burns to the mucous membranes of the mouth, trachea, esophagus and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	
Hydrochloric Acid 7647-01-0	= 700 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h	
2-Propanol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m <sup>3</sup> ( Rat ) 4 h	

#### Information on toxicological effects

Symptoms	and weakness shortness of b	Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hours. Pulmonary edema may occur with tightness in the ches shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.		
Delayed and immediate eff	ects as well as chronic	effects from short and lo	ong-term exposure	
Sensitization Germ cell mutagenicity Carcinogenicity	carcinogenic to carcinogenic to	n available. ontains one or more subs o humans (Group I), proba o humans (Group 2B). The	ably carcinogenic to huma	ans (Group 2A) or possible
	listed any ingr	edient as a carcinogen.		
Chemical Name	listed any ingre ACGIH	edient as a carcinogen.	NTP	OSHA
Hydrochloric Acid 7647-01-0	ACGIH Yes	IARC Group 3	NTP Yes	OSHA Yes
Hydrochloric Acid 7647-01-0 IARC (International Agence	ACGIH Yes cy for Research on Cancer	IARC Group 3		
Hydrochloric Acid 7647-01-0 IARC (International Agenc Not classifiable as a human	ACGIH Yes cy for Research on Cancer	IARC Group 3		
Hydrochloric Acid 7647-01-0 <i>IARC (International Agenc</i> <i>Not classifiable as a human</i> <b>Reproductive toxicity</b>	ACGIH Yes cy for Research on Cancer, carcinogen	IARC Group 3 ) n available.		
Hydrochloric Acid 7647-01-0 IARC (International Agenc Not classifiable as a human	ACGIH Yes cy for Research on Cancer carcinogen No Information No Information No Information	IARC Group 3 n available. n available. n available. n available.	Yes	Yes
Hydrochloric Acid 7647-01-0 <i>IARC (International Agenc</i> <i>Not classifiable as a human</i> Reproductive toxicity STOT - single exposure	ACGIH Yes by for Research on Cancer carcinogen No Information No Information No Information Chronic expos necrosis. Bron	IARC Group 3 ) n available. n available.	Yes uses may cause erosion o c cough and frequent atta	Yes f the teeth followed by jay cks of pneumonia are
Hydrochloric Acid 7647-01-0 <i>IARC (International Agenc</i> <i>Not classifiable as a human</i> Reproductive toxicity STOT - single exposure STOT - repeated exposure	ACGIH Yes by for Research on Cancer carcinogen No Information No Information No Information Chronic expos necrosis. Bron common. Gas	IARC Group 3 n available. n available. n available. sure to corrosive fumes/ga nchial irritation with chronic	Yes uses may cause erosion o c cough and frequent atta	Yes f the teeth followed by jay cks of pneumonia are
Hydrochloric Acid 7647-01-0 <i>IARC (International Agenc</i> <i>Not classifiable as a human</i> Reproductive toxicity STOT - single exposure STOT - repeated exposure	ACGIH Yes by for Research on Cancer Carcinogen No Information No Information No Information Chronic expos necrosis. Bron common. Gas Possible risk o	IARC Group 3 A available. A available. A available. A available. Sure to corrosive fumes/gatherial irritation with chronic strointestinal disturbances	Yes uses may cause erosion o c cough and frequent atta	Yes f the teeth followed by jay cks of pneumonia are

0.95% of the mixture consists of ingredient(s) of unknown toxicity **Unknown Acute Toxicity** The following values are calculated based on chapter 3.1 of the GHS document'.

## **12. ECOLOGICAL INFORMATION**

## Ecotoxicity

24.045% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Algae/aquatic plants Fish	
Hydrochloric Acid 7647-01-0	Yes	282: 96 h Gambusia affinis mg/L LC50 static	Yes
Sodium Tripolyphosphate 7758-29-4	Yes	1650: 48 h Leuciscus idus mg/L LC50	Yes
2-Propanol 67-63-0		9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus μg/L LC50	

Persistence and degradability NOT READILY BIODEGRADABLE.

## **Bioaccumulation** No Information available.

## Other adverse effects

No Information available

**13. DISPOSAL CONSIDERATIONS** 

Waste treatment methods	
Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

## 14. TRANSPORT INFORMATION

This corrosive material, as per 49 CFR §173.154 and when the product meets the packaging requirements of 49 CFR §173.154 (b)(2) [inner packagings not over 5.0 L (1.3 gallons) net capacity each for liquid] is excepted from labeling and placarding requirements so long as the material is not offered for transport by aircraft

#### DOT

UN/ID No.	
Proper shipping name	
Hazard Class	
Packing Group	
Special Provisions	
Description	
<b>Emergency Response Gu</b>	ide
Number	

UN1789 Hydrochloric acid 8 11 A3, A6, B3, B15, IB2, N41, T8, TP2 UN1789, Hydrochloric acid solution, 8, II 157

#### TDG

UN1789
Hydrochloric acid Hydrochloric acid solution
8
11
UN1789, Hydrochloric acid solution, 8, II

## 15. REGULATORY INFORMATION

International Inventories TSCA DSL/NDSL

Complies Complies

Legend: TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

## **US Federal Regulations**

## **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values % 1.0	
Hydrochloric Acid - 7647-01-0		
SARA 311/312 Hazard Categories		
Acute health hazard	Yes	
Chronic Health Hazard	Yes	
Fire hazard	No	
Sudden release of pressure hazard	No	
Reactive Hazard	No	

#### **CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrochloric Acid 7647-01-0	5000 lb	Yes	Yes	x

## CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrochloric Acid 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

## California Proposition 65

This product does not contain any Proposition 65 chemicals

## U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrochloric Acid 7647-01-0	X	X	X
2-Propano! 67-63-0	X	X	. X

U.S. EPA Label Information\_ EPA Pesticide Registration Number Not Applicable

	同時的有效是非常	16. OTHER INFORM	MATION	
NFPA	Health hazards 3	Flammability 0	Instability 0	Physical and Chemical Properties Yes
HMIS	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection D
Issue Date	02-Jan-2	015		
<b>Revision Date</b>	02-Jan-2	015		
Revision Note				

No Information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



## SAFETY DATA SHEET

67-31166 7 pgs

 1. Identification

 Product identifier
 Oatey Plumber's Putty

 Other means of identification
 1705E

 Product code
 1705E

 Synonyms
 Part Numbers: 31166, 31167, 31170, 31174, 48003, 48004

 Recommended use
 Plumbing Mastic

 Recommended restrictions
 Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

## Manufacturer/Importer/Supplier/Distributor information

Company Name	Oatey Co.
Address	4700 West 160th St.
	Cleveland, OH 44135

Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
<b>Emergency First Ald</b>	1-877-740-5015
Contact person	MSDS Coordinator

## 2. Hazard(s) identification

Not classified.
Not classified.
Not classified.
None.
None.
The mixture does not meet the criteria for classification.
Observe good industrial hygiene practices.
Wash hands after handling.
Store away from incompatible materials.
Dispose of waste and residues in accordance with local authority requirements.
Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

## 3. Composition/information on ingredients

## **Mixtures**

Chemical name	CAS number	%	
Limestone	1317-65-3	60-90	
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5-30	
Crystalline silica (Quartz)	14808-60-7	<1	
Other components below reportable levels		9.85	

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Coughing.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

Keep unnecessary personnel away. For personal protection, see section 8 of the SDS. Personal precautions, protective equipment and emergency procedures Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Methods and materials for For waste disposal, see section 13 of the SDS. containment and cleaning up Avoid discharge into drains, water courses or onto the ground. **Environmental precautions** 7. Handling and storage Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places Precautions for safe handling

where dust is formed. Do not breathe dust. Avoid prolonged exposure. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). including any incompatibilities

## 8. Exposure controls/personal protection

## **Occupational exposure limits**

Conditions for safe storage,

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Туре	Value	Form
PEL	5 mg/m3	Mist.
	2000 mg/m3 500 ppm	
PEL	5 mg/m3 15 mg/m3	Respirable fraction. Total dust.
	PEL	PEL 5 mg/m3 2000 mg/m3 500 ppm PEL 5 mg/m3

## US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
,	· ·	0.1 mg/m3	Respirable.
US. ACGIH Threshold Limit	Values		
Components	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.
US. NIOSH: Pocket Guide to	Chemical Hazards		
Components	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Limestone (CAS 1317-65-3)	TWA	5 mg/m3 10 mg/m3	Respirable. Total
logical limit values	No biological exposure limits noted for	or the ingredient(s).	
oosure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.		
oropriate engineering itrols	Good general ventilation (typically 10 should be matched to conditions. If a or other engineering controls to main exposure limits have not been establi	pplicable, use process enclosus tain airborne levels below recor	res, local exhaust ventilation mmended exposure limits. I
ividual protection measures,	such as personal protective equipm	ent	
Eye/face protection	Wear safety glasses with side shields		
Skin protection			
Hand protection	Wear appropriate chemical resistant	gloves.	
Other	Wear suitable protective clothing.		
Respiratory protection	Use a particulate filter respirator for p Exposure Limit.	articulate concentrations excee	eding the Occupational
Thermal hazards	Wear appropriate thermal protective	clothing, when necessary.	
neral hygiene siderations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.		
Physical and chemical	properties ,		
pearance			
Physical state	Solid.		
Form	Putty.		
Color	Off-white.		
or	Slight.	•	

Odor threshold

pH

Not available.

Not applicable

Initial boiling point and boiling range	Not determined	
Flash point	> 212.0 °F (> 100.0 °C)	
Evaporation rate	Not available.	
Flammability (solid, gas)	Not available.	
Upper/lower flammability or exp	losive limits	
Flammability limit - lower (%)	Not available.	
Flammability limit - upper (%)	Not available.	
Explosive limit - lower (%)	Not available.	
Explosive limit - upper (%)	Not available.	
Vapor pressure	Not available.	
Vapor density	Not available.	
Relative density	1.87	
Solubility(ies)		
Solubility (water)	Not available.	
Partition coefficient (n-octanol/water)	Not available.	
Auto-ignition temperature	Not available.	
Decomposition temperature	Not available.	
Viscosity	> 500000 cP	
Other information		
VOC (Weight %)	20 g/l	
40.01.1.11		

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport	
Chemical stability	Material is stable under normal conditions.	
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.	
Conditions to avoid	Contact with incompatible materials.	
Incompatible materials	Acids. Fluorine.	
Hazardous decomposition products	No hazardous decomposition products are known.	

## 11. Toxicological information

## Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Coughing.
Information on toxicological eff	fects
Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitizatio	n
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity	In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) Risk of cancer cannot be excluded with prolonged exposure.		
IARC Monographs. Overall E	Evaluation of Carcinogenicity		
Crystalline silica (Quartz) Distillates (petroleum), hy (CAS 64742-52-5) NTP Report on Carcinogens	drotreated heavy naphthenic 3 Not classifiable as to carcinogenicity to humans.		
Crystalline silica (Quartz) OSHA Specifically Regulate	(CAS 14808-60-7) Known To Be Human Carcinogen. d Substances (29 CFR 1910.1001-1050)		
Not listed.			
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.		
Specific target organ toxicity - single exposure	Not classified.		
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	Not an aspiration hazard.		
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.		
Further information	This product has no known adverse effect on human health.		
12. Ecological information			
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.		
Persistence and degradability No data is available on the degradability of this product.			
Bioaccumulative potential			
Mobility in soil	No data available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		
13. Disposal consideration	1S		
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.		
Local disposal regulations	Dispose in accordance with all applicable regulations.		
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.		
14. Transport information			
DOT			
Not regulated as dangerous g	oods.		
ΙΑΤΑ			

## IATA

Not regulated as dangerous goods.

## IMDG

Not regulated as dangerous goods.

## Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 and the IBC Code

## 15. Regulatory information

## US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Hazard categories

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No

chemical

SARA 313 (TRI reporting) Not regulated.

## Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated. (SDWA)

## **US state regulations**

#### **US. Massachusetts RTK - Substance List**

Crystalline silica (Quartz) (CAS 14808-60-7) Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) Limestone (CAS 1317-65-3)

## US. New Jersey Worker and Community Right-to-Know Act

Crystalline silica (Quartz) (CAS 14808-60-7) Limestone (CAS 1317-65-3)

## US. Pennsylvania Worker and Community Right-to-Know Law

Crystalline silica (Quartz) (CAS 14808-60-7) Limestone (CAS 1317-65-3)

## US. Rhode Island RTK

Not regulated.

## US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

## US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Crystalline silica (Quartz) (CAS 14808-60-7) Methanol (CAS 67-56-1)

#### International Inventories

Country(s) or region Inventory name

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

## Issue date

22-April-2015

Yes

On inventory (yes/no)\*

## Revision date Version # HMIS® ratings

**NFPA** ratings

-01 Health: 0 Flammability: 0 Physical hazard: 0



## Disclaimer

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Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

OT 31263 7 Pgs

# **Oatey**<sup>®</sup>

## SAFETY DATA SHEET

	1. Identification	
	Product identifier	Great Blue Pipe Joint Compound
	Other means of identification SDS number	1704E
	Synonyms	Part Numbers: 31261, 31262, 32163, 31265, 48330, 48332, 48333
	Recommended use	Pipe Joint Compound for Threaded Metal Pipes
,	<b>Recommended restrictions</b>	None known.
	Manufacturer/Importer/Supplier	/Distributor information
	Company Name Address	Oatey Co. 4700 West 160th St. Cleveland, OH 44135
	Telephone E-mail	216-267-7100 info@oatey.com
	Transport Emergency Emergency First Ald Contact person	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887) 1-877-740-5015 MSDS Coordinator
	2. Hazard(s) identification	
	Physical hazards	Not classified.
	Health hazards	Not classified.
	OSHA defined hazards	Not classified.
	Label elements	
	Hazard symbol	None.
	Signal word	None.
	Hazard statement	The mixture does not meet the criteria for classification.
	Precautionary statement	
	Prevention	Observe good industrial hygiene practices.
	Response	Wash hands after handling.
	Storage	Store away from incompatible materials.
	Disposal	Dispose of waste and residues in accordance with local authority requirements.
	Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

## 3. Composition/information on ingredients

CAS number	%	
64742-52-5	30-60	
1332-58-7	10-30	
13463-67-7	3-7	
9004-34-6	1-5	
14808-60-7	< 0.8	
	64742-52-5 1332-58-7 13463-67-7 9004-34-6	

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

5

Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for	The product is immiscible with water and will sediment in water systems.
containment and cleaning up	Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.

cautions for safe handling

ure. Obser

Store in original tightly closed container. Store away from incompatible materials (see Section 10 Conditions for safe storage, of the SDS). including any incompatibilities

## 8. Exposure controls/personal protection

## **Occupational exposure limits**

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Cellulose (CAS 9004-34-6)	PEL	5 mg/m3	Respirable fraction.
•		15 mg/m3	Total dust.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
		500 ppm	
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.

## US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
•		15 mg/m3	Total dust.
Titanium dioxide (CAS	PEL	15 mg/m3	Total dust.
13463-67-7)	2 4040 4000		•
US. OSHA Table Z-3 (29 CFI	(1910.1000)		1.2
Components	Туре	Value	Form
Crystalline silica (Quartz)	TWA	0.3 mg/m3	Total dust.
(CAS 14808-60-7)		0,1 mg/m3	Respirable.
· · · · · · · · · · · · · · · · · · ·		ott nightio	
US. ACGIH Threshold Limit	Values		100 C
Components	Туре	Value	Form
Cellulose (CAS 9004-34-6)	TWA	10 mg/m3	
Crystalline silica (Quartz)	TWA	0.025 mg/m3	Respirable fraction.
(CAS 14808-60-7)	TWA	5 mg/m3	Inhalable fraction.
Distillates (petroleum), hydrotreated heavy	IWA	5 mg.ms	
naphthenic (CAS			
64742-52-5)	TAVA	2 mg/m3	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA TWA	10 mg/m3	
Titanium dioxide (CAS 13463-67-7)	IWA	to ingrito	
US. NIOSH: Pocket Guide t	o Chemical Hazards	4	1
Components	Туре	Value	Form
Cellulose (CAS 9004-34-6)	TWA	5 mg/m3	Respirable.
Cendinae (CAS SOUTOTO)		10 mg/m3	Totai
Crystalline silica (Quartz)	TWA	0.05 mg/m3	Respirable dust.
(CAS 14808-60-7)		10	Mist.
Distillates (petroleum),	STEL	10 mg/m3	IVIISI.
hydrotreated heavy naphthenic (CAS			
64742-52-5)			
	TWA	5 mg/m3	Mist.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
ological limit values	No biological exposure limits noted for		
propriate engineering ntrols	Good general ventilation (typically 10 should be matched to conditions. If a or other engineering controls to main exposure limits have not been establi	oplicable, use process enclosu ain airborne levels below reco	res, local exhaust ventilation mmended exposure limits. I
lividual protection measures	, such as personal protective equipm		
Eye/face protection	Wear safety glasses with side shields	(or goggles).	
Skin protection			
Hand protection	Wear appropriate chemical resistant	gloves.	
Other	Wear suitable protective clothing.		
Respiratory protection	Use a particulate filter respirator for p Exposure Limit.	articulate concentrations exce	eding the Occupational
Thermal hazards	Wear appropriate thermal protective		
eneral hygleneAlways observe good personal hyglene measures, such as washing after handling the materiandnsiderationsand before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.			

## 9. Physical and chemical properties

## Appearance

L

Physical state	Liquid.
Form	Liquid paste.
Color	Blue.
Odor	Odorless
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 212.0 °F (> 100.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	< 1
Relative density	1.2
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-Ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	25000 cP
Other Information	
VOC (Weight %)	11 g/l

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.	
Chemical stability	Material is stable under normal conditions.	
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.	
Conditions to avoid	Contact with incompatible materials.	
Incompatible materials	Acids. Fluorine.	
Hazardous decomposition products	No hazardous decomposition products are known.	

## 11. Toxicological information

Information on likely routes of	exposure
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Information on toylogladical of	facto

## Information on toxicological effects

Acute toxicity Not available.

Skin corrosion/irritation	Prolonged skin contact may c	
Serious eye damage/eye irritation	Direct contact with eyes may	cause temporary initiation.
Respiratory or skin sensitizatio		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected t	
Germ cell mutagenicity	mutagenic or genotoxic.	product or any components present at greater than 0.1% are
Carcinogenicity	inhaled from occupational sou overall evaluation, IARC note circumstances studied. Carcin crystalline silica or on externa polymorphs." (IARC Monogra	hal Agency for Research on Cancer) concluded that crystalline silica arces can cause lung cancer in humans. However in making the d that "carcinogenicity was not detected in all industrial hogenicity may be dependent on inherent characteristics of the al factors affecting its biological activity or distribution of its aphs on the evaluation of the carcinogenic risks of chemicals to and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)
IARC Monographs. Overall	<b>Evaluation of Carcinogenicity</b>	
Crystalline silica (Quartz Distillates (petroleum), h (CAS 64742-52-5)	) (CAS 14808-60-7) ydrotreated heavy naphthenic	1 Carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.
Titanium dioxide (CAS 1		2B Possibly carcinogenic to humans.
	) (CAS 14808-60-7) ed Substances (29 CFR 1910.1	Known To Be Human Carcinogen. 001-1050)
Not listed.	This product is not expected	to cause reproductive or developmental effects.
Reproductive toxicity Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be	harmful. Prolonged exposure may cause chronic effects.
Further information	-	dverse effect on human health.
12. Ecological informatio	n	
Ecotoxicity	The product is not classified a possibility that large or freque	as environmentally hazardous. However, this does not exclude the ent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the de	egradability of this product.
<b>Bioaccumulative potential</b>	No data available.	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmer potential, endocrine disruptio	ntal effects (e.g. ozone depletion, photochemical ozone creation / n, global warming potential) are expected from this component.
13. Disposal consideration	ons	
Disposal instructions	Collect and reclaim or dispos	e in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with a	Il applicable regulations.
Hazardous waste code	disposal company.	signed in discussion between the user, the producer and the waste
Waste from residues / unused products	product residues. This materi Disposal instructions).	h local regulations. Empty containers or liners may retain some al and its container must be disposed of in a safe manner (see:
Contaminated packaging	Empty containers should be t Since emptied containers ma emptied.	aken to an approved waste handling site for recycling or disposal. y retain product residue, follow label warnings even after container
14. Transport information	1	
DOT		

## DOT

Not regulated as dangerous goods.

## IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not established. Annex II of MARPOL 73/78 and the IBC Code

## 15. Regulatory information

US federal regulations

All components are on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No chemical

SARA 313 (TRI reporting) Not regulated.

## Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated. (SDWA)

#### **US** state regulations

## US. Massachusetts RTK - Substance List

Cellulose (CAS 9004-34-6) Crystalline silica (Quartz) (CAS 14808-60-7) Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) Kaolin (CAS 1332-58-7) Titanium dioxide (CAS 13463-67-7)

## US. New Jersey Worker and Community Right-to-Know Act

Cellulose (CAS 9004-34-6) Crystalline silica (Quartz) (CAS 14808-60-7) Kaolin (CAS 1332-58-7) Titanium dioxide (CAS 13463-67-7)

#### US. Pennsylvania Worker and Community Right-to-Know Law

Cellulose (CAS 9004-34-6) Crystalline silica (Quartz) (CAS 14808-60-7) Kaolin (CAS 1332-58-7) Titanium dioxide (CAS 13463-67-7) US. Rhode Island RTK

Not regulated.

## **US.** California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

## US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Crystalline silica (Quartz) (CAS 14808-60-7) Titanium dioxide (CAS 13463-67-7)

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	05-February-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0
Disclaimer	Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

## SAFETY DATA SHEET





## 1. Identification

1. Identification		
Product identifier	Rain-R Shine Blue PVC Cement	
Other means of identification Product code Synonyms Recommended use Recommended restrictions Manufacturer/Importer/Supplier Company Name Address	1104E Part Numbers: 30890, 30891, 30893, 30894, 3 Joining PVC Pipes None known. / <b>Distributor information</b> Oatey Co. 4700 West 160th St. Cleveland, OH 44135	30895, 30896, 31954, 31955, 31956, 31957
Telephone E-mail Transport Emergency Emergency First Aid Contact person	216-267-7100 info@oatey.com Chemtrec 1-800-424-9300 (Outside the U 1-877-740-5015 MSDS Coordinator	S 1-703-527-3887)
2. Hazard(s) identification		
Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral Skin corrosion/irritation Serious eye damage/eye irritation Specific target organ toxicity, single exposure Specific target organ toxicity, single exposure Aspiration hazard	Category 4 Category 2 Category 2A Category 3 respiratory tract irritation Category 3 narcotic effects Category 1
OSHA defined hazards	Not classified.	
Label elements		
Signal word	Danger	
Hazard statement		swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May
Precautionary statement		
Prevention	Keep away from heat/sparks/open flames/hot closed. Ground/bond container and receiving e electrical/ventilating/lighting equipment. Use of measures against static discharge. Avoid brea handling. Do not eat, drink or smoke when usin well-ventilated area. Wear protective gloves/pr	equipment. Use explosion-proof nly non-sparking tools. Take precautionary thing mist or vapor. Wash thoroughly after

Response If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

## Storage

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Disposal Hazard(s) not otherwise classified (HNOC) Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

## Not applicable.

## 3. Composition/information on ingredients

## Mixtures

Chemical name	CAS number	%	
Furan, Tetrahydro-	109-99-9	40-70	
Polyvinyl chloride	9002-86-2	10-20	
Acetone	67-64-1	5-15	
Cyclohexanone	108-94-1	5-15	
Methyl ethyl ketone	78-93-3	5-15	
Silica, amorphous, fumed	112945-52-5	1-5	

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

4. First-aid measures	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

## 6. Accidental release measures

I	Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
-	Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
		Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
		Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
		Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
I	Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
	7. Handling and storage	
I	Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
	Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
	8. Exposure controls/pers	onal protection

## 8. Exposure controls/personal protection

## **Occupational exposure limits**

## US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Туре	Value	
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm	
,	TWA	1 ppm	
US. OSHA Table Z-1 Limits for A	ir Contaminants (29 CFR 1910.	1000)	
Components	Туре	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
, , , , , , , , , , , , , , , , , , ,		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
, , , , , , , , , , , , , , , , , , , ,		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
,		15 mg/m3	Total dust.

## US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	
Silica, amorphous, fumed	TWA	0.8 mg/m3	
(CAS 112945-52-5)		20 mppcf	
US. ACGIH Threshold Limit Value	S		
Components	Туре	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
100-04-1)	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.
US. NIOSH: Pocket Guide to Chei	nical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
,		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
,		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
,		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
-,		300 ppm	
	TWA	590 mg/m3	
		200 ppm	
Silica, amorphous, fumed (CAS 112945-52-5)	TWÂ	6 mg/m3	
ogical limit values			

## **Biological limit values**

## ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

\* - For sampling details, please see the source document.

Exposure guidelines		
US - California OELs: Skin de	signation	
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.
US - Minnesota Haz Subs: Sk		
Cyclohexanone (CAS 108-	94-1)	Skin designation applies.
US - Tennessee OELs: Skin d		On the strength of through the skip
Cyclohexanone (CAS 108-	94-1)	Can be absorbed through the skin.
US ACGIH Threshold Limit V		e i statter de la terre de la claire
Cyclohexanone (CAS 108-	·94-1)	Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 1	09-99-9)	Can be absorbed through the skin.
US. NIOSH: Pocket Guide to		A state to the state the align
Cyclohexanone (CAS 108-	-94-1)	Can be absorbed through the skin.
Appropriate engineering controls	changes per hour) should be u applicable, use process enclos maintain airborne levels below established, maintain airborne shower must be available when	
Individual protection measures, s	such as personal protective e	quipment
Eye/face protection	Face shield is recommended.	Wear safety glasses with side shields (or goggles).
Skin protection		
Hand protection	Wear appropriate chemical res	
Other	Wear appropriate chemical res	sistant clothing.
Respiratory protection	limits (where applicable) or to a been established), an approve	
Thermal hazards	Wear appropriate thermal prot	ective clothing, when necessary.
General hygiene considerations	as washing after handling the	or smoke. Always observe good personal hygiene measures, such material and before eating, drinking, and/or smoking. Routinely wash quipment to remove contaminants.

# 9. Physical and chemical properties

9. Physical and chemical p	
Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
pН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling	151 °F (66.11 °C)
range	
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.92 +/- 0.02
· · · · · · · · · · · · · · · · · · ·	

Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1200 - 2500 cP
Viscosity temperature	77 °F (25 °C)
Other information	
Bulk density	7.7 lb/gal
VOC (Weight %)	443 g/I SQACMD 1168/M316A
10 Stability and reactivity	M.

#### 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

# 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

#### Information on toxicological effects

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

May be latar in oritanonioa ana or	May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.		
Species	Test Results		
Rabbit	20 ml/kg		
Rat	50 mg/l, 8 Hours		
Rat	5800 mg/kg		
)			
Rabbit	948 mg/kg		
Rat	8000 ppm, 4 hours		
	Rabbit Rat Rat I) Rabbit		

Components	Species		Test Results
Oral	<b>_</b> .		1510 malles
LD50	Rat		· 1540 mg/kg
* Estimates for product may b	e based on ad	ditional compon	ent data not shown.
kin corrosion/irritation	Causes skin		
erious eye damage/eye	Causes serie	ous eye irritation	l.
Respiratory or skin sensitizatio	n		
Respiratory sensitization	Not available	<del>3</del> .	
Skin sensitization	This product	t is not expected	to cause skin sensitization.
Germ cell mutagenicity		ilable to indicate	product or any components present at greater than 0.1% are
Carcinogenicity	In 2012 USE lifetime stud mice develo results. Bec either tumor assessment data in agor	EPA Integrated F y on THF condu ped liver tumors ause the carcino , the EPA deterr	Risk Information System (IRIS) reviewed a two species inhalation cted by NTP (1998). Male rats developed renal tumors and female while neither the female rats nor the male mice showed similar genic mechanisms could not be identified clearly in either species fo nined that the male rat and female mouse findings are relevant to the potential in humans. Therefore, the IRIS review concludes that these nat there is "suggestive evidence of carcinogenic potential" following as of exposure.
IARC Monographs. Overall	Evaluation of	Carcinogenicit	y
Cyclohexanone (CAS 10 Polyvinyl chloride (CAS Silica, amorphous, fume OSHA Specifically Regulate	)8-94-1) 9002-86-2) d (CAS 11294{ ed Substance	5-52-5)	3 Not classifiable as to carcinogenicity to humans. 3 Not classifiable as to carcinogenicity to humans. 3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS	9002-86-2) This was due	t is not avaata	I to cause reproductive or developmental effects.
Reproductive toxicity			
Specific target organ toxicity - single exposure			drowsiness and dizziness. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classifie	ed.	
Aspiration hazard	May be fata	I if swallowed ar	nd enters airways.
Chronic effects	Prolonged in	nhalation may b	e harmful.
12. Ecological informatio	n		
Ecotoxicity	The product	t is not classified nat large or frequ	l as environmentally hazardous. However, this does not exclude the sent spills can have a harmful or damaging effect on the environment
Components		Species	Test Results
Acetone (CAS 67-64-1)	·····		
Aquatic			
Fish	LC50	Fathead mir	now (Pimephales promelas) > 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94	4_1)		
<b>Aquatic</b> Fish	LC50	Fathead mir	now (Pimephales promelas) 481 - 578 mg/l, 96 hours
* Estimates for product may	be based on a	dditional compor	nent data not shown.
Persistence and degradability	No data is a	available on the	degradability of this product.
Bioaccumulative potential	No data ava		
Partition coefficient n-octa			
Acetone (CAS 67-64-1)		J ,	-0.24
Cyclohexanone (CAS 108-9	4-1)		0.81
Furan, Tetrahydro- (CAS 10	9-99-9)		0.46
Methyl ethyl ketone (CAS 78			0.29
Mobility in soil	No data av		
Other adverse effects	No other ac potential, e	lverse environm ndocrine disrupt	ental effects (e.g. ozone depletion, photochemical ozone creation ion, global warming potential) are expected from this component.
Rain-R Shine Blue PVC Cement			SDS

Rain-R Shine Blue PVC Cement 927279 Version #: 01 Revision date: - Issue date: 05-27-2015

# 13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

# 14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 34014 LBS, Acetone RQ = 34247 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
IATA	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	11
Environmental hazards	No.
ERG Code	3H
	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	11
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.
15 Populatory information	

# 15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication
0	Standard, 29 CFR 1910.1200.
	All components are on the U.S. EPA TSCA Inventory List.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Cancer Polyvinyl chloride (CAS 9002-86-2) Central nervous system Liver Blood Flammability CERCLA Hazardous Substance List (40 CFR 302.4) Acetone (CAS 67-64-1) LISTED Cyclohexanone (CAS 108-94-1) LISTED Furan, Tetrahydro- (CAS 109-99-9) LISTED Methyl ethyl ketone (CAS 78-93-3) LISTED Superfund Amendments and Reauthorization Act of 1986 (SARA) Immediate Hazard - Yes Hazard categories Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No SARA 302 Extremely hazardous substance Not listed. SARA 311/312 Hazardous No chemical SARA 313 (TRI reporting) Not regulated. Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Not regulated. Safe Drinking Water Act (SDWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and **Chemical Code Number** Acetone (CAS 67-64-1) 6532 Methyl ethyl ketone (CAS 78-93-3) 6714 Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV Acetone (CAS 67-64-1) 35 %WV Methyl ethyl ketone (CAS 78-93-3) **DEA Exempt Chemical Mixtures Code Number** 6532 Acetone (CAS 67-64-1) Methyl ethyl ketone (CAS 78-93-3) 6714 **US state regulations** US, Massachusetts RTK - Substance List Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5) US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Polyvinyl chloride (CAS 9002-86-2) US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5)

#### US. Rhode Island RTK

Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3)

#### **US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

#### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No
*A "Yes" indicates this product co	mplies with the inventory requirements administered by the governing country(s)	

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

Issue date	05-27-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	2 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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10page

#### MATERIAL SAFETY DATA SHEET

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	OATEY LO-V.O.C. PVC MEDIUM CLEAR CEMENT
Product No.:	31845, 31846, 31847, 31848, 31849
Product Use:	Cement for PVC Plastic Pipe
Formula:	PVC Resin in Solvent Solution
Synonyms:	PVC Flastic Pipe Cement
Firm Name &	
	Ohio 44135, U.S.A. http://www.oatey.com
	(216) 267-7100 or $(300)$ 321-9532.
Emergency Phone	
Numbers:	
NUMBELSI	chemical transportation emergencies ONLY, call Chemtrec at
D 1 D	1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By:	Technical Department
Preparation Date:	November 12, 2008
CROWTON D	CONCRETE TON / THEORY AND AND THEORY AND
SECTION 2	COMPOSITION/INFORMATION ON INGREDIENTS
INGREDIENTS:	<pre>%:wt/wt CAS NUMBER: ACGIH TLV TWA: OSHA PEL TWA: OTHER:</pre>
Tetrahydrofuran	38 - 50% 109-99-9 50 ppm(skin) 200 ppm 25 ppm (Mfg)
	100 ppm STEL
Methyl Ethyl Ketone	12 - 20% 78-93-3 200 ppm 200 ppm None
	300 ppm STEL
PVC Resin	12 – 20% 9002–86–2 10 mg/m3 15 mg/m3 None
(Non-hazardous)	-
Acotono	

Acetone 10 - 20% 67-64-1 500 ppm 1000 ppm None 750 ppm 7 - 148 108-94-1 20 ppm(skin) 50 ppm Cyclohexanone None 50 ppm STEL Amorphous Fumed Silica 1 - 5% 112945-52-5 10 mg/m3 None None (Non-hazardous) Established

OSHA Hazard Classification:

Flammable, irritant, organ effects

#### SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview:

\*\*\*\*\*\*\*

Clear liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4	FIRST AID MEASURES
	CALL 1-877-740-5015 or 1-303-623-5716 COLLECT
Skin:	Remove contaminated clothing immediately. Wash all exposed areas with
	soap and water. Get medical attention if irritation develops. Remove
	dried cement with Oatey Plumber's Hand Cleaner or baby oil.
Eyes:	If material gets into eyes or if fumes cause irritation, immediately
	flush eyes with plenty of water until chemical is removed. If
	irritation persists, get medical attention immediately.
Inhalation:	If symptoms of exposure develop, remove to fresh air. If breathing
	becomes difficult, administer oxygen. Administer artificial
	respiration if breathing has stopped. Seex immediate medical attention.
Ingestion:	DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything
	by mouth to a person who is uncenscicus or drowsy. Get immediate
	medical attention by calling a Poison Control Center, or hospital
	emostemby rush. If padiral auxide cannot be ditained, then take the
	person and product to the nearest medical emergency freatment center or hospital.

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SECTION 5	FIRE FIGHTING MEASURES	UT J
Flashpoint / Method:	: 14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP	
Flammability:	LEL = 1.8 % Volume, UEL = 11.8 % Volume	
Extinguishing	Use dry chemical, CO2, or foam to extinguish fire.	Cool fire
Media:	exposed container with water. Water may be ineffect extinguishing agent.	ive as an
Special Fire	Firefighters should wear positive pressure self-con	tained
Fighting	<ul> <li>preatning apparatus and full protective clothing fo</li> </ul>	r fires in
Procedure:	areas where chemicals are used or stored	
Unusual Fire and	Extremely flammable liquid. Keep away from heat and	all
Explosion	sources of ignition including sparks, flames, light	ed
Hazards:	cigarettes and pilot lights. Containers may ructure	or
	explode in the heat of a fire. Vapors are heavier t	han air
	and may travel to a remote ignition source and flas	h back.
	This product contains tetrahydrofuran that may form	explosive
Hazardous	organic peroxide when exposed to air or light or wi	th age.
Decomposition	Combustion will produce toxic and irritating vapors	including
Products:	carbon monoxide, carbon dioxide and hydrogen chlorid	de.

#### SECTION 6 Spill or

Procedures:

Leak

#### ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

# SECTION 7 Handling:

#### HANDLING AND STORAGE

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use. Other: "Empty" containers retain product residue and mark he is a set

"Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 Ventilation:	<b>EXPOSURE CONTROLS/PERSONAL PROTECTION</b> Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammaple concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respirator; Protestion:	For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select is accordance with 29 CFR 1910.134 and good industrial bygiene practice. For firefighting, use self-constraint
Skin Protection:	breathing apparatus. Fubles gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 48(rm) or Silver Fileli(tablet) or will produced ship contact.

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Sine -Safety glasses with side shields or safety goggles. Scotection: Other: Eye wash and safety shower should be available. SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES Boiling Point: 151 Degrees F / 66 Degrees C Melting Point: Not applicable Vapor Pressure: 145 mmHg @ 20 Degrees C

Vapor Density: (Air = 1) 2.5Volatile Components: 80-84% Solubility In Water: Negligible pH: Not applicable Specific Gravity: 0.93 +/- 0.02 @ 20 Degrees C (BUAC = 1) = 5.5 - 8.0Evaporation Rate: Clear Liquid Appearance: Odor: Ether-Like Will Dissolve In: Tetrahydrofuran Material Is: Liquid

SECTION 10 STABILITY AND REACTIVITY Stability: Stable. Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition. Hazardous Combustion will produce toxic and irritating vapors Decomposition including carbon monoxide, carbon dioxide and hydrogen Products: chloride. Incompatibility/ Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and Materials To Avoid: sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber. Hazardous Polymerization: Will not occur.

SECTION 11 Inhalation:	irritation, coughing shortness of breath a	cause muccus membrane and respiratory , headache, dizziness, dullness, nausea, and vomiting. High concentrations may cause		
Skin:	central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage. May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanore may be absorbed through the skin causing effects similar to those listed under inhalation.			
Eye:	<ul> <li>Vapors may cause irr:</li> </ul>	itation. Direct contact may cause irritation og and tearing of the eyes. May cause eye		
Ingestion:	Swallowing may cause diarchea. Aspiration	abdominal pain, nausea, vomiting and during swallowing or vomiting can cause d lung damage. May cause kidney and liver		
Chronic	2	overexposure cause dermatitis and damage		
Toxicity:	to the kidney. Liver.	lungs and central nervous system.		
Toxicity Data:	Acetone:	Cral rat L050: 5,800 hg/sq		
*		Tobalation rat LC50: 89,100 mg/m3/3 hours		
	Cyclohexanche:	Gral rat L050: 1,620 mg/kg		
		Inhalation rat LC50: 7,000 ppm/e nours		
		Skin rabbit LD50: 1 mL/kg		
	letrahyárofaran:	Oral rat LDS0: 1,650 mg/sg		
		Ichalation rat LCL0: 21,000 ppm/S nours		
	udetterik Bitayi Kong Lai	Grad Fat Lewis 2,1 - Grades		
		ipbalation rat 1000r 15,000 mg/m378 magne Grén Harnit 1000r 7,43 mr eg		
densitization:	laie di tae trapitei€	and the second of the second frequency of the second frequency of the second se		

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Page: 4 of 5 Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans. Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic. Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother. Persons with pre-existing skin, lung, kidney or liver disorders

Medical Conditions Aggravated By Exposure:

Mutagenicity:

Reproductive

Toxicity:

SECTION 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms. Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l. Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L. Acetone: 96 hour LC50 for fish is greater than 100 mg/L. Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/t. This product emits VOC's (volatile organic compounds) in its use. VOC Make sure that use of this product complies with local VOC emission Information: regulations, where they exist. VOC Level: Maximum 510 g/L per SCAQMD Test Method 316A.

may be at increased risk from exposure to this product.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RCRA Hazardous Waste Number: U002, U057, U159, U213 EPA Hazardous Waste ID Number: D001, D035, F003, F005 EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

DOT	NSPORT INFORMATION Less than 1 Liter (0.3 gal) Greater	than 1 Liter (0 3 cal)
Proper Shipping Name: Hazard Class: Packing Group: Hazard Labels:	None Consumer Commodity ORM-D	UN1133 Adhesives 3 PGII Flammable Liquid
fMDG UN Number: Proper Shipping Name: Haza:d=Class: Packing Group: Label:	UN1133 Adhesives 3 [] None (Limited Quantities	UNT133 Adhesivos 3 F1 Class 3 (Pfennable
Flabhraice obsquit 2016 North American Emer	are excepted from lab.ling) -10 to -1 Tegress C Gency Response Guidebook Number:	Liquia) -14 de -5 Septem d - 197

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SECTION 15 REGULATOR	Y INFORMATION
Hazard Category for Section 311/312:	
Section 302 Extremely Hazardous Substances (TPQ):	This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals:	This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.
CERCLA 103 Reportable	Spills of this product over the RQ (reportable
Quantity:	quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (50% maximum) of 2,000 lbs, is 1,667 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65:	This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Pisk Level" (NSRL) are unlikely. Oatey Strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 to minimize exposure to these chemicals.
TSCA Inventory:	All of the components of this product are listed on the TSCA inventory.
Canadian WHIM3 Classification	

SECTION 16 NFPA and HM1S:	OTHER INFORM	ATION		
NFPA Hazard Signal:		Flammability: 3	Reactivity: 1	Special: None
NMIS Hazard Signal:		Flammability: 3	Reactivity: 1	PPE: G

Disclaimer:

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The information herein has been compiled from sources believed to be reliable, upto-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use. 24285K42, 74605A42,43,86

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#### MATERIAL SAFETY DATA SHEET

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	OATEY LO-V.O.C. PURPLE PRIMER - NSF LISTED
Product No.:	31900, 31901, 31902, 31903, 31904
Product Use:	Primer for PVC and CPVC Plastic Pipe
Formula:	See Section 2
Synonyms:	Plastic Pipe Primer
Firm Name 🌜	OATEY CO. 4700 West 160th Street P.O. Box 359C6 Cleveland,
Mailing Address:	Ohio 44135, U.S.A. http://www.oatey.com
Oatey Phone Number:	(216) 267-7100 or (800) 321-9532
Emergency Phone	For Emergency First Aid call 1-877-740-5015. For
Numbers:	chemical transportation emergencies ONLY, call Chemtrec at
	1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By:	Technical Department
Preparation Date:	December 11, 2008

SECTION 2	COMPOSITIO	N/INFORMATIC	ON ON INGREDIENT	S	
INGREDIENTS:		CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA:	OTHER:
Methyl Ethyl Ketone	20 - 40%	78-93-3	200 ppm	200 ppm	None
			300 ppm STEL		
Cyclohexanone	10 - 30용	108-94-1	20 ppm(skin)	50 ppm	None
			50 ppm STEL		
Tetrahydrofuran	15 - 35%	109-99-9	50 ppm (skin)	200 ppm	25 ppm (Mfg)
		· · · ·	100 ppm STEL		
Acetone	20 - 408	67-64-1	500 ppm	1000 ppm	None
			750 ppm STEL		

OSHA Hazard Classification:

Flammable, irritant, organ effects

## SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview:

Purple liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4	FIRST AID MEASURES
Skin;	CALL 1-877-740-5015 or 1-303-623-5716 COLLECT Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove
Eyes:	dried cement with Oatey Plumber's Hand Cleaner or baby oil If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If
Inhalation:	irritation persists, get medical attention inmediately. If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer exygen. Administer artificial
	respiration if breathing has stopped. Sock immediate medical attention. DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical anvice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

# SECTION 5FIRE FIGHTING MEASURESPlashpoint 2 Hothog: 14 - 23 Degree P. (-10 to -5 Degree T) 2 threePlasmatility:UR1 = 0.4 S 201000, UR1 = 01.4 C triumePlasmatility:UR1 = 0.4 S 201000, UR1 = 01.4 C triumeEstimationing02 dry the inst, UR1, or then the estimation file.

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Media:	exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire	Firefighters should wear positive pressure self-contained
Fighting	breathing apparatus and full protective clothing for fires in
Procedure:	areas where chemicals are used or stored
Unusual Fire and Explosion Hazards: Hazardous Decomposition Products:	Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age. Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
	ACCIDENTAL RELEASE MEASURES
Spill or Remove	all sources of ignition and ventilate area. Stop leak if it
Leak can be	done without risk. Personnel cleaning up the spill should
Procedures: wear ap	opropriate personal protective equipment, including respirators
it vapo	or concentrations are high. Soak up spill with an inert
	ent such as sand, earth or other non-combusting material. Put

absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for

SECTION 7 HANDLING AND STORAGE

disposal information.

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible Storage: materials. Keep containers closed when not in use. "Empty" containers retain product residue and can be hazardous. Other: Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

#### EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces. Respiratory

For operations where the exposure limit may be exceeded, a NIOSH Protection: approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained creathing apparatus.

Rubber gloves are suitable for normal use of the product. For long Frobection: exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact. Safety glasses with side shields or safety goggley.

€\e Protection: 20.000

Shin

SECTION 8

Eye wash and safety shower is old be availably.

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SECTION 9 E	HYSICAL AND CHEMICAL PROPERTIES
Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	Not applicable
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	99.96%
Solubility In Water:	Negligible
pH:	Not applicable
Specific Gravity:	0.84 +/- 0.02 @ 20 Degrees C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Purple Liquid
Odor:	Ether-Like
Will Dissolve In:	Tetrahydrofuran
Material Tre	Liquid

Material Is: Liquid STABILITY AND REACTIVITY SECTION 10 Stability: Stable. Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition. Hazàrdous Combustion will produce toxic and irritating vapors Decomposition including carbon monoxide, carbon dioxide and hydrogen Products: chloride. Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and Incompatibility/ Materials To Avoid: sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Polymerization: Will not occur.

SECTION 11 Inhalation:	TOXICOLOGICAL INFO	RMATION cause mucous membrane and respiratory
	irritation, coughing shortness of breath central nervous syst	, beadache, dizziness, dullness, nausea, and vomiting. High concentrations may cause em depression, narcosis and unconsciousness.
	May cause kidney, li	ver and lung damage.
Skin:	<ul> <li>ethyl ketone and cyc</li> </ul>	with redness, itching and pain. Methyl lohexanone may be absorbed through the skin
Sye:	Vapors may gauge irr	lar to those listed under inhalation.
- y - ,	with redness, stingi damage.	itation. Direct contact may cause irritation ng and tearing of the eyes. May cause eye
Ingestion:		abdominal pain, nausea, vomiting and
2	diarrhea, Aspiration	during swallowing or vomiting can cause
	chemical pneumonia a	nd lung damage. May cause kidney and liver
	damage.	
Chronic	Prolonged or repeated	d overexposure cause dermatitis and damage
Toxicity:	to the kidney, liver,	, lungs and central nervous system.
Toxicity Data:	Acetone:	Oral rat LD50: 5,800 mg/kg
		Inhalation rat LC50: 50,100 mg/m3/8 nours
	Cyclonexanone:	Oral rat LD50: 1,620 mg/kg
		Inhalation rat LC50: 3,000 ppm/4 hours
		Skin rabbit LD50: 1 mL/kg
	Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg
	March Science and the March Science of the	Inhalation rat LC50: 21,000 ppm/3 hours
	Methyl Sthyl Setche:	
		Inhalation rat LC50: 23,500 mg/m3/8 neurs
Sensitization:	None of the component	Skin rabbit LD50: 6,480 mg/kg
Carolesgenicity:	None of the component	s are known to cause sensitization. Is are listed as a cardinogen or suspect
	Carcinaasa be NTP TA	PC or OSEA. The National Toxicology Program
	The first and the set and	65 of of mice and rats ( ) tetrahydroidean
	(TEF) vacer levels in	to 1600 ppm 6 m./day, 5 days/week for them.
	- Hietuna causeu ar in	construct provide the state structures in male

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	Page: 4 or 5
	rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be
	related to "species specific" effects. Elevated incidences of
	tumors in humans have not been reported for THF. ACGIH has
	classified cyclohexanone (CYH) and tetrahydrofuran as "A3,"
	Confirmed Animal Carcinogens with Unknown Relevance to Humans.
Mutagenicity:	
	assays. Acetone, methyl ethyl ketone and tetrahydrofuran are
	generally thought not to be mutagenic.
Reproductive	Methyl ethyl ketone and cyclohexanone have been shown to cause
Toxicity:	embryofetal toxicity and birth defects in laboratory animals.
	Acetone and tetrahydrofuran has been found to cause adverse
	developmental effects only when exposure levels cause other
N. 11 3	toxic effects to the mother.
Medical	Persons with pre-existing skin, lung, kidney or liver disorders
Conditions Aggravated By	may be at increased risk from exposure to this product.
Exposure:	
SECTION 12	ECOLOGICAL INFORMATION
	This product is not expected to be toxic to aquatic organisms.
	into produce to not expected to be coxic to aquatic organisms.

HOOHOOLONN THE ORDER TON
This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.
This product emits VOC's (volatile organic compounds) in its use.
Make sure that use of this product complies with local VOC emission
regulations, where they exist.
Maximum 550 g/L per SCAQMD Test Method 316A.

SECTION 13

#### DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RCRA Hazardous Waste Number: 1002, 0057, 0159, 0213 EPA Hazardous Waste ID Number: 0001, 0035, F003, F005 EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

UN/NA Number:	lan 1 Liter (0.3 gal) Greater t None	UN1133
Proper Shipping Name:	Consumer Commodity	Adhesives
Hazard Class:	ORM-D	.3
Packing Group:	None	PGII
Hazard Labels: IMDG	None	Flammable Liquid
UN Number:	UN1133	UNT133
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class:	3	3
Packing Group:	1.1	II
Label:	None (Limited Quantities are excepted from labeling)	Liquid)
'lashpoint (meg C)	-10 to -5 Degrees C	-10 to -5 bearage C
1008 North American Emergency	Response Guidebook Number:	127

311/312:	Acute Health, Chronic Health, Flanmable
Hazandous Substances (TPD):	This product does not contain chemicals regulated ander SARA Section 302.
Section 313 1 with N-minarate	This product does not contain chemphals subject to

MSDS No: CLN050E8 Issue Date: 11 Dec 2008 Page: 5 of 5 SARA Title III Section 313 Reporting requirements. CERCLA 103 Reportable Spills of this product over the RQ (reportable Quantity: quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (30% maximum) of 1,000 lbs, is 3,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations. California Proposition 65: This product does not contain any chemicals subject To California Proposition 65 regulation. **TSCA** Inventory: All of the components of this product are listed on the TSCA inventory. Canadian WHIMS Classification: Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR. SECTION 16 OTHER INFORMATION

NFPA an	d HMIS:					
NFPA Ha HMIS Ha	zard Signal: zard Signal:	Health: 2 Health: 2*	Flammability: 3 Flammability: 3	Reactivity: Reactivity:	1 1	Special: None PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, upto-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.



# SAFETY DATA SHEET

OT 6 31910 14 10 pases

1. Identification			
Product identifier	Oatey CPVC Flowguard Gold UVI One-Step	Yellow Cement	
Other means of identification		· .	
Product code	1203E		
Synonyms	Part Numbers: 31910(TV), 31911(TV), 31912, 31913, 31914, 31656, 31657, 32200, 32201, 32202, 32203, 31660, 31661, 31662, 31663, 31917, 31918, 31919		
Recommended use	Joining CPVC Pipes		
<b>Recommended restrictions</b>	None known.		
Manufacturer/Importer/Supplier/	/Distributor information		
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the U	S 1-703-527-3887)	
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		
2. Hazard(s) identification			
Physical hazards	Flammable liquids	Category 2	
Health hazards	Acute toxicity, oral	Category 4	
	Skin corrosion/irritation	Category 2	
	Serious eye damage/eye irritation	Category 2A	
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation	
	Specific target organ toxicity, single exposure	Category 3 narcotic effects	
	Aspiration hazard	Category 1	
OSHA defined hazards	Not classified.		
Label elements			
·			
Signal word	Danger		
Hazard statement	Highly flammable liquid and vapor. Harmful if s airways. Causes skin irritation. Causes serious cause drowsiness or dizziness.	swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May	
Precautionary statement			
Prevention	Keep away from heat/sparks/open flames/hot closed. Ground/bond container and receiving e electrical/ventilating/lighting equipment. Use o measures against static discharge. Avoid brea handling. Do not eat, drink or smoke when usi well-ventilated area. Wear protective gloves/pr	equipment. Use explosion-proof nly non-sparking tools. Take precautionary thing mist or vapor. Wash thoroughly after	

Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information Not applicable.

# 3. Composition/information on ingredients

Chemical name	CAS number	. %
Furan, Tetrahydro-	109-99-9	30-60
Methyl ethyl ketone	78-93-3	10-30
Ethene, chloro-, homopolymer, chlorinated	68648-82-8	10-20
Acetone	67-64-1	5-15
Cyclohexanone	108-94-1	5-15
Silica, amorphous, fumed	112945-52-5	1-5

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

Ti Thot and moustaile	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

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Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
6. Accidental release meas	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

# 8. Exposure controls/personal protection

#### **Occupational exposure limits**

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
100-04-1)		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
100-00-07		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
10-33-3)		200 ppm	
US. OSHA Table Z-3 (29 CFR 191	0.1000)		
Components	Туре	Value	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3	

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#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	
		20 mppcf	
US. ACGIH Threshold Limit Value	25		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
·	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
US. NIOSH: Pocket Guide to Che	nical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
,		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
,		300 ppm	
	TWA	590 mg/m3	
		200 ppm	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	6 mg/m3	
orical limit values			

# Biological limit values

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	·
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

\* - For sampling details, please see the source document.

#### Exposure guidelines

#### US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1)

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

Skin designation applies.

US - Tennessee OELs: Skin	designation	
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.
US ACGIH Threshold Limit	alues: Skin designation	
Cyclohexanone (CAS 108	9-94-1)	Can be absorbed through the skin.
Furan, Tetrahydro- (CAS	•	Can be absorbed through the skin.
US. NIOSH: Pocket Guide to	Chemical Hazards	
Cyclohexanone (CAS 108	3-94-1)	Can be absorbed through the skin.
Appropriate engineering controls	changes per hour) should be u applicable, use process enclos maintain airborne levels below	acal exhaust ventilation. Good general ventilation (typically 10 air used. Ventilation rates should be matched to conditions. If sures, local exhaust ventilation, or other engineering controls to recommended exposure limits. If exposure limits have not been levels to an acceptable level. Eye wash facilities and emergency n handling this product.
Individual protection measures,	such as personal protective e	quipment
Eye/face protection	Face shield is recommended.	Wear safety glasses with side shields (or goggles).
Skin protection		
Hand protection	Wear appropriate chemical res	sistant gloves.
Other	Wear appropriate chemical res	sistant clothing.
Respiratory protection	If engineering controls do not r limits (where applicable) or to a been established), an approve	naintain airborne concentrations below recommended exposure an acceptable level (in countries where exposure limits have not d respirator must be worn.
Thermal hazards	Wear appropriate thermal prote	ective clothing, when necessary.
General hygiene considerations	as washing after handling the I	or smoke. Always observe good personal hygiene measures, such material and before eating, drinking, and/or smoking. Routinely wash quipment to remove contaminants.

# 9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Yellow / Gold
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.94 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.

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Decomposition temperature	Not available.
Viscosity	500 - 1500 cP
Other information	
Bulk density	7.8 lb/gal
VOC (Weight %)	470 g/l SQACMD 1168/M316A

# 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

# 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

#### Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94	-1)	
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg

Skin corrosion/irritationCauses skin irritation.Serious eye damage/eyeCauses serious eye irritation.irritationCauses serious eye irritation.

Respiratory or skin sensitizatio	n Not availabl		
Respiratory sensitization Skin sensitization			o cause skin sensitization.
	•	•	product or any components present at greater than 0.1% are
Germ cell mutagenicity	mutagenic o	or genotoxic.	
Carcinogenicity	lifetime stud mice develo results. Beo either tumo assessmen data in aggi	ly on THF conduc oped liver tumors v ause the carcinog r, the EPA determ t of carcinogenic p	sk Information System (IRIS) reviewed a two species inhalation ted by NTP (1998). Male rats developed renal tumors and female while neither the female rats nor the male mice showed similar enic mechanisms could not be identified clearly in either species for ined that the male rat and female mouse findings are relevant to the iotential in humans. Therefore, the IRIS review concludes that these t there is "suggestive evidence of carcinogenic potential" following of exposure.
IARC Monographs. Overall	Evaluation of	Carcinogenicity	
Cyclohexanone (CAS 10 Silica, amorphous, fumed OSHA Specifically Regulate	d (CAS 11294	5-52-5) s (29 CFR 1910.1	3 Not classifiable as to carcinogenicity to humans. 3 Not classifiable as to carcinogenicity to humans. 001-1050)
Not listed.	This was done	4 in	
Reproductive toxicity	•	•	o cause reproductive or developmental effects.
Specific target organ toxicity - single exposure		·	rowsiness and dizziness. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classifie	ed.	
Aspiration hazard	May be fata	l if swallowed and	enters airways.
Chronic effects	Prolonged i	nhalation may be	harmful.
12. Ecological information	n		
Ecotoxicity	The produc possibility the test of the possibility the product of	t is not classified a nat large or freque	is environmentally hazardous. However, this does not exclude the nt spills can have a harmful or damaging effect on the environment.
Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minn	$\alpha_{\rm ev}$ (Dimensional promotion) > 100 mg/L 06 bourg
Cyclohexanone (CAS 108-94			ow (Pimephales promelas) > 100 mg/l, 96 hours
	-1)		ow (Pimephales prometas) > 100 mg/, 30 nouis
Aquatic	⊢1) LC50	Fathead minn	ow (Pimephales prometas) 481 - 578 mg/l, 96 hours
<b>Aquatic</b> Fish	LC50		ow (Pimephales promelas) 481 - 578 mg/l, 96 hours
Aquatic Fish * Estimates for product may b	LC50 be based on ad	ditional compone	ow (Pimephales promelas)  481 - 578 mg/l, 96 hours nt data not shown.
Aquatic Fish * Estimates for product may b Persistence and degradability	LC50 be based on ad No data is a	dditional compone available on the de	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential	LC50 be based on ac No data is a No data ava	dditional compone available on the de ailable.	ow (Pimephales promelas)  481 - 578 mg/l, 96 hours nt data not shown.
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar	LC50 be based on ac No data is a No data ava	dditional compone available on the de ailable.	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product.
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1)	LC50 be based on ac No data is a No data ava nol / water (lo	dditional compone available on the de ailable.	ow (Pimephales promelas)  481 - 578 mg/l, 96 hours nt data not shown.
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109	LC50 be based on ac No data is a No data ava nol / water (lo i-1) i-99-9)	dditional compone available on the de ailable.	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81 0.46
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94	LC50 De based on ac No data is a No data ava nol / water (lo 1-1) 1-99-9) -93-3)	dditional compone available on the de ailable. g Kow)	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109 Methyl ethyl ketone (CAS 78- Mobility in soil	LC50 No data is a No data ava nol / water (lo -99-9) -93-3) No data ava	dditional compone available on the de ailable. <b>g Kow)</b> ailable.	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81 0.46 0.29
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109 Methyl ethyl ketone (CAS 78-	LC50 No data is a No data ava nol / water (lo -99-9) -93-3) No data ava No other ad	dditional compone available on the de ailable. <b>g Kow)</b> ailable. verse environmer	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81 0.46
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109 Methyl ethyl ketone (CAS 78- Mobility in soil	LC50 No data is a No data ava nol / water (lo i-1) )-99-9) -93-3) No data ava No other ad potential, er	dditional compone available on the de ailable. g Kow) ailable. verse environmer adocrine disruption	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81 0.46 0.29 tal effects (e.g. ozone depletion, photochemical ozone creation h, global warming potential) are expected from this component.
Aquatic Fish * Estimates for product may b Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109 Methyl ethyl ketone (CAS 78- Mobility in soil Other adverse effects	LC50 be based on ad No data is a No data ava nol / water (lo 1-1) 1-99-9) 1-93-3) No data ava No other ad potential, er ns Collect and and its cont sewers/wat	dditional compone available on the de ailable. <b>g Kow)</b> ailable. verse environmen adocrine disruption reclaim or dispose ainer must be disp er supplies. Do no Dispose of content	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81 0.46 0.29 tal effects (e.g. ozone depletion, photochemical ozone creation
Aquatic Fish * Estimates for product may be Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109 Methyl ethyl ketone (CAS 78- Mobility in soil Other adverse effects 13. Disposal consideratio	LC50 be based on ad No data is a No data ava nol / water (lo i-1) )-99-9) -93-3) No data ava No other ad potential, er ns Collect and and its cont sewers/wate container. E regulations.	dditional compone available on the de ailable. g Kow) ailable. verse environmer ndocrine disruption reclaim or dispose ainer must be disp er supplies. Do no Dispose of content	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81 0.46 0.29 tal effects (e.g. ozone depletion, photochemical ozone creation h, global warming potential) are expected from this component. e in sealed containers at licensed waste disposal site. This material to be of as hazardous waste. Do not allow this material to drain into t contaminate ponds, waterways or ditches with chemical or used
Aquatic Fish * Estimates for product may be Persistence and degradability Bioaccumulative potential Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109 Methyl ethyl ketone (CAS 78- Mobility in soil Other adverse effects 13. Disposal consideratio Disposal instructions	LC50 be based on ad No data is a No data ava nol / water (lo -1) -99-9) -93-3) No data ava No other ad potential, er ns Collect and and its cont sewers/wate container. E regulations. Dispose in a	dditional compone available on the de ailable. <b>g Kow)</b> ailable. verse environmen adocrine disruption reclaim or dispose ainer must be disp er supplies. Do no Dispose of content accordance with a code should be as	ow (Pimephales promelas) 481 - 578 mg/l, 96 hours nt data not shown. gradability of this product. -0.24 0.81 0.46 0.29 tal effects (e.g. ozone depletion, photochemical ozone creation h, global warming potential) are expected from this component. e in sealed containers at licensed waste disposal site. This material bosed of as hazardous waste. Do not allow this material to drain into t contaminate ponds, waterways or ditches with chemical or used s/container in accordance with local/regional/national/international

ALC: 1 11144

Waste from residues / unused<br/>productsDispose of in accordance with local regulations. Empty containers or liners may retain some<br/>product residues. This material and its container must be disposed of in a safe manner (see:<br/>Disposal instructions).Contaminated packagingEmpty containers should be taken to an approved waste handling site for recycling or disposal.<br/>Since emptied containers may retain product residue, follow label warnings even after container is<br/>emptied.

#### 14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 23310 LBS, Acetone RQ = 50000 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	11
	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
	1014000
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group Environmental hazards	II No.
ERG Code	3H
	Read safety instructions, SDS and emergency procedures before handling.
IMDG	riced balory included in, obo and chickgonoy procedulos sciolo handling.
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	- -
Packing group	11
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not available.
Annex II of MARPOL 73/78 and	
the IBC Code	
15. Regulatory information	
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
	otification (40 CFR 707, Subpt. D)
Not regulated. OSHA Specifically Regulated	Substances (29 CFR 1910.1001-1050)
Not listed.	

CERCLA Hazardous Substance List (40 CFR 302.4)

• •	
Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

.

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No		
SARA 302 Extremely hazard Not listed.	ous substance		
SARA 311/312 Hazardous chemical	No		
SARA 313 (TRI reporting) Not regulated.		•	
Other federal regulations			
Clean Air Act (CAA) Section	112 Hazardous Air Pollutar	nts (HAPs) List	
Not regulated. Clean Air Act (CAA) Section	112(r) Accidental Release I	Prevention (40 CFR 68.130)	
Not regulated.	<b>N</b> ( 1-1-1		
Safe Drinking Water Act (SDWA)	Not regulated.		
Drug Enforcement Adm Chemical Code Number	inistration (DEA). List 2, Es	sential Chemicals (21 CFR 1310.02(b) a	nd 1310.04(f)(2) and
Acetone (CAS 67-64	-1)	6532	
Methyl ethyl ketone (	CAS 78-93-3)	6714 Exempt Chemical Mixtures (21 CFR 13	10.12(c))
		35 %WV	
Acetone (CAS 67-64 Methyl ethyl ketone ( DEA Exempt Chemical	CAS 78-93-3)	35 %WV	
Acetone (CAS 67-64 Methyl ethyl ketone		6532 6714	
US state regulations			
US. Massachusetts RTK - S	ubstance List		
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed	109-99-9) 3 78-93-3) 1 (CAS 112945-52-5)		
US. New Jersey Worker and	I Community Right-to-Know	Act	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS US. Pennsylvania Worker a	109-99-9) 5 78-93-3)	ow Law	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fume	8-94-1) 109-99-9) 5 78-93-3)		
US. Rhode Island RTK Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	; 109-99-9)		
US. California Proposition	85	t Act of 1986 (Proposition 65): This materia ductive toxins.	al is not known to contain
International Inventories			
Country(s) or region	Inventory name		On inventory (yes/no)*
Canada	Domestic Substances List	(DSL)	Yes

Oatey CPVC Flowguard Gold UVI One-Step Yellow Cement 926350 Version #: 01 Revision date: - Issue date: 27-May-2015 Country(s) or region

Inventory name

On inventory (yes/no)\* No

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

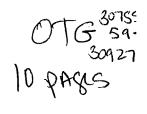
Issue date	27-May-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.



# SAFETY DATA SHEET



1. Identification		
Product identifier	Oatey Purple Primer- NSF Listed for PVC and	nd CPVC
Other means of identification		
Product code	1402E Part Numbers: 30755(TV), 30756(TV), 30757(	TVN 30758 30759 30927
Synonyms		1 (), 307 30, 307 33, 30327
Recommended use	Joining PVC Pipes	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier		
Company Name	Oatey Co.	
Address	4700 West 160th St.	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	•
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the U	S 1-703-527-3887)
Emergency First Aid	1-877-740-5015	
Contact person	MSDS Coordinator	
2. Hazard(s) identification		Cotogory 2
Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	
	Specific target organ toxicity, single exposure	
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		
Signal word	Danger	
Hazard statement	Highly flammable liquid and vapor. Harmful if a airways. Causes skin irritation. Causes seriou cause drowsiness or dizziness.	swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May
Precautionary statement		
Prevention	Keep away from heat/sparks/open flames/hot closed. Ground/bond container and receiving	surfaces No smoking. Keep container tightly
	electrical/ventilating/lighting equipment. Use o measures against static discharge. Avoid brea handling. Do not eat, drink or smoke when usi well-ventilated area. Wear protective gloves/p	inly non-sparking tools. Take precautionary athing mist or vapor. Wash thoroughly after ing this product. Use only outdoors or in a rotective clothing/eye protection/face protection.
Response	contaminated clothing. Rinse skin with water/s keep comfortable for breathing. If in eyes: Rin Remove contact lenses, if present and easy to you feel unwell. Rinse mouth. Do NOT induce	o do. Continue rinsing. Call a poison center/doctor if vomiting. If skin irritation occurs: Get medical medical advice/attention. Take off contaminated

#### Storage

Disposal Hazard(s) not otherwise

classified (HNOC)

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

# 3. Composition/information on ingredients

#### **Mixtures**

Chemical name	CAS number	%	
Acetone	67-64-1	25-40	
Cyclohexanone	108-94-1	25-40	
Furan, Tetrahydro-	109-99-9	15-30	
Methyl ethyl ketone	78-93-3	15-30	

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive
Scheral Ine hazarus	organic peroxide when exposed to air or light or with age.

### 6. Accidental release measures

0. Accidental release meas	Suice
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

# 8. Exposure controls/personal protection

#### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
,		200 ppm	
US. ACGIH Threshold Limit Value	?S		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
· · · ·	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
,	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	

#### **US. ACGIH Threshold Limit Values**

Components	Туре	Value	
	TWA	50 ppm	
Methyl ethyl ketone (CAS	STEL	300 ppm	
78-93-3)			
	TWA	200 ppm	
US. NIOSH: Pocket Guide to Che	mical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
,		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS	STEL	885 mg/m3	
78-93-3)		300 ppm	
	TWA	590 mg/m3	
		200 ppm	

# Biological limit values

#### **ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

\* - For sampling details, please see the source document.

# Exposure guidelines

Exposure guidelines				
US - California OELs: Skin	designation			
Cyclohexanone (CAS 10		Can be absorbed through the skin.		
US - Minnesota Haz Subs:	Skin designation applies			
Cyclohexanone (CAS 10	)8-94-1)	Skin designation applies.		
US - Tennessee OELs: Skir	n designation			
Cyclohexanone (CAS 10	)8-94-1)	Can be absorbed through the skin.		
US ACGIH Threshold Limit	Values: Skin designation			
Cyclohexanone (CAS 10	)8-94-1)	Can be absorbed through the skin.		
Furan, Tetrahydro- (CAS	S 109-99-9)	Can be absorbed through the skin.		
US. NIOSH: Pocket Guide t	o Chemical Hazards			
Cyclohexanone (CAS 10	)8-94-1)	Can be absorbed through the skin.		
Appropriate engineering controls	changes per hour) should b applicable, use process end maintain airborne levels bel	d local exhaust ventilation. Good general ventilation (typically 10 air e used. Ventilation rates should be matched to conditions. If closures, local exhaust ventilation, or other engineering controls to ow recommended exposure limits. If exposure limits have not been ne levels to an acceptable level. Eye wash facilities and emergency then handling this product.		
Individual protection measures, such as personal protective equipment				
Eye/face protection	Face shield is recommende	d. Wear safety glasses with side shields (or goggles).		

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Skin protection	Wear appropriate chemical resistant gloves.
Hand protection	Wear appropriate chemical resistant clothing.
Other	If engineering controls do not maintain airborne concentrations below recommended exposure
Respiratory protection	limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

# 9. Physical and chemical properties

Apperance         Liquid.           Physical state         Liquid.           Form         Translucent liquid.           Color         Solvent.           Odor threshold         Not available.           PH         Not available.           Intial boiling point and boiling         151 °F (66.11 °C)           range         Solvent.           Evaporation rate         5.5 -8           Evaporation rate         5.5 -8           Flammability (solid, gas)         Not available.           Upper/lower flammability on to available.         Not available.           Flammability (solid, gas)         Not available.           (%)         1.8           Flammability (solid, gas)         Not available.           (%)         1.8           (%)         1.8           Explosive limit - tower (%)         Not available.           (%)         Not available.           Explosive limit - upper (%)         Not available.           Explosive limit - upper (%)         Not available.           Explosive limit - upper (%)         Not available.           Postore flocient         Not available.           Explosive limit - upper (%)         Not available.           Vogor density         Not av	9. Physical and onemioar p	
FormTranslucent liquid.FormPurpleOdorSolvent.Odor thresholdNot available.pHNot available.Melting point/freezing pointNot available.Initial boilting point and boilting151 'F (66.11 'C)range14.0 - 23.0 'F (-10.05.0 'C)Evaporation rate5.5 - 8Flarmability (solid, gas)Not available.Upper/lower flarmability or explosive limitsFlarmability limit - upper (%)1.8Flarmability limit - upper (%)Not available.Explosive limit - upper (%)Not available.Vapor pressure14.5 mm Hg @ 20 CVapor density2.5Relative density0.84 +/- 0.02 @20'CSolubility(ixes)Not available.Solubility(ixes)Not available.Solubility(ixes)Not available.Vator gridion temperatureNot available.ViscosityNot available.Other informationNot available.Buik density7 Ib/gaiYOC (Welght %)50 g/ I SQACMD Method 24PeactivityNot available.CherrisonNot available.VOC (Welght %)50 g/ I SQACMD Method 24Conditions to avoidAcids Strong oxiditions quere, Annonia, Annonia, Annea, Isocyanates, Caustics.PeactivityNo dargerous reaction Known under conditions of normal use.Reactiv	Appearance	
LockPurpleOdorSolvent.Odor firesholdNot available.Melting polnt/freezing pointNot available.Melting point and boiling151 °F (66.11 °C)range140 - 23.0 °F (-10.05.0 °C)Flash point4.0 - 23.0 °F (-10.05.0 °C)Evaporation rate5.5 - 8Flammability (solid, gas)Not available.Upper/lower flammability or explosive limitsFlammability (solid, gas)Not available.Upper/lower flammability innit - upper (%)Not available.Flammability limit - lower (%)Not available.Kapor pressure14.8Vapor pressure14.8Vapor pressure14.8Vapor stressify0.84 +/- 0.02 @20 °CSolubility(lesi)Not available.Solubility(water)Not available.Partition coefficientNot available.(n-octanol/water)Not available.Vator galito intemperatureNot available.Voc (Welght %)Solg g/I SQACMD Method 24Other informationThe product is stable and non-reactive under normal conditions of use, storage and transport.Not available.Not available.Voc (Welght %)Solg g/I SQACMD Method 24ReactivityMaterial is stable under normal conditions.No dangerous reaction known under conditions of normal use.reactionsAvoid heat, starks. open fames and other ignition sources. Avoid temperatures exceeding the heat reaction.No dangerous reaction known under conditions of normal use.reactionsAvoid heat, st	Physical state	•
Odor         Solvent.           Odor threshold         Not available.           PH         Not available.           Metting point/freezing point         Not available.           Initial boiling point and boiling         151 °F (66.11 °C)           range         5.5 - 8           Flash point         14.0 - 23.0 °F (-10.05.0 °C)           Evaporation rate         5.5 - 8           Flasmability (soid, gas)         Not available.           Upper/lower flammability init - lower         1.8           (%)         Flammability limit - lower           (%)         1.8           Flammability limit - lower         1.8           (%)         Not available.           Explosive limit - lower (%)         Not available.           Explosive limit - lower (%)         Not available.           Explosive limit - lower (%)         Not available.           Yapor pressure         145 mm Hg @ 20 C           Vapor pressure         145 mm Hg @ 20 C           Vapor density         2.5           Rolative density         0.84 +/- 0.02 @20°C           Solubility (water)         Negligible           Partition coefficient         Not available.           (r-cccatol/Water)         Not available.	Form	
Count         Event and the state of the product	Color	•
Dubb         Not available.           Metting point/freezing point         Not available.           Initial boiling point and boiling         151 °F (66.11 °C)           range         Flash point         14.0 - 23.0 °F (-10.05.0 °C)           Evaporation rate         5.5 - 8           Flasmability (solid, gas)         Not available.           Upper/lower flammability or explosive limits         Flammability (solid, gas)           Flammability limit - lower         1.8           (%)         1.8           Flammability limit - upper (%)         Not available.           Explosive limit - lower (%)         Not available.           Explosive limit - upper (%)         Not available.           Vapor pressure         145 mm Hg @ 20 C           Vapor density         0.28 +/- 0.02 @20°C           Solubility (wator)         Negligible           Partition coefficient         Not available.           (ro-ctanol/water)         Not available.           Viscosity         Not available.           Other information         Solubility (water)           Buik density         50 50 gl SQACMD Method 24           Other information         Flammability and reactivity           Viscosity         Not available.           Other information	Odor	Solvent.
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Flash point       14.0 - 23.0 °F (-10.05.0 °C)         Evaporation rate       5.5 - 8         Flammability (solid, gas)       Not available.         Upper/lower flammability or explosive limits       Flammability limit - lower         Flammability limit - lower       1.8         (%)       Not available.         Explosive limit - lower (%)       Not available.         Explosive limit - upper (%)       Not available.         Vapor pressure       145 mm Hg @ 20 C         Vapor density       2.5         Relative density       0.84 +/- 0.02 @20 °C         Solubility(les)       Solubility (water)         Negligible       Not available.         Partition coefficient       Not available.         (n-octanol/water)       Not available.         Viscosity       Not available.         Other information       Julk density         Bulk density       505 g/l SQACMD Method 24 <b>10. Stability and reactivity</b> The product is stable and non-reactive under normal conditions of use, storage and transport.         Chemical stability       Material is stabl	Melting point/freezing point	Not available.
Test point       5.5 - 8         Evaporation rate       5.5 - 8         Flammability (solid, gas)       Not available.         Upper/lower flammability or explosive limits       Flammability init - lower         Flammability limit - lower       1.8         (%)       Flammability limit - upper         Flammability limit - upper       11.8         (%)       Not available.         Explosive limit - upper (%)       Not available.         Vapor pressure       145 mm Hg @ 20 C         Vapor density       0.84 +/- 0.02 @20*C         Solubility(les)       Solubility(les)         Solubility(les)       Not available.         Auto-lignition temperature       Not available.         Viscosity       Solo Sof g/l SQACMD Method 24         VOC (Weight %)       505 g/l SQACMD Method 24         Chemical stability       Material is stable and non-reactive under normal conditions of use, storage and transport.		
Evamability (solid, gas)       Not available.         Upper/lower flammability or explosive limits         Flammability limit - lower       1.8         (%)       Flammability limit - upper         Flammability limit - upper       11.8         (%)       Value         Explosive limit - upper (%)       Not available.         Vapor density       2.5         Relative density       0.84 +/- 0.02 @20°C         Solubility (water)       Not available.         Partition coefficient       Not available.         (n-octanol/water)       Not available.         Auto-ignition temperature       Not available.         Viscosity       Not available.         Other information       Not available.         Buik density       7 ib/gal         VOC (Weight %)       505 g/l SQACMD Method 24         10. Stability and reactivity       The product is stable and non-reactive under normal conditions of use, storage and transport.         Chemical stability       Material is stable under normal conditions.         Possibility of hazardous       No dangerous reaction known under conditions of normal use.         Possibility of hazardous       Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flam point. Contact with incompatible materials.         Actois. Str	Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Upper/lower flammability or explosive limits         Flammability limit - lower (%)       1.8         (%)       Flammability limit - upper (%)         Explosive limit - lower (%)       Not available.         Explosive limit - upper (%)       Not available.         Vapor pressure       145 mm Hg @ 20 C         Vapor density       2.5         Relative density       0.84 +/- 0.02 @ 20°C         Solubility (water)       Negligible         Partition coefficient       Not available.         (n-octanol/water)       Not available.         Viscosity       Not available.         Viscosity       Not available.         Other information       Bulk density         Bulk density       7 lb/gal         VOC (Weight %)       505 g/l SQACMD Method 24 <b>10. Stability and reactivity</b> The product is stable and non-reactive under normal conditions of use, storage and transport.         Possibility of hazardous reactions       Not availaple. normal conditions.         Possibility of hazardous reactions known under conditions of normal use.       Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.	Evaporation rate	5.5 - 8
Flammability limit - lower (%)       1.8         Flammability limit - upper (%)       11.8         Explosive limit - lower (%)       Not available.         Explosive limit - upper (%)       Not available.         Vapor pressure       145 mm Hg @ 20 C         Vapor density       2.5         Relative density       0.84 +/- 0.02 @ 20°C         Solubility (water)       Negligible         Partition coefficient (n-octanol/water)       Not available.         Viscosity       Not available.         Viscosity       Not available.         Other information Bulk density       7 lb/gal VOC (Weight %)         Sol sof yl SQACMD Method 24       10. Stability and reactivity         Reactivity       The product is stable and non-reactive under normal conditions of use, storage and transport.         Reactivity       Not available.         Other information Bulk density       The product is stable and non-reactive under normal conditions of use, storage and transport.         Reactivity       The product is stable and non-reactive under normal conditions of use, storage and transport.         Possibility of hazardous reactions       Not availappen normal conditions.         Possibility of hazardous reactions       Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.	Flammability (solid, gas)	Not available.
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Solubility(ies)       Negligible         Solubility(water)       Negligible         Partition coefficient       Not available.         (n-octanol/water)       Not available.         Auto-ignition temperature       Not available.         Decomposition temperature       Not available.         Viscosity       Not available.         Other information       Bulk density         Bulk density       7 lb/gal         VOC (Weight %)       505 g/l SQACMD Method 24         10. Stability and reactivity       The product is stable and non-reactive under normal conditions of use, storage and transport.         Chemical stability       Material is stable under normal conditions.         Possibility of hazardous reaction known under conditions of normal use.         reactions       Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.         Incompatible materials       Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.	Vapor density	2.5
Solubility (water)NegligiblePartition coefficient (n-octanol/water)Not available.Auto-ignition temperatureNot available.Decomposition temperatureNot available.UiscosityNot available.Other informationIterationBulk density7 lb/galVOC (Weight %)505 g/l SQACMD Method 24ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.Possibility of hazardous reactionsNo dangerous reaction known under conditions of normal use.Conditions to avoidAvoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.Incompatible materialsAcids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.	Relative density	0.84 +/- 0.02 @20°C
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Bulk density7 lb/galVOC (Weight %)505 g/l SQACMD Method 2410. Stability and reactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.ReactivityThe product is stable under normal conditions.Chemical stabilityMaterial is stable under normal conditions.Possibility of hazardous reactionsNo dangerous reaction known under conditions of normal use.Conditions to avoidAvoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.Incompatible materialsAcids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.	Viscosity	Not available.
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Incompatible materials       flash point. Contact with incompatible materials.         Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.		
	Conditions to avoid	flash point. Contact with incompatible materials.
	Incompatible materials	

# 11. Toxicological information

Information on likely routes of e	exposure
Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

#### Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Acute toxicity		
Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg
* Entimator for product may b	be based on additional component data not	shown
kin corrosion/irritation	Causes skin irritation.	t Shown.
	Causes serious eye irritation.	
Serious eye damage/eye rritation	Causes senous eye initation.	
Respiratory or skin sensitizatio		
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	lifetime study on THF conducted by NTF mice developed liver tumors while neither results. Because the carcinogenic mech either tumor, the EPA determined that the assessment of carcinogenic potential in	tion System (IRIS) reviewed a two species inhalation (1998). Male rats developed renal tumors and female er the female rats nor the male mice showed similar anisms could not be identified clearly in either species for he male rat and female mouse findings are relevant to the humans. Therefore, the IRIS review concludes that these suggestive evidence of carcinogenic potential" following ire.
IARC Monographs. Overall	Evaluation of Carcinogenicity	
		ifiable on to complementative to burnons

Cyclohexanone (CAS 108-94-1)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulate	d Substances (29 CFR 1910.1001-1050)
Not listed.	The second s
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

# 12. Ecological information

Ecotoxicity		The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.		
Components		Species	Test Results	
Acetone (CAS 67-64-1)				
Aquatic				
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours	
Cyclohexanone (CAS 10	)8-94-1)			
Aquatic				
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours	

\* Estimates for product may be based on additional component data not shown.

Lounates for product may be			
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Partition coefficient n-octane Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94- Furan, Tetrahydro- (CAS 109-1 Methyl ethyl ketone (CAS 78-9	-0.24 1) 0.81 99-9) 0.46 03-3) 0.29		
Mobility in soil	No data available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		
13. Disposal consideration			
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.		
Local disposal regulations	Dispose in accordance with all applicable regulations.		
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.		

# 14. Transport information

DOT UN number UN proper shipping name Transport hazard class(es)	UN1993 Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 26274 LBS, Acetone RQ = 13130 LBS)
Class	3
Subsidiary risk	•
Label(s)	3
Packing group	

Special precautions for use Special provisions Packaging exceptions Packaging non bulk Packaging bulk IATA	r Read safety instructions, SDS and emergency procedures before handling. IB2, T7, TP1, TP8, TP28 150 202 242
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	11
Environmental hazards	No.
ERG Code	3H
Special precautions for user	<ul> <li>Read safety instructions, SDS and emergency procedures before handling.</li> </ul>
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	•
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and	Not available.
the IBC Code	
15. Regulatory information	
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

• •	
Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - Yes	
Delayed Hazard - No	
Fire Hazard - Yes	
Pressure Hazard - No	
Reactivity Hazard - No	

SARA 302 Extremely hazardous substance

Not listed.

Hazard categories

SARA 311/312 Hazardous No chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and **Chemical Code Number** 6532 Acetone (CAS 67-64-1) 6714 Methyl ethyl ketone (CAS 78-93-3) Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV Acetone (CAS 67-64-1) Methyl ethyl ketone (CAS 78-93-3) 35 %WV **DEA Exempt Chemical Mixtures Code Number** Acetone (CAS 67-64-1) 6532 Methyl ethyl ketone (CAS 78-93-3) 6714 **US state regulations** US. Massachusetts RTK - Substance List Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) US. Pennsylvania Worker and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) US, Rhode Island RTK Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) **US. California Proposition 65** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. International Inventories On inventory (yes/no)\* Inventory name Country(s) or region Yes Domestic Substances List (DSL) Canada Yes Toxic Substances Control Act (TSCA) Inventory United States & Puerto Rico \*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s). 16. Other information, including date of preparation or last revision 27-May-2015 Issue date **Revision date** -01 Version #

HMIS® ratings

Health: 2

Flammability: 3 Physical hazard: 0



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

**Oatey**<sup>®</sup>

## SAFETY DATA SHEET

DTG (30891) ET 10PGS

1. Identification	-	
Product identifier	Rain-R Shine Blue PVC Cement	
Other means of identification		
Product code	1104E	
Synonyms	Part Numbers: 30890, 30891, 30893, 30894, 3	30895, 30896, 31954, 31955, 31956, 31957
Recommended use	Joining PVC Pipes	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier	/Distributor information	
Company Name	Oatey Co.	,
Address	4700 West 160th St.	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	×.
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the U	S 1-703-527-3887)
Emergency First Aid	1-877-740-5015	
Contact person	MSDS Coordinator	
2. Hazard(s) identification	I	
Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		
	$\land \land \land \land$	
Signal word	Danger	
Signal word Hazard statement		wallowed. May be fatal if swallowed and enters
Hazaru Statement	airways. Causes skin irritation. Causes serious cause drowsiness or dizziness.	s eye irritation. May cause respiratory irritation. May
Precautionary statement		
Prevention	Keep away from heat/sparks/open flames/hot s closed. Ground/bond container and receiving e electrical/ventilating/lighting equipment. Use or measures against static discharge. Avoid brea handling. Do not eat, drink or smoke when usir well-ventilated area. Wear protective gloves/pr	equipment. Use explosion-proof nly non-sparking tools. Take precautionary thing mist or vapor. Wash thoroughly after
Response	contaminated clothing. Rinse skin with water/s keep comfortable for breathing. If in eyes: Rins	do. Continue rinsing. Call a poison center/doctor if vomiting. If skin irritation occurs: Get medical

advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

SDS US 1 / 10

#### Storage

#### Disposal

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

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### Supplemental information

Not applicable.

### 3. Composition/information on ingredients

**Mixtures** 

Chemical name	CAS number	%
Furan, Tetrahydro-	109-99-9	40-70
Polyvinyl chloride	9002-86-2	10-20
Acetone	67-64-1	5-15
Cyclohexanone	108-94-1	5-15
Methyl ethyl ketone	78-93-3	5-15
Silica, amorphous, fumed	112945-52-5	1-5

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-a	id measures
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Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

#### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Methods and materials for containment and cleaning up Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

#### Environmental precautions

## 7. Handling and storage

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

#### Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Туре	Value	
Polyvinyl chloride (CAS	STEL	5 ppm	
9002-86-2)	TWA	1 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	1
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
100-94-1)		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	,
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
(0-93-3)		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
3002-00-2j		15 mg/m3	Total dust.

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components		Туре	•		Value	
Silica, amorphous, fumed (CAS 112945-52-5)		TWA	•		0.8 mg/m3	
					20 mppcf	
US. ACGIH Threshold L	imit Values					
Components		Туре	)		Value	Form
Acetone (CAS 67-64-1)		STE			750 ppm	
		TWA			500 ppm	
Cyclohexanone (CAS 108-94-1)	· ·	STEI			50 ppm	
		TWA			20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)		STEI			100 ppm	
		TWA			50 ppm	
Methyl ethyl ketone (CAS 78-93-3)		STEL			300 ppm	
		TWA			200 ppm	
Polyvinyl chloride (CAS 9002-86-2)		TWA			1 mg/m3	Respirable fraction.
US. NIOSH: Pocket Guid	le to Chemical H	azards				
Components		Туре			Value	
Acetone (CAS 67-64-1)		TWA			590 mg/m3	
					250 ppm	
Cyclohexanone (CAS 108-94-1)		TWA			100 mg/m3	
Europ Totrobudes (010		070			25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)		STEL			735 mg/m3	
		· <b>····</b>			250 ppm	
		TWA			590 mg/m3	
Mothul othul Issters (CAC		07-1	:		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)		STEL			885 mg/m3	
		T1474			300 ppm	
		TWA			590 mg/m3	
Silica, amorphous, fumed CAS 112945-52-5)		TWA			200 ppm 5 mg/m3	
ogical limit values ACGIH Biological Expos	ure Indices					
Components	Value		Determinant	Specimen	Sampling Tim	е
Acetone (CAS 67-64-1)	50 mg/l		Acetone	Urine	*	
Cyclohexanone (CAS	80 mg/l		1,2-Cyclohexan	Urine	*	
108-94-1)	•		ediol, with			
	o "		hydrolysis			
	8 mg/l		Cyclohexanol,	Urine	*	
Euron Tetrobydro- (CAS	0 m m/l		with hydrolysis	Lirino	<u>ـ</u>	

Furan, Tetrahydro- (CAS 2 mg/lTetrahydrofuraUrine109-99-9)nnMethyl ethyl ketone (CAS 2 mg/lMEKUrine78-93-3)

\* - For sampling details, please see the source document.

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Exposure guidelines		
US - California OELs: Skin d	esignation	
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.
US - Minnesota Haz Subs: Sl	kin designation applies	
Cyclohexanone (CAS 108	-94-1)	Skin designation applies.
US - Tennessee OELs: Skin	designation	
Cyclohexanone (CAS 108	-94-1)	Can be absorbed through the skin.
US ACGIH Threshold Limit V		
Cyclohexanone (CAS 108	-94-1)	Can be absorbed through the skin.
Furan, Tetrahydro- (CAS	109-99-9)	Can be absorbed through the skin.
US. NIOSH: Pocket Guide to		One has a base had through the okin
Cyclohexanone (CAS 108	9-94-1)	Can be absorbed through the skin.
Appropriate engineering controls	changes per hour) should be u applicable, use process enclos maintain airborne levels below	bocal exhaust ventilation. Good general ventilation (typically 10 air used. Ventilation rates should be matched to conditions. If sures, local exhaust ventilation, or other engineering controls to v recommended exposure limits. If exposure limits have not been e levels to an acceptable level. Eye wash facilities and emergency on handling this product.
Individual protection measures,	such as personal protective e	quipment
Eye/face protection	Face shield is recommended.	Wear safety glasses with side shields (or goggles).
Skin protection		
Hand protection	Wear appropriate chemical rea	sistant gloves.
Other	Wear appropriate chemical rea	
Respiratory protection	If engineering controls do not limits (where applicable) or to been established), an approve	maintain airborne concentrations below recommended exposure an acceptable level (in countries where exposure limits have not ed respirator must be worn.
Thermal hazards		tective clothing, when necessary.
General hygiene considerations	as washing after handling the	or smoke. Always observe good personal hygiene measures, such material and before eating, drinking, and/or smoking. Routinely wash equipment to remove contaminants.

## 9. Physical and chemical properties

9, Physical and chemical p	Noheinea
Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling	151 °F (66.11 °C)
range Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.92 +/- 0.02

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Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1200 - 2500 cP
Viscosity temperature	77 °F (25 °C)
Other information	
Bulk density	7.7 lb/gal
VOC (Weight %)	443 g/I SQACMD 1168/M316A

#### 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## Information on toxicological effects

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritati	
Species	Test Results
. ,	
Rabbit	20 ml/kg
Rat	50 mg/l, 8 Hours
Rat	5800 mg/kg
1)	
Rabbit	948 mg/kg
Rat	8000 ppm, 4 hours
	Species Rabbit Rat Rat 1) Rabbit

Components	Species		Test Results
Oral			1540 malka
LD50	Rat		1540 mg/kg
* Estimates for product may	v be based on additi	ional component data not sho	owin.
Skin corrosion/irritation	Causes skin irr	itation.	
	Causes serious		
Serious eye damage/eye rritation	oudoor come		
Respiratory or skin sensitizat	ion		•
Respiratory sensitization	Not available.		
Skin sensitization	This product is	not expected to cause skin s	sensitization.
Germ cell mutagenicity	mutagenic or g	enotoxic.	components present at greater than 0.1% are
Carcinogenicity	lifetime study c mice develope results. Becaus either tumor, th assessment of data in aggreg	on THF conducted by NTP (1) ad liver tumors while neither the se the carcinogenic mechanis he EPA determined that the n f corcinegenic potential in hur	System (IRIS) reviewed a two species inhalation 998). Male rats developed renal tumors and female ne female rats nor the male mice showed similar sms could not be identified clearly in either species fo nale rat and female mouse findings are relevant to the mans. Therefore, the IRIS review concludes that these gestive evidence of carcinogenic potential" following
IARC Monographs. Over			
Cyclohexanone (CAS Polyvinyl chloride (CA Silica, amorphous, fur OSHA Specifically Regul	108-94-1) \S 9002-86-2) ned (CAS 112945-5 lated Substances (	3 Not classi 3 Not classi 52-5) 3 Not classi	ifiable as to carcinogenicity to humans. ifiable as to carcinogenicity to humans. ifiable as to carcinogenicity to humans.
Polyvinyl chloride (CA	.5 9002-00-2) This product is		oductive or developmental effects.
Reproductive toxicity		to May cause drowsiness an	d dizziness. Respiratory tract irritation.
Specific target organ toxicity single exposure	/ = Narcouc enect	ts. May cause drowsmood an	
Specific target organ toxicity repeated exposure			
Aspiration hazard	•	f swallowed and enters airway	ys.
Chronic effects	Prolonged inh	alation may be harmful.	
12. Ecological informat	ion		
Ecotoxicity	The second states and the	s not classified as environmen t large or frequent spills can h	ntally hazardous. However, this does not exclude the have a harmful or damaging effect on the environmen
Components		Species	Test Results
Components			
Components Acetone (CAS 67-64-1)			
Acetone (CAS 67-64-1)			
	LC50	Fathead minnow (Pimepha	les promelas) > 100 mg/l, 96 hours
Acetone (CAS 67-64-1) Aquatic Fish		Fathead minnow (Pimepha	les promelas) >100 mg/l, 96 hours
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108			· · · · · · · · · · · · · · · · · · ·
Acetone (CAS 67-64-1) Aquatic Fish			les promelas) > 100 mg/l, 96 hours les promelas) 481 - 578 mg/l, 96 hours
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish	3-94-1) LC50	Fathead minnow (Pimepha	lles promelas) 481 - 578 mg/l, 96 hours
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m	3-94-1) LC50 ay be based on add	Fathead minnow (Pimepha litional component data not sl	iles promelas) 481 - 578 mg/l, 96 hours hown.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m Persistence and degradabili	3-94-1) LC50 ay be based on add ity No data is av	Fathead minnow (Pimepha litional component data not sl ailable on the degradability of	iles promelas) 481 - 578 mg/l, 96 hours hown.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m	3-94-1) LC50 ay be based on add	Fathead minnow (Pimepha litional component data not sl ailable on the degradability of	iles promelas) 481 - 578 mg/l, 96 hours hown.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m Persistence and degradabili Bioaccumulative potential Partition coefficient n-o Acetone (CAS 67-64-1)	B-94-1) LC50 ay be based on add ity No data is avail No data avail ctanol / water (log	Fathead minnow (Pimepha litional component data not sl ailable on the degradability of able. Kow) -0.24	iles promelas) 481 - 578 mg/l, 96 hours hown.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m Persistence and degradabili Bioaccumulative potential Partition coefficient n-o Acetone (CAS 67-64-1) Cyclohexanone (CAS 108	3-94-1) LC50 ay be based on add ity No data is avail No data avail ctanol / water (log 8-94-1)	Fathead minnow (Pimepha litional component data not sl allable on the degradability of able. <b>Kow)</b> -0.24 0.81	iles promelas) 481 - 578 mg/l, 96 hours hown.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m Persistence and degradabili Bioaccumulative potential Partition coefficient n-o Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS	3-94-1) LC50 ay be based on add ity No data is avail No data avail ctanol / water (log 8-94-1) 109-99-9)	Fathead minnow (Pimepha litional component data not sl allable on the degradability of lable. <b>Kow)</b> -0.24 0.81 0.46	iles promelas) 481 - 578 mg/l, 96 hours hown.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m Persistence and degradabili Bioaccumulative potential Partition coefficient n-o Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	3-94-1) LC50 ay be based on add ity No data is avail No data avail ctanol / water (log 8-94-1) 109-99-9) 5 78-93-3)	Fathead minnow (Pimepha litional component data not sl ailable on the degradability of able. <b>Kow)</b> -0.24 0.81 0.46 0.29	iles promelas) 481 - 578 mg/l, 96 hours hown.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m Persistence and degradabili Bioaccumulative potential Partition coefficient n-o Acetone (CAS 67-64-1) Cyclohexanone (CAS 100 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	3-94-1) LC50 ay be based on add ity No data is av No data avail ctanol / water (log 8-94-1) 109-99-9) 5 78-93-3) No data avail	Fathead minnow (Pimepha litional component data not sl allable on the degradability of able. <b>Kow)</b> -0.24 0.81 0.46 0.29 lable.	iles promelas) 481 - 578 mg/l, 96 hours hown. f this product.
Acetone (CAS 67-64-1) Aquatic Fish Cyclohexanone (CAS 108 Aquatic Fish * Estimates for product m Persistence and degradabili Bioaccumulative potential Partition coefficient n-o Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	3-94-1) LC50 ay be based on add ity No data is av No data avail ctanol / water (log 8-94-1) 109-99-9) 5 78-93-3) No data avail	Fathead minnow (Pimepha litional component data not sl allable on the degradability of able. <b>Kow)</b> -0.24 0.81 0.46 0.29 lable.	iles promelas) 481 - 578 mg/l, 96 hours hown.

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## 13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 34014 LBS, Acetone RQ = 34247 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	•
Label(s)	3
Packing group	
Special precautions for use	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
IATA	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	11
Environmental hazards	No.
ERG Code	3H
Special precautions for use	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for use	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not available.
Annex II of MARPOL 73/78 and	
the IBC Code	
15. Regulatory information	1
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication
us leueral regulations	Standard 29 CFR 1910.1200.

This product is a "Hazardous Chemical" as defined by the Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

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(20 CEP 1010 1001-1050)

OSHA Specifically Regulate	ed Substances (29 CFR 1910.1	001-1050)
Polyvinyl chloride (CAS S		Cancer Central nervous system Liver Blood Flammability
CERCLA Hazardous Substa	ance List (40 CFR 302.4)	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	18-94-1) \$ 109-99-9) \$ 78-93-3)	LISTED LISTED LISTED LISTED
Superfund Amendments and R	eauthorization Act of 1986 (SA	ARA)
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No	
SARA 302 Extremely haza	rdous substance	
Not listed.		
SARA 311/312 Hazardous chemical	No	
SARA 313 (TRI reporting) Not regulated.		
Other federal regulations		
Clean Air Act (CAA) Sectio	on 112 Hazardous Air Pollutan	ts (HAPs) List
	on 112(r) Accidental Release P	Prevention (40 CFR 68.130)
Not regulated.		
Safe Drinking Water Act (SDWA)	Not regulated.	unties Chamicala (21 CEP 1310 02/b) and 1310.04(f)(2) and
Chemical Code Numb	er	sential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and
Acetone (CAS 67-6	54-1) - (CAR 78 02 2)	6532 6714
Methyl ethyl ketone	e (CAS 78-93-3) ministration (DEA). List 1 & 2	Exempt Chemical Mixtures (21 CFR 1310.12(c))
Acetone (CAS 67-6		35 %WV
Methyl ethyl keton	e (CAS 78-93-3)	35 %WV
DEA Exempt Chemica	al Mixtures Code Number	
Acetone (CAS 67- Methyl ethyl keton	64-1) e (CAS 78-93-3)	6532 6714
US state regulations		
US. Massachusetts RTK -		
Acetone (CAS 67-64-1 Cyclohexanone (CAS Furan, Tetrahydro- (C/ Methyl ethyl ketone (C Silica, amorphous, fur US, New Jersey Worker a	108-94-1) \S 109-99-9)	v Act
Acetone (CAS 67-64-1 Cyclohexanone (CAS Furan, Tetrahydro- (C/ Methyl ethyl ketone (C Polyvinyl chloride (CA)	) 108-94-1) AS 109-99-9) AS 78-93-3) S 9002-86-2)	
US. Pennsylvania Worker	and Community Right-to-Kno	bw Law
Acetone (CAS 67-64-1 Cyclohexanone (CAS Furan, Tetrahydro- (CA	l) 108-94-1)	

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Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5)

#### US. Rhode Island RTK

Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3)

#### **US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

#### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No
*A "Yes" indicates this product co	mplies with the inventory requirements administered by the governing country(s).	

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	05-27-2015		
Revision date	-	· .	
Version #	01		
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0		
NFPA ratings	<b>A</b>		

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#### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.



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## SAFETY DATA SHEET

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1. Identification		
Product identifier	Transition Cement	
Other means of identification		
Product code	1110E	
Synonyms	Part Numbers: 30900, 30925, 30926, 32220, 3	
Recommended use	Joining PVC Pipe or Fittings to ABS Pipe or Fit	tings
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/	Distributor information	
Company Name	Oatey Co.	
Address	4700 West 160th St.	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US	S 1-703-527-3887)
Emergency First Aid	1-877-740-5015	
Contact person	MSDS Coordinator	
2. Hazard(s) identification	Clause able liquide	Category 2
Physical hazards	Flammable liquids	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		
Signal word	Danger	where the state of the surger state of the s
Hazard statement	Highly flammable liquid and vapor. Harmful if a airways. Causes skin irritation. Causes seriou cause drowsiness or dizziness.	swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May
Precautionary statement		
Prevention	closed. Ground/bond container and receiving electrical/ventilating/lighting equipment. Use o measures against static discharge. Avoid brea handling. Do not eat, drink or smoke when usi well-ventilated area. Wear protective gloves/p	inly non-sparking tools. Take precationary athing mist or vapor. Wash thoroughly after ing this product. Use only outdoors or in a rotective clothing/eye protection/face protection.
Response	contaminated clothing. Rinse skin with water/s	/doctor. If on skin (or hair): Take off immediately all shower. If inhaled: Remove person to fresh air and se cautiously with water for several minutes. o do. Continue rinsing. Call a poison center/doctor if

Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical

advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

SDS US 1 / 10

#### Storage

### Disposal

Hazard(s) not otherwise classified (HNOC)

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

## 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%	
Furan, Tetrahydro-	109-99-9	30-50	
Acetone	67-64-1	10-25	
Methyl ethyl ketone	78-93-3	10-25	
Polyvinyl chloride	9002-86-2	12-20	
Cyclohexanone	108-94-1	5-15	
Silica, amorphous, fumed	112945-52-5	1-5	

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

#### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Methods and materials for containment and cleaning up Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

#### Environmental precautions

## 7. Handling and storage

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

#### Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Туре	Value	
Polyvinyl chloride (CAS	STEL	5 ppm	
9002-86-2)	TWA	1 ppm	

## US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
Acelone (CAS 07-04-1)	,	1000 ppm	
Cyclohexanone (CAS	PEL	200 mg/m3	
108-94-1)		50 ppm <sup>'</sup>	
Furan, Tetrahydro- (CAS	PEL	590 mg/m3	
109-99-9)		200 ppm	
Methyl ethyl ketone (CAS	PEL	590 mg/m3	
78-93-3)		200 ppm	
Polyvinyl chloride (CAS	PEL	5 mg/m3	Respirable fraction.
9002-86-2)		15 mg/m3	Total dust.

## US. OSHA Table Z-3 (29 CFR 1910.1000)

	Туре	Value	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3	
,	χ.	. 20 mppcf	
US. ACGIH Threshold Limit Value	98		
Components	Туре	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
-	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.
US. NIOSH: Pocket Guide to Che	mical Hazards		
Components	Туре	Value	
oomponente	**		
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
-	TWA	590 mg/m3 250 ppm	
Acetone (CAS 67-64-1) Cyclohexanone (CAS		590 mg/m3 250 ppm 100 mg/m3	
Acetone (CAS 67-64-1) Cyclohexanone (CAS	TWA	590 mg/m3 250 ppm 100 mg/m3 25 ppm	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS	TWA	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS	TWA TWA STEL	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm	
-	TWA TWA	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9)	TWA TWA STEL TWA	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS	TWA TWA STEL	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS	TWA TWA STEL TWA STEL	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3 300 ppm	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS	TWA TWA STEL TWA	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3 300 ppm 590 mg/m3	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3)	TWA TWA STEL TWA STEL TWA	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3 300 ppm 590 mg/m3 200 ppm	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS	TWA TWA STEL TWA STEL	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3 300 ppm 590 mg/m3	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Sillica, amorphous, fumed	TWA TWA STEL TWA STEL TWA	590 mg/m3 250 ppm 100 mg/m3 25 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3 300 ppm 590 mg/m3 200 ppm	

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

\* - For sampling details, please see the source document.

Exposure guidelines		
US - California OELs: Skin de	esignation	
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.
US - Minnesota Haz Subs: Sk		
Cyclohexanone (CAS 108-	-94-1)	Skin designation applies.
US - Tennessee OELs: Skin o		and the state of the state
Cyclohexanone (CAS 108-	.94-1)	Can be absorbed through the skin.
US ACGIH Threshold Limit V		
Cyclohexanone (CAS 108-	-94-1)	Can be absorbed through the skin. Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 1 US. NIOSH: Pocket Guide to	(09-99-9) Chamical Hazarda	Carrie absorbed through the skin.
		Can be absorbed through the skin.
Cyclohexanone (CAS 108	-94-1)	cal exhaust ventilation. Good general ventilation (typically 10 air
Appropriate engineering controls	changes per hour) should be u applicable, use process enclos maintain airborne levels below	sed. Ventilation rates should be matched to conditions. If ures, local exhaust ventilation, or other engineering controls to recommended exposure limits. If exposure limits have not been levels to an acceptable level. Eye wash facilities and emergency
Individual protection measures,	such as personal protective e	quipment
Eye/face protection	Face shield is recommended.	Wear safety glasses with side shields (or goggles).
Skin protection		
Hand protection	Wear appropriate chemical res	istant gloves.
Other	Wear appropriate chemical res	
Respiratory protection	If engineering controls do not r limits (where applicable) or to a been established), an approve	naintain airborne concentrations below recommended exposure an acceptable level (in countries where exposure limits have not d respirator must be worn.
Thermal hazards		ective clothing, when necessary.
General hygiene	as washing after handling the i	or smoke. Always observe good personal hygiene measures, such material and before eating, drinking, and/or smoking. Routinely wash quipment to remove contaminants.

9. Physical and chemical prope	rties
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Annearance

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Green.
Odor	Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	-4.0 °F (-20.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or explo	osive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.93 +/- 0.02

Transition Cement

Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1000 - 2100 cP
Other information	
Bulk density	7.8 lb/gal
VOC (Weight %)	398 g/I SCAQMD 1168/M316A

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

## Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## Information on toxicological effects

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May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.		
Species	Test Results	
Rabbit	20 ml/kg	
	-	
Rat	50 mg/l, 8 Hours	
Rat	5800 mg/kg	
	0.40 · · ·	
Rabbit	948 mg/kg	
Rat	8000 ppm, 4 hours	
	Species Rabbit Rat	

omponents	Species	Test Results
Oral		1540 mg/kg
LD50	Rat	1540 mg/kg
* Estimates for product may be	e based on additional com	nponent data not shown.
kin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye rritation	Causes serious eye irrit	ation.
Respiratory or skin sensitizatior	n	
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expe	ected to cause skin sensitization.
Germ cell mutagenicity	mutagenic or genotoxic	licate product or any components present at greater than 0.1% are
Carcinogenicity	lifetime study on THF c mice developed liver tu results. Because the ca either tumor, the EPA c	ted Risk Information System (IRIS) reviewed a two species inhalation onducted by NTP (1998). Male rats developed renal tumors and female mors while neither the female rats nor the male mice showed similar arcinogenic mechanisms could not be identified clearly in either species for determined that the male rat and female mouse findings are relevant to the genic potential in humans. Therefore, the IRIS review concludes that these ate that there is "suggestive evidence of carcinogenic potential" following routes of exposure.
IARC Monographs. Overall	Evaluation of Carcinoge	ənicity
Cyclohexanone (CAS 10 Polyvinyl chloride (CAS S Silica, amorphous, fumer OSHA Specifically Regulate	)8-94-1) 9002-86-2) d (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans. 3 Not classifiable as to carcinogenicity to humans. 3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS	9002-86-2)	Cancer
Reproductive toxicity	This product is not exp	ected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Narcotic effects. May c	cause drowsiness and dizziness. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified.	• • • •
Aspiration hazard	May be fatal if swallow	red and enters airways.
Chronic effects	Prolonged inhalation n	nay be harmful.
12. Ecological informatio	n	
Ecotoxicity		ssified as environmentally hazardous. However, this does not exclude the r frequent spills can have a harmful or damaging effect on the environment
Components	Specie	es Test Results
Acetone (CAS 67-64-1)		
Aquatic		
Fish	LC50 Fathea	ad minnow (Pimephales promelas) > 100 mg/l, 96 hours
Cyclohexanone (CAS 108-9	4-1)	
Aquatic		
Fish	LC50 Fathea	ad minnow (Pimephales promelas)  481 - 578 mg/l, 96 hours
	he hand on additional or	omnonent data not shown.
* Estimates for product may		n the degradability of this product.
Persistence and degradability		11 010 00 JI 000 00 J
Bioaccumulative potential	No data available.	
Partition coefficient n-octa	anol / water (log Kow)	-0.24
Acetone (CAS 67-64-1)	94-1)	0.81
Cyclohexanone (CAS 108-9 Furan, Tetrahydro- (CAS 10	)9-99-9)	0.46
Methyl ethyl ketone (CAS 78	8-93-3)	0.29
monifi and a second second	No data available.	
Mobility in soil	No data availabio	
Mobility in soil Other adverse effects		rironmental effects (e.g. ozone depletion, photochemical ozone creation lisruption, global warming potential) are expected from this component.

927041 Version #: 01 Revision date: - Issue date: 05-27-2015

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## 13. Disposal considerations

13. Disposal consideration	
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 27933 LBS, Acetone RQ = 34247 LBS)
Transport hazard class(es)	
Class	3 .
Subsidiary risk	-
Labe!(s)	3
Packing group	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
ΙΑΤΑ	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3H
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
	F-E, S-E
Special precautions for use	<ul> <li>Read safety instructions, SDS and emergency procedures before handling.</li> </ul>
Transport in bulk according to	Not available.
Annex II of MARPOL 73/78 and	
the IBC Code	
15. Regulatory information	I

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. **US** federal regulations All components are on the U.S. EPA TSCA Inventory List.

Υ.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

v

Not regulated. 

Polydnyl chorde (CAS 9002-86-2)       Cencer Central nervous system Liver Blood         CERCLA Hazardous Substance List (40 CFR 302-4)       LiSTED         Acatone (CAS 70-64-1)       LISTED         Cyclohexamore (CAS 70-94-7)       LISTED         Methyl othyl kolone (CAS 78-78-3-3)       LISTED         Supperfund Amendments and Rauthorization Act of 1986 (SARA)       Immediale Mazard - Yos         Pressure Hazard - No Fire Hazard - No Fire Hazard - No Pressure Hazard - No Readtivity Hazard - No       SARA 302 Extremely hazardous substance         Not inside.       SARA 313121 Hazardous No chemical       SarA 31312 Hazardous No         Clean Alt Act (CAA) Socion 12 Hazardous Air Pollutants (HAPs) List       Not regulated.         Clean Alt Act (CAA) Socion 12 Hazardous Air Pollutants (HAPs) List       Not regulated.         SarA 1312 Hazardous No chemical       Scient 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.         Sarb Orthking Water Act       Not regulated.         Sarb Orthking Water Act       Not regulated.         Sarb Orthking Water Act       Not regulated.         Drug Enforcement Administration (DEA). List 2, Essential Chemical Release (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number         Acotone (CAS 76-8-1)       S532         Methyl ebhyl keone (CAS 78-93-3)       6714         Drug Enforcement Administration (DEA). List 1 2 2 Exompt Chemical Ma	OSHA Specifically Regulated	l Substances (29 CFR 1910.1	1001-1050)
CERCLA Hazardous Substance List (40 CFR 302.4) Acetone (CAS 87-64-1) Cyclobexanore (CAS 108-84-1) LISTED Furan, Tetrahydro- (CAS 10-89-4)) LISTED Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories Immediate Hazard - No Fire Hazard - No Reactivity Hezard - No SARA 312 (TRI reporting) Not regulated. Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. (SBWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Acetone (CAS 67-64-1) Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Acetone (CAS 67-64-1) Acetone (CAS 67-64-1) Size Methyl athyl ketone (CAS 78-93-3) THA Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.02(c)) Acetone (CAS 67-64-1) Acetone (CAS 67-64-1) Size Methyl athyl ketone (CAS 78-93-3) Size Methyl athyl ketone (CAS 10-90-9) Methyl ethyl ketone (CAS 10-90-9) Methyl et	Polyvinyl chloride (CAS 90	)02-86-2)	Cancer Central nervous system Liver Blood
Acstone (CAS 87-84-1) LISTED Cyclobrearone (CAS 109-94-1) LISTED Furen, Tetrahydro- (CAS 109-96-9) LISTED Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories Immediale Mazard - Yes Delayed Hazard - Yes Delayed Hazard - No Fire Hazarda - No Fire Hazarda - No Reactivity Hazard - No Reactivity Hazard - No Reactivity Hazard - No Reactivity Hazard - No Chemical SARA 312 Extremely hazardous substance Not listed. SARA 313 (TRI reporting) Not regulated. Clean Air Act (CAA) Soction 112 Hazardous Air Pollutants (HAPs) List Clean Air Act (CAA) Soction 112 Hazardous Air Pollutants (HAPs) List Not regulated. SaRA 313 (TRI reporting) Not regulated. Clean Air Act (CAA) Soction 112 Hazardous Air Pollutants (HAPs) List Clean Air Act (CAA) Soction 112 (r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Acetone (CAS 67-64-1) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Acetone (CAS 67-64-1) Drug Enforcement Administration (DEA). List 2 Exampt Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Science (CAS 78-93-3) S 5%WV DEA Exampt Chemical Mixtures (21 CFR 1310.12(c)) Acctone (CAS 67-64-1) Acetone (CAS 67-64-1) Cyclobreatone (CAS 78-93-3) S 5%WV DEA Exampt Chemical Mixtures (21 CFR 1310.12(c)) Acctone (CAS 67-64-1) Cyclobreatone (CAS 78-93-3) S 5%WV DEA Exampt Chemical Mixtures Code Number Acotone (CAS 67-64-1) Cyclobreatone (CAS 78-93-3) S 7/14 US state regulations US. Massachusetts RTK - Substance List Acatone (CAS 67-64-1) Cyclobreatone (CAS 78-93-3) S 7/14 US state regulations US. New Jersay Worker and Community Right-to-Know Act Acatone (CAS 67-64-1) Cyclobreatone (CAS 108-94-1) Cyclobreatone (CAS 108-94-1) Cyclobreatone (CAS 108-94-1) Cyclobreatone (CAS 108-94-	CERCI A Hazardous Substar	nce List (40 CFR 302.4)	
Hazard categories       Immediate Hazard - Yes         Delayed Hazard - No       Fire Hazard - No         Reactivity Hazard - No       Reactivity Hazard - No         Reactivity Hazard - No       Reactivity Hazard - No         SARA 302 Extremely hazardous substance       No         Not listed.       SARA 311/312 Hazardous         SARA 311/312 Hazardous       No         chemical       SaRa 311/312 Hazardous Alv         SARA 311/312 Hazardous       No         chemical       Sarka 311 (Ri reporting)         Not regulated.       Clean Air Act (CAA) Section 112 (Hazardous Air Pollutants (HAPs) List         Not regulated.       Safe Drinking Water Act         Safe Drinking Water Act       Not regulated.         (SDWA)       Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number         Acetone (CAS 67-64-1)       6532         Methyl ethyl ketone (CAS 78-93-3)       6714         Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))         Acetone (CAS 67-64-1)       6532         Methyl ethyl ketone (CAS 78-93-3)       35 %WV         DEA Exempt Chemical Mixtures Code Number       Acetone (CAS 67-64-1)         Acetone (CAS 67-64-1)       6532         Methyl ethyl k	Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9)		LISTED LISTED LISTED
Hazard categories       Immediate Hazard - Yes         Delayed Hazard - No       Fire Hazard - No         Reactivity Hazard - No       Reactivity Hazard - No         Reactivity Hazard - No       Reactivity Hazard - No         SARA 302 Extremely hazardous substance       No         Not listed.       SARA 311/312 Hazardous         SARA 311/312 Hazardous       No         chemical       SaRa 311/312 Hazardous Alv         SARA 311/312 Hazardous       No         chemical       Sarka 311 (Ri reporting)         Not regulated.       Clean Air Act (CAA) Section 112 (Hazardous Air Pollutants (HAPs) List         Not regulated.       Safe Drinking Water Act         Safe Drinking Water Act       Not regulated.         (SDWA)       Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number         Acetone (CAS 67-64-1)       6532         Methyl ethyl ketone (CAS 78-93-3)       6714         Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))         Acetone (CAS 67-64-1)       6532         Methyl ethyl ketone (CAS 78-93-3)       35 %WV         DEA Exempt Chemical Mixtures Code Number       Acetone (CAS 67-64-1)         Acetone (CAS 67-64-1)       6532         Methyl ethyl k	Superfund Amendments and Rea	authorization Act of 1986 (SA	ARA)
Not listed. SARA 311/312 Hazardous No chemical SARA 313 (TRI reporting) Not regulated. Citean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Citean Air Act (CAA) Section 112 (r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Citean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Aceione (CAS 67-64-1) Citean Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Aceione (CAS 67-64-1) Citean Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Acctone (CAS 67-64-1) Citean Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Chemical Mixtures Code Number Aceione (CAS 67-64-1) Citean Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) DEA Exempt Chemical Mixtures Code Number Aceione (CAS 67-64-1) Citean (CAS 78-93-3) Silica, anorphous, fumed (CAS 198-93-3) Silica, anorphous, fumed (CAS 112494-52-5) US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 67-64-1) Citean (CAS 78-93-3) Polyvinyl chorde (CAS 78-93-3) Po	Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No	
chemical SARA 313 (TRI reporting) Not regulated. Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Glean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act (SDWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Acetone (CAS 67-64-1) Acetone (CAS 67-64-1) Methyl ethyl ketone (CAS 78-93-3) Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Acetone (CAS 67-64-1) Acetone (CAS 67-64-1) Cyclohexanone (CAS 78-93-3) Silica, anorphous, fumed (CAS 112945-52-5) US. Nassachusetts RTK - Substance List Acetone (CAS 67-64-1) Cyclohexanone (CAS 710-94-1) Furan, Tetrahydro. (CAS 109-94-1) Silica, anorphous, fumed (CAS 112945-52-5) US. New Verser and Community Right-to-Know Act Acetone (CAS 67-64-1) Cyclohexanone (CAS 78-93-3) Silica, anorphous, fumed (CAS 112945-52-5) US. New Verser and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanone (CAS 109-94-1) Furan, Tetrahydro. (CAS 109-94-1) Furan, Tetrahydro. (CAS 109-94-9) Methyl ethyl ketone (CAS 78-93-3) Silica, anorphous, fumed (CAS 112945-52-5) US. New Verser and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanone (CAS 78-93-3) Polyving Ichoher (CAS 109-94-9) Methyl ethyl ketone (CAS 78-93-3) Polyving Ichoher (CAS 109-94-1) Furan, Tetrahydro. (CAS 109-94-9) Methyl ethyl ketone (CAS 78-93-3) Polyving Ichoher (CAS 109-94-9) Methyl ethyl ketone (CAS 78-93-3) Polyving Ichoher (CAS 109-94-1) Furan, Tetrahydro. (CAS 109-94-9) Methyl ethyl ketone (CAS 78-93-3) Polyving Ichoher (CAS 109-94-1) Furan, Tetrahydro. (CAS 109-94-9) Methyl ethyl ketone (CAS 78-93-3) Polyving Ichoher (CAS 109-94-1) Polyving Ichoher (		lous substance	
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Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number Acetone (CAS 67-64-1) 6532 Methyl ethyl ketone (CAS 78-93-3) 6714 Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Acetone (CAS 67-64-1) 35 %WV Methyl ethyl ketone (CAS 78-93-3) 37 %WV DEA Exempt Chemical Mixtures Code Number Acetone (CAS 67-64-1) 6532 Methyl ethyl ketone (CAS 78-93-3) 6714 US state regulations US. Massachusetts RTK - Substance List Acetone (CAS 67-64-1) Cyclohexanore (CAS 112945-52-5) US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5) US. New Jersey Worker and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanore (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Silica, Previous (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Silica, Previous	Other federal regulations		
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Safe Drinking Water Act (SDWA)       Not regulated.         Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number         Acetone (CAS 67-64-1)       6532         Methyl ethyl ketone (CAS 78-93-3)       6714         Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))         Acetone (CAS 67-64-1)       35 %WV         Methyl ethyl ketone (CAS 78-93-3)       35 %WV         DEA Exempt Chemical Mixtures Code Number       Acetone (CAS 67-64-1)         Acetone (CAS 67-64-1)       6532         Methyl ethyl ketone (CAS 78-93-3)       6714         US state regulations       6532         US Massachusetts RTK - Substance List       Acetone (CAS 67-64-1)         Cyclohexanone (CAS 108-94-1)       Furan, Tetrahydro- (CAS 108-94-1)         Furan, Tetrahydro- (CAS 108-94-1)       Furan, Tetrahydro- (CAS 108-94-1)         Kethyl ethyl ketone (CAS 78-93-3)       Silica, amorphous, fumed (CAS 112945-52-5)         US. New Jersey Worker and Community Right-to-Know Act       Acetone (CAS 70-89-3)         Acetone (CAS 67-64-1)       Cyclohexanone (CAS 108-94-1)         Cyclohexanone (CAS 108-93-3)       Silica, amorphous, fumed (CAS 112945-52-5)         US. New Jersey Worker and Community Right-to-Know Law       Acetone (CAS 67-64-1)         Cyclohexa	Net regulated		
<ul> <li>(SDWA)</li> <li>Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number <ul> <li>Acetone (CAS 67-64-1)</li> <li>Methyl ethyl ketone (CAS 78-93-3)</li> <li>6714</li> </ul> </li> <li>Drug Enforcement Administration (DEA). List 1 &amp; 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))</li> <li>Acetone (CAS 67-64-1)</li> <li>35 %WV</li> <li>Methyl ethyl ketone (CAS 78-93-3)</li> <li>35 %WV</li> <li>DEA Exempt Chemical Mixtures Code Number</li> <li>Acetone (CAS 67-64-1)</li> <li>6532</li> <li>Methyl ethyl ketone (CAS 78-93-3)</li> <li>35 %WV</li> </ul> US state regulations US. Massachusetts RTK - Substance List <ul> <li>Acetone (CAS 67-64-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 109-99-9)</li> <li>Methyl ethyl ketone (CAS 78-93-3)</li> <li>Silica, amorphous, fumed (CAS 112945-52-5)</li> <li>US. New Jersey Worker and Community Right-to-Know Act</li> <li>Acetone (CAS 67-64-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 109-99-9)</li> <li>Methyl ethyl ketone (CAS 78-93-3)</li> <li>Silica, Strone (CAS 67-64-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Furan, Tetrahydro- (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> <li>Cyclohexanone (CAS 108-94-1)</li> </ul>	Not regulated.		
Chemical Code Number Acetone (CAS 67-64-1) 6532 Methyl ethyl ketone (CAS 78-93-3) 6714 Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Acetone (CAS 67-64-1) 35 %WV Methyl ethyl ketone (CAS 78-93-3) 35 %WV DEA Exempt Chemical Mixtures Code Number Acetone (CAS 67-64-1) 6532 Methyl ethyl ketone (CAS 78-93-3) 6714 US state regulations US. Massachusetts RTK - Substance List Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 108-94-1) Cyclohexanone (CAS 108-94-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 108-94-1) Cyclohexanone (CAS 108-94-1)		-	(1.1.0)
Methyl ethyl ketone (CAS 78-93-3)       6714         Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))         Acetone (CAS 67-64-1)       35 %WV         Methyl ethyl ketone (CAS 78-93-3)       35 %WV         DEA Exempt Chemical Mixtures Code Number       Acetone (CAS 67-64-1)         Acetone (CAS 67-64-1)       6532         Methyl ethyl ketone (CAS 78-93-3)       6714         US state regulations         US. Massachusetts RTK - Substance List         Acetone (CAS 67-64-1)       Cyclohexanone (CAS 109-99-9)         Methyl ethyl ketone (CAS 109-99-9)         Methyl ethyl ketone (CAS 112945-52-5)         US. New Jersey Worker and Community Right-to-Know Act         Acetone (CAS 67-64-1)         Cyclohexanone (CAS 108-99-1)         Furan, Tetrahydro- (CAS 112945-52-5)         US. New Jersey Worker and Community Right-to-Know Act         Acetone (CAS 67-64-1)         Cyclohexanone (CAS 108-99-9)         Methyl ethyl ketone (CAS 78-93-3)         Silica, amorphous, fumed (CAS 112945-52-5)         US. New Jersey Worker and Community Right-to-Know Act         Acetone (CAS 67-64-1)         Cyclohexanone (CAS 108-99-9)         Methyl ethyl ketone (CAS 78-93-3)         Polyvinyl chloride (CAS 9002-86-2) <td< th=""><th>Chemical Code Numbe</th><th>r</th><th></th></td<>	Chemical Code Numbe	r	
Acetone (CAS 67-64-1) 35 %WV Methyl ethyl ketone (CAS 78-93-3) 35 %WV DEA Exempt Chemical Mixtures Code Number Acetone (CAS 67-64-1) 6532 Methyl ethyl ketone (CAS 78-93-3) 6714 US state regulations US. Massachusetts RTK - Substance List Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5) US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 108-94-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 108-94-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Polyvinyl chloride (CAS 78-94-1) Cyclohexanone (CAS 67-64-1) Cyclohexanone (CAS 67-64-1) Cyclohexanone (CAS 78-93-3) Polyvinyl chloride (CAS 78-93-3) Polyvinyl chloride (CAS 78-93-3) Polyvinyl chloride (CAS 78-93-3) Polyvinyl chloride (CAS 78-94-1) Cyclohexanone (CAS 67-64-1)	A. (1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1010 70 02 21	6714 Exempt Chemical Mixtures (21 CFR 1310.12(c))
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Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5) US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Polyvinyl chloride (CAS 9002-86-2) US. Pennsylvania Worker and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1)			
US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Polyvinyl chloride (CAS 9002-86-2) US. Pennsylvania Worker and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1)	Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CA Silica, amorphous, fume	)8-94-1) 5 109-99-9) S 78-93-3) d (CAS 112945-52-5)	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3) Polyvinyl chloride (CAS 9002-86-2) US. Pennsylvania Worker and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1)	US. New Jersey Worker an	d Community Right-to-Know	/ Act
Cyclohexanone (CAS 108-94-1)	Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CA Polyvinyl chloride (CAS US. Pennsylvania Worker a	08-94-1) 5 109-99-9) S 78-93-3) 9002-86-2)	
	Cyclohexanone (CAS 1	08-94-1) S 109-99-9)	

Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5)

#### US. Rhode Island RTK

Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3)

#### **US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

#### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No
*A "Yes" indicates this product co	mplies with the inventory requirements administered by the governing country(s).	

A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

Issue date	05-27-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0

**NFPA** ratings



#### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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## SAFETY DATA SHEET

016 32161

9 pgs

1. Identification		
Product identifier	Oatey Blue Lava Hot PVC Cement	
Other means of identification		
Product code	1114E	0464
Synonyms	Part Numbers: 32160, 32161, 32162, 32163, 3	2164
Recommended use	Joining PVC Pipes	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/		
Company Name	Oatey Co.	
Address	4700 West 160th St.	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the U	S 1-703-527-3887)
Emergency First Aid	1-877-740-5015	
Contact person	MSDS Coordinator	
2. Hazard(s) identification		•
Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements	· · · · · ·	
		· · · · · · · · · · · · · · · · · · ·
Signal word	Danger	
Hazard statement	Highly flammable liquid and vapor. Harmful if s	swallowed. May be fatal if swallowed and enters
Hazard Statement	airways. Causes skin irritation. Causes serious cause drowsiness or dizziness.	s eye irritation. May cause respiratory irritation. May

**Precautionary statement** Prevention

Response

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

#### Storage

#### Disposai

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

## 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%	
Furan, Tetrahydro-	109-99-9	40-80	
Acetone	67-64-1	10-20	
Polyvinyl chloride	9002-86-2	10-20	
Methyl ethyl ketone	78-93-3	5-15	
Silica, amorphous, fumed	112945-52-5	1-4	

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

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#### 4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical`attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	· ·
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

### 6. Accidental release measures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of Personal precautions, low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). protective equipment and Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or emergency procedures vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take Methods and materials for precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles containment and cleaning up (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. **Environmental precautions** 7. Handling and storage Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, Precautions for safe handling sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge Conditions for safe storage, build-up by using common bonding and grounding techniques. Store in a cool, dry place out of including any incompatibilities direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

#### 8. Exposure controls/personal protection

#### Occupational exposure limits

## US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Туре	Value	
Polyvinyl chloride (CAS	STEL	5 ppm	
9002-86-2)	TWA	1 ppm	

## US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Furan, Tetrahydro- (CAS	PEL	590 mg/m3	
109-99-9)		200 ppm	
Methyl ethyl ketone (CAS	PEL	590 mg/m3	
78-93-3)		200 ppm	
Polyvinyl chloride (CAS	PEL	5 mg/m3	Respirable fraction.
9002-86-2)		15 mg/m3	Total dust.

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3	
(	· · · · · · · · · · · · · · · · · · ·	20 mppcf	
US. ACGIH Threshold Limit Value	S .		
Components	Туре	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
·	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.
US. NIOSH: Pocket Guide to Cher	nical Hazards		
Components	Туре	Value	
Components Acetone (CAS 67-64-1)	<b>Type</b> TWA	Value 590 mg/m3	
-			
-		590 mg/m3	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS	TWA	590 mg/m3 250 ppm	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS	TWA	590 mg/m3 250 ppm 735 mg/m3	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS	TWA	590 mg/m3 250 ppm 735 mg/m3 250 ppm	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS	TWA	590 mg/m3 250 ppm 735 mg/m3 250 ppm 590 mg/m3	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS	TWA STEL TWA	590 mg/m3 250 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS	TWA STEL TWA	590 mg/m3 250 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS	TWA STEL TWA STEL	590 mg/m3 250 ppm 735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3 300 ppm	

#### **Biological limit values**

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

\* - For sampling details, please see the source document.

#### **Exposure guidelines**

#### **US ACGIH Threshold Limit Values: Skin designation**

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Furan, Tetrahydro- (CAS 109-99-9)
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Can be absorbed through the skin.

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

### Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

f Skin protection Wear appropriate chemical resistant gloves. Hand protection Wear appropriate chemical resistant clothing. Other If engineering controls do not maintain airborne concentrations below recommended exposure **Respiratory protection** limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear appropriate thermal protective clothing, when necessary. Thermal hazards When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such General hygiene as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. considerations

## 9. Physical and chemical properties

of I hyoroar arrest error I	•
Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Blue.
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	osive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.92 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1200 - 2500 cP
Viscosity temperature	77 °F (25 °C)
Other information	
Bulk density	7.7 lb/gał
VOC (Weight %)	454 g/i SQACMD 1168/M316A
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#### 10. Stability and reactivity

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Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Oatey Blue Lava Hot PVC Cement 927043 Version #: 01 Revision date: - Issue date: 05-27-2015

### 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

### Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airwa	ys. Narcotic effects. May cause respiratory irritation.
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Components	Species	Test Results
Acetone (CAS 67-64-1)		and a second
Acute		
Dermal LD50	Rabbit	20 ml/kg
Inhalation LC50	Rat	50 mg/l, 8 Hours
Oral LD50	Rat	5800 mg/kg

\* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.

#### Respiratory or skin sensitization

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<b>Respiratory sensitization</b>	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Polyvinyl chloride (CAS 9002-86-2)		3 Not classifiable as to carcinogenicity to humans.
Silica, amorphous, fumed (CAS 112945-52-5)		3 Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulate	d Substances (29 CFR 191	0.1001-1050)
Polyvinyl chloride (CAS 9	002-86-2)	Cancer
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.	
Specific target organ toxicity - repeated exposure	Not classified.	

Oatey Blue Lava Hot PVC Cement 927043 Version #: 01 Revision date: - Issue date: 05-27-2015

Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

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### 12. Ecological information

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12. Ecological Information				
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.			
Components		Species	Test Results	
Acetone (CAS 67-64-1)				
Aquatic				
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours	
		tional component data not shown.		
Persistence and degradability	No data is ava	ailable on the degradability of this product.		
Bioaccumulative potential	No data availa	able.		
Partition coefficient n-octan Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS 109- Methyl ethyl ketone (CAS 78-9	99-9)	Kow) -0.24 0.46 0.29		
Mobility in soil	No data availa	able.		
Other adverse effects		rse environmental effects (e.g. ozone depl ocrine disruption, global warming potential)		
13. Disposal consideration	ıs			
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.			
Local disposal regulations	Dispose in accordance with all applicable regulations.			
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.			
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).			
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.			
14. Transport information				
DOT				
UN number UN proper shipping name Transport hazard class(es)	UN1993 Flammable liq	uids, n.o.s. (Methyl ethyl ketone RQ = 6596	63 LBS, Acetone RQ = 34771 LBS)	
Class	3			
Subsidiary risk	-			
Label(s)	3			
Packing group	II Read safety instructions, SDS and emergency procedures before handling.			
	Bead safety in IB2, T7, TP1, 1		s beiore fidituling.	
Special provisions Packaging exceptions	150	11 0, 11 20		
Packaging non bulk	202			
Packaging bulk	242			

Packaging non bulk	202
Packaging bulk	242
IATA	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	·
Class	3
Subsidiary risk	-
Packing group	11

Environmental hazards	No.	
ERG Code Special precautions for user	3H Read safety instructions SD9	S and emergency procedures before handling.
IMDG		s and emergency procedures before nandning.
UN number	UN1993	
UN proper shipping name	FLAMMABLE LIQUID, N.O.S	. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	2	
Class Subsidiary risk	3	
Packing group	11	,
<b>Environmental hazards</b>		
Marine pollutant	No.	
EmS Special precautions for usor	F-E, S-E Read safety instructions	and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.	and emergency procedures before nanding.
15. Regulatory information		
US federal regulations		
TSCA Section 12(b) Export N	otification (40 CFR 707, Sub	pt. D)
Not regulated. OSHA Specifically Regulated	Substances (29 CFR 1910.1	001-1050)
Polyvinyl chloride (CAS 90	02-86-2)	Cancer
		Central nervous system Liver
	•	Blood
		Flammability
CERCLA Hazardous Substan	ce List (40 CFR 302.4)	
Acetone (CAS 67-64-1) Furan, Tetrahydro- (CAS 1	09-99-9)	LISTED LISTED
Methyl ethyl ketone (CAS		LISTED
Superfund Amendments and Rea	uthorization Act of 1986 (SA	RA)
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No	
	Fire Hazard - Yes	
	Pressure Hazard - No	
SADA 202 Evéremely berevel	Reactivity Hazard - No	
SARA 302 Extremely hazardo Not listed.	ous substance	
SARA 311/312 Hazardous chemical	No	
SARA 313 (TRI reporting) Not regulated.		
Other federal regulations		
Clean Air Act (CAA) Section 1	12 Hazardous Air Pollutants	(HAPs) List
Not regulated. Clean Air Act (CAA) Section 1	12(r) Accidental Release Pre	vention (40 CFR 68.130)
Not regulated.		
	Not regulated.	
(SDWA)		
• •	istration (DEA). List 2, Esser	ntial Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and
Drug Enforcement Admin		ntial Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and 6532

.

Drug Enforcement Adm	inistration (DEA). List 1 &	& 2 Exempt Chemical Mixtures (2	21 CFR 1310.12(c))
Acetone (CAS 67-64	I-1)	35 %WV	
Methyl ethyl ketone		35 %WV	
	Mixtures Code Number		
Acetone (CAS 67-64	i-1)	6532	
Methyl ethyl ketone	(CÁS 78-93-3)	6714	
US state regulations			
US. Massachusetts RTK - S	ubstance List	. *	
Acetone (CAS 67-64-1)			
Furan, Tetrahydro- (CAS	109-99-9)		
Methyl ethyl ketone (CAS			
Silica, amorphous, fumeo			
US. New Jersey Worker and	I Community Right-to-Kno	ow Act	
Acetone (CAS 67-64-1)			
Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS	*		
Polyvinyl chloride (CAS 9 US. Pennsylvania Worker al		now Low	
Acetone (CAS 67-64-1)	in community Right-to-R	NOW Law	
Furan, Tetrahydro- (CAS	100-00-01		
Methyl ethyl ketone (CAS			
Silica, amorphous, fumeo			·
US. Rhode Island RTK	<b>( ) ) ) ) ) ) ) ) ) )</b>		
Acetone (CAS 67-64-1)			
Furan, Tetrahydro- (CÁS	109-99-9)		
Methyl ethyl ketone (CAS	; 78-93-3)		
US. California Proposition 6	5		
California Safe Drinking V	Nater and Toxic Enforceme	ent Act of 1986 (Proposition 65): Th	is material is not known to contain
	isted as carcinogens or repr		
International Inventories		```	
Country(s) or region	Inventory name		On inventory (yes/no)*
Canada	Domestic Substances Lis	st (DSL)	Yes
United States & Puerto Rico	Toxic Substances Contro	I Act (TSCA) Inventory	No
*A "Yes" indicates this product co	molies with the inventory requi	irements administered by the governing	a country(s)

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

Issue date	05-27-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability Physical haz

**NFPA** ratings



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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# SAFETY DATA SHEET

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1. Identification			
	Octors Task M Tile Could Mikite		
Product identifier	Oatey Tub-N-Tile Caulk - White		
Other means of identification			
Product code	Dart Numbers: 20240, 20241		
Synonyms	Part Numbers: 30240, 30241		
Recommended use	Caulk and sealant for use around tubs, sinks and other plumbing applications. Do not use on applications where product will be submerged under water.		
Recommended restrictions			
Manufacturer/Importer/Supplier/			
Company Name	Oatey Inc.		
Address	4700 West 160th Street		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)		
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		
2. Hazard(s) identification			
Physical hazards	Not Classified.		
Health hazards	Acute Oral Toxicity	Cat 5	
	Eye Irritation	Cat 2B	
	Skin Irritation	Cat 3	
OSHA defined hazards	Not Classified.		
Label elements			
Hazard symbol	None.		
Signal word	Warning		
Hazard statement	May be harmful if swallowed. Causes mild skin irritation. Causes eye irrit	ation	
Precautionary statement			
Prevention	Wash Thoroughly after handling. Wear protective gloves and eye protecti		
Response	If skin irritation occurs: Get medical advice. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.		
Storage	Not applicable.		
Disposal	Not applicable.		
Hazard(s) not otherwise classified (HNOC)	Uncured product is irritating to eyes, skin and respiratory system.		

## 3. Composition/information on ingredients

Mixtures % **CAS** number **Chemical name** 1317-65-3 30 - 50 Calcium Carbonate\* 30 - 50 Mixture Acrylic Emulsion 5 - 10 Proprietary Benzoate Ester 1 - 2 13463-67-7 Titanium Dioxide\* 64742-48-9 1 Petroleum Distillate < 5% Mixture Non Hazardous Ingredients

Oatey Tun-N-Tile Caulk – White SDS # Version #: 01 Revision date: Issue date: 12-May-2015 \*Inhalation of particulates unlikely due to product's physical state.

4. First-aid measures			
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.		
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.		
Eye contact			
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.		
Most important symptoms/effects, acute and delayed	Skin or eye irritation.		
Indication of immediate medical attention and special treatment needed.	Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.		
General information	Note to physician, treat symptomatically.		
5. Fire-fighting measures			
Suitable extinguishing media	Use dry chemical, CO2, alcohol-resistant foam or water spray (fog).		
Unsuitable extinguishing media	water jet		
Specific hazards arising from the chemical	No specific fire or explosion hazard.		
Special protective equipment and precautions for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.		
Fire fighting equipment/instructions	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.		
Specific methods	None		
General fire hazards	None		

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Methods and materials for containment and cleaning up	Large Spills: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal. Small Spills: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal. Small Spills: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
7. Handling and storage	
Precautions for safe handling	Put on appropriate personal protective equipment (see section 8 of SDS). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

# Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

#### Occupational exposure limits

Components		Туре	Value
Petroleum Distillate	······································	TWA	5 mg/m3
Titanium Dioxide		TWA	10 mg/m3
US OSHA Permissible Exp	oosure Limits		
Components		Туре	Value
Calcium Carbonate		TWA	5 mg/m3 respirable
Petroleum Distillate		TWA	5 mg/m3
Biological limit values	No Biological limits.		
Appropriate engineering controls Individual protection measures Eye/face protection	worker exposure to a limits, use process er worker exposure belo , such as personal proto Safety evewear comp	irborne contaminants. If this produ- nclosures, local exhaust ventilation w any recommended or statutory ective equipment	should be used when a risk assessmen
Skin protection	indicates this is neces	ssary to avoid exposure to liquid s	plasties, misis, gases of dusis.
Hand	Chemical-resistant, ir	npervious gloves complying with a	an approved standard should be worn a
Other	all times when handling chemical products if a risk assessment indicates this is necessary. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.		
Respiratory protection Thermal hazards	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. None.		
		a such face the second by often bondli	ing chamical products, before esting
General hygiene considerations	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing shou not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.		

#### 9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Paste
Color	White or Off-White.
Odor	Mild Acrylic
Odor threshold	Not available.
Hq	7 - 9
Melting point/freezing point	Not applicable.
Initial boiling point and boiling	Not determined
range	
Flash point	> 199 °F (> 93.3 °C)
Upper/lower flammability or explo	
Flammability limit – lower (%)	Not available
Flammability limit – upper (%)	Not available
·	

Oatey Tun-N-Tile Caulk - White

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Explosive limit - lower (%)	Not available		
Explosive limit - upper (%)	Not available		
Vapor pressure	or density Not applicable		
Relative density			
Solubility(ies)			
Solubility (water)	Not available		
Partition coefficient			
(n-octanol/water) Auto-ignition temperature	Not available Not applicable		
Decomposition temperature	Not available		
Viscosity	Not available		
Other information			
VOC (Weight %)	0.8% or 11 g/L		
10. Stability and reactivity	,		
Reactivity	Stable under normal conditions.		
Chemical stability	The product is stable.		
Possibility of hazardous	Under normal conditions of storage and use, hazardous reactions will not occur.		
reaction	-		
Conditions to avoid	No specific data.		
Incompatible materials	No specific data.		
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.		
11. Toxicological information	tion		
Information on likely routes of e			
Inhalation	No known significant effects or crit	cal hazards.	
Skin contact	No known significant effects or critical hazards.		
Eye contact	No known significant effects or critical hazards.		
Ingestion	No known significant effects or critical hazards.		
Symptoms related to the physical, chemical and toxicological characteristics	No specific data.		
Information on likely routes of e Acute Toxicity	exposure		
Components	Species	Results	

Skin corrosion/irritation	Not determined.
Serious eye damage/eye irritation	Not determined.
Respiratory or skin sensitization Respiratory sensitization	Not considered a respiratory irritant
Skin sensitization	This product is not expected to cause skin irritation.
Germ cell mutagenicity	No specific data
Carcinogenicity	No known significant effects or critical hazards.
Reproductive toxicity	No known significant effects or critical hazards.
Specific target organ toxicity Single exposure Repeated exposure Aspiration Hazard	Not Classified. Not Classified. Contains Distillates (petroleum), hydrotreated – Which is a category 1 Aspiration Hazard. The
Chronic effects Further information 12. Ecological information	likely hood of aspirating the product in this form is very low due to the high viscosity. Not Classified.

Oatey Tun-N-Tile Caulk – White SDS # Version #: 01 Revision date: Issue date: 12-May-2015

Petroleum Distillates	Acute LC50 2,900 µg/l Fresh	Fish Dainhaustraut D	
		water Fish - Rainbow trout, D	onaldson trout 96 h
	Acute LC50 2,200 µg/l Fresh	water Fish - Bluegill	96 h
Persistence and degradabil	ity Not Available.		
Bio accumulative potential	Not Available.		
Mobility in soil	Not available.		
Other adverse effects	No known significant effects of critical hazards.		
13. Disposal considera	ations		
Disposal instructions	product, solutions and a environmental protection requirements. Dispose of contractor. Waste shoul the requirements of all a Incineration or landfill sh and its container must b	e should be avoided or minimized whe iny by-products should at all times con n and waste disposal legislation and a of surplus and non-recyclable product d not be disposed of untreated to the authorities with jurisdiction. Waste pac nould only be considered when recycl be disposed of in a safe way. Empty co dispersal of spilled material and runo	mply with the requirements of any regional local authority s via a licensed waste disposal sewer unless fully compliant with ckaging should be recycled. ing is not feasible. This material ontainers or liners may retain some
Hazardous waste code	Not Applicable		
14. Transportation info			
DOT	Not Regulated		
UN number	Hot togulatos		
UN Proper Shipping N	lame		
Transportation Hazard			
Packing group			
ΙΑΤΑ	Not Regulated		
UN number			
UN Proper Shipping N	lame		
Transportation Hazard	d		
Packing group			
IMDG	Not Regulated		
UN number			
UN Proper Shipping N			
Transportation Hazard classes	d		
Packing group			
Environmental hazard Marine polluntant	ls		
15. Regulatory informa	ation		
U.S. Federal regulations	TSCA 5(a)2 - Final signi TSCA 5(a)2 - Proposed	export notification: None required. ficant new use rules: Not listed significant new use rules: Not listed	1
SARA 311/312	TSCA 5(e) - Substances	consent order: Not listed	

Classification	Not applicable		
US state regulations California Prop 65 Canada	This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.		
WHMIS (Canada)	Class D-2A: Material causing other toxic effects (Very toxic).		
International regulations			
Country(s) or region	Inventory Name	On inventory list (yes/no)*	
Canada	DSL/NDSL	Yes	
Australia	Australian Inventory of Chemical Substances (AICS)	Not Determined	
China	Inventory of Existing Chemical Substances in China (IECSC) Not Determ		
United States & Puerto Rico	Toxic Substances Control Act (TSCA 8b)	Yes	
16. Other information, incl	uding date of preparation or last revision		
Issue Date	12-May-2015		
Revision Date	-		
Version #	01		
HMIS Rating	Health: 1 Flammability: 1 Physical Hazards: 0		
Disclaimer	Oatey Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.		

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# SAFETY DATA SHEET



Of 35-281 bpAges

# 1. Identification

r. achtmoadon	Hercules Cryoteck Solar System Antifreeze	
Product identifier		
Other means of identification		
Product code	7382E	
Synonyms	Part Numbers: 35280, 35292	
Recommended use	Engineered Heat Transfer Fluid for solar systems	
<b>Recommended restrictions</b>	None known.	
Manufacturer/Importer/Supplier/	Distributor information	
Company Name	HCC Holdings, Inc. an Oatey Affiliate	
Address	4700 West 160th Street	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)	
Emergency First Aid	1-877-740-5015	
Contact person	MSDS Coordinator	
2. Hazard(s) identification		
Physical hazards	Not classified.	
Health hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		
Hazard symbol	None.	
Signal word	None.	
Hazard statement	The mixture does not meet the criteria for classification.	
Precautionary statement		
Prevention	Observe good industrial hygiene practices.	
Response	Wash hands after handling.	
Storage	Store away from incompatible materials.	
	Dispage of waste and residues in apportance with local authority requi	

Dispose of waste and residues in accordance with local authority requirements.

# Hazard(s) not otherwise classified (HNOC)

Disposal

# 3. Composition/information on ingredients

# Mixtures

Chemical name	CAS number	%	
Propylene glycol	57-55-6	55-65	
Water	7732-18-5	45-55	
NJTSR #31348300 5065P	N/A	1-5	

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breat Call a physician if symptoms develop or persist.		nfortable for breathing.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops ar	id persists.
Hercules Cryoteck Solar	System Antifreeze	SDS US
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Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
6. Accidental release meas	sures
Personal precautions.	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Personal precautions, protective equipment and emergency procedures	Reep unnecessary personner away. For personal protection, see section of the obo.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

# 7. Handling and storage

Precautions for safe handling Conditions for safe storage, including any incompatibilities

Avoid prolonged exposure. Use care in handling/storage.

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

# 8. Exposure controls/personal protection

# **Occupational exposure limits**

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Туре	Value	Form
Propylene glycol (CAS 57-55-6)	TWA	10 mg/m3	Aerosol.
Biological limit values	No biological exposure limits noted fo	r the ingredient(s).	
Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilat or other engineering controls to maintain airborne levels below recommended exposure limits exposure limits have not been established, maintain airborne levels to an acceptable level.		ures, local exhaust ventilation, ommended exposure limits. If	
Individual protection measur	es, such as personal protective equipme	ent	
Eye/face protection	Wear safety glasses with side shields		
Skin protection			
Hand protection	Wear appropriate chemical resistant g	loves.	
Hercules Cryoteck Solar System A	ntifreeze		SDS US
•	n datas — Janua datas 22 April 2015		2/6

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Other	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

# 9. Physical and chemical properties

3. I hysical and chemical	
Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Orange or Green.
Odor	Odorless.
Odor threshold	Not available.
pН	7 - 8.5
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	> 212.0 °F (> 100.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.05
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	8 cP
Other information	
VOC (Weight %)	60.6 % by weight
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.

and transport.

# 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

Acute	toxicity
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Acute toxicity			
Components	Species	Test Results	
Propylene glycol (CAS 57-55-6)			
Acute			
Oral			
LD50	Rat	30 g/kg	
* Estimates for product may b	be based on additional compon	ent data not shown.	
Skin corrosion/irritation	Prolonged skin contact may	cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.		
Respiratory or skin sensitizatio	n		
Respiratory sensitization	Not a respiratory sensitizer.		
Skin sensitization	This product is not expected	to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity This product is not cons		d to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
OSHA Specifically Regulate	Substances (29 CFR 1910.1001-1050)		
Not listed.			
Reproductive toxicity	This product is not expected	to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure			
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	Not an aspiration hazard.		
Chronic effects	Prolonged inhalation may be	harmful.	
Further information	This product has no known adverse effect on human health.		

# 12. Ecological information

otoxicity		The product is not classified as environmentally hazardous. However, this do possibility that large or frequent spills can have a harmful or damaging effect		
Components		Species	Test Results	
Propylene glycol (CAS	\$ 57-55-6)			
Aquatic				
Crustacea	LC50	Ceriodaphnia dubia	18340 mg/l, 48 hours	
Fish	LC50	Pimephales promelas	46500 mg/l, 96 hours	

No data is available on the degradability of this product. Persistence and degradability

# **Bioaccumulative potential**

Partition coefficient n-octanol / water (log Kow) Propylene glycol (CAS 57-55-6)		-0.92	
Mobility in soil	No data available.		
Hercules Cryoteck Solar Sy	stem Antifreeze		SDS US

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# 13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.		
Local disposal regulations	Dispose in accordance with all applicable regulations.		
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.		

# 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

Transport in bulk according to<br/>Annex II of MARPOL 73/78 and<br/>the IBC CodeNot established.

# 15. Regulatory information

**US** federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)				
0	d Substances (29 CER 1910 1001-1050)			
	noo Liet (40 CEP 302 4)			
	lice List (40 CFR 302.4)			
Not listed.				
erfund Amendments and Re	authorization Act of 1986 (SARA)			
Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No			
SARA 302 Extremely hazard	lous substance			
Not listed.				
SARA 311/312 Hazardous chemical	Νο			
SARA 313 (TRI reporting) Not regulated.				
er federal regulations				
Clean Air Act (CAA) Section	112 Hazardous Air Pollutants (HAPs) List			
Not regulated.				
Clean Air Act (CAA) Section	112(r) Accidental Release Prevention (40 CFR 68.130)			
Not regulated.				
Safe Drinking Water Act (SDWA)	Not regulated.			
	Not regulated. OSHA Specifically Regulate Not listed. CERCLA Hazardous Substan Not listed. Derfund Amendments and Re Hazard categories SARA 302 Extremely hazard Not listed. SARA 311/312 Hazardous chemical SARA 313 (TRI reporting) Not regulated. er federal regulations Clean Air Act (CAA) Section Not regulated. Clean Air Act (CAA) Section Not regulated.			

### **US state regulations**

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Propylene glycol (CAS 57-55-6)

- US. Pennsylvania Worker and Community Right-to-Know Law
- Propylene glycol (CAS 57-55-6)
- **US. Rhode Island RTK**

Not regulated.

# US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

# International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

# 16. Other information, including date of preparation or last revision

Issue date	23-April-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0
NFPA ratings	

Disclaimer

HCC Holdings Inc. an Oatey Affiliate cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

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# SAFETY DATA SHEET

Ot 30204 600-5

1. Identification	
Product identifier	Oatey Dark Cutting Oil
Other means of identification	
Product code	
Synonyms	Part Numbers: 30203, 30204, 30205
Recommended use	Cutting oil for high speed thread cutting machines.
<b>Recommended restrictions</b>	None known.
Manufacturer/Importer/Supplier	
Company Name	Oatey Inc.
Address	4700 West 160th Street
	Cleveland, OH 44135
Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator
2. Hazard(s) identification	
Physical hazards	Not Classified.
Health hazards	Not Classified
OSHA defined hazards	Not Classified.
Label elements	
Hazard symbol	None.
Signal word	None
Hazard statement	This product does not require any hazard statements.
Precautionary statement	
Prevention	This product does not require any precautionary statements.
Response	This product does not require any precautionary statements.
Storage	Not applicable.
Disposal	Not applicable.
Hazard(s) not otherwise classified (HNOC)	Used Oil may contain harmful impurities.
3. Composition/information	on on ingredients
Mixtures	

Chemical name	CAS number	%
Petroleum Hydrocarbon Mixture	Mixture	>95
4. First-aid measures		
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable attention if symptoms occur.	
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated medical attention if symptoms occur.	
Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the up Check for and remove any contact lenses. Get medical attention if irri	itation occurs.
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at re for breathing. If material has been swallowed and the exposed person quantities of water to drink. Do not induce vomiting unless directed to	est in a position comfortable n is conscious, give small
Oatey Dark Cutting Oil		SDS US

Most important symptoms/effects, acute and delayed	personnel. Get medical attention if symptoms occur. Ingestion may result in nausea, vomiting, and or diarrhea.
Indication of immediate medical attention and special treatment needed.	Immediate medical attention is not required.
General information	Note to physician, treat symptomatically.
5. Fire-fighting measures	
Suitable extinguishing media	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water in a jet.
Specific hazards arising from the chemical	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases, oxides of sulfur and phosphorous (smoke). Carbon monoxide.
Special protective equipment and precautions for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Fire fighting equipment/instructions	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Specific methods	None
General fire hazards	None

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".		
Methods and materials for containment and cleaning up	Large Spills: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal. Small Spills: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.		
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).		
7. Handling and storage			
Precautions for safe handling	Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials to prevent fires. Put on appropriate personal protective equipment (see section 8 of SDS). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.		
Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.		
8. Exposure controls/personal protection			

# Occupational exposure limits

# **US. ACGIH Threshold Limit Values**

Components		Туре	Value
Oil Mist, Mineral		TLV or PEL	5 mg/m3
US OSHA Permissible Exp	osure Limits		
Components		Туре	Value
Biological limit values	Data Not available.		
Appropriate engineering controls	worker exposure to air limits, use process end	equirements. Good general ventilat borne contaminants. If this product closures, local exhaust ventilation or v any recommended or statutory lim	contains ingredients with exposure other engineering controls to keep
Individual protection measures, Eye/face protection	Safety eyewear comply	<b>tive equipment</b> ying with an approved standard sho sary to avoid exposure to liquid spla	uld be used when a risk assessment shes. mists. gases or dusts.
Skin protection			
Hand	Chemical-resistant, im all times when handling	pervious gloves complying with an a g chemical products if a risk assess	approved standard should be worn at ment indicates this is necessary.
Other	Appropriate footwear a	nd any additional skin protection me	easures should be selected based or d be approved by a specialist before
Respiratory protection	Use a properly fitted, p assessment indicates	articulate filter respirator complying this is necessary. Respirator selection evels, the hazards of the product an	with an approved standard if a risk on must be based on known or d the safe working limits of the
Thermal hazards	None.		
General hygiene considerations	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.		
9. Physical and chemical p		salety showers are close to the work	
•	roperties		
Appearance Physical state	Liquid		
Form	Liquid		
Color	Dark, brown		
Odor	Slight hydrocarbon		
Odor threshold	Not available.		
pH Malting paint/maning paint	Not applicable No data available.		
Melting point/freezing point Initial boiling point and boiling	Not determined		
range Flock point	> 340 °F (> 171°C)		
Flash point Upper/lower flammability or expl			
Flammability limit – lower (%)	Not available		
Flammability limit – upper (%)	Not available		
Explosive limit - lower (%)	Not available		
Explosive limit - upper (%)	Not available		
Vapor pressure	Not applicable		
Vapor density	Not applicable		
Relative density	0.92		
Solubility(ies)	Nogligible		
Solubility (water) Partition coefficient	Negligible		
(n-octanol/water)	>6 based on similar pro	oducts	
Auto-ignition temperature	Not applicable		
	······································		
Oatey Dark Cutting Oil			SDS U

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Decomposition temperature	Not available
Viscosity, kinematic	182 SUS at 100 F (typical)
Other information	
VOC (Weight %)	< 1% by weight, < 10 g/L

# 10. Stability and reactivity

To. Otability and reactivity		
Reactivity	The product does not pose a following sub-paragraph	ny further reactivity hazards in addition to those listed in the
Chemical stability	The product is stable.	
Possibility of hazardous reaction	Under normal conditions of s	torage and use, hazardous reactions will not occur.
Conditions to avoid	Extreme temperature and dir	ect sunlight.
incompatible materials	Strong Oxidizing Agents.	
Hazardous decomposition products	Under normal conditions of s produced.	torage and use, hazardous decomposition products should not be
11. Toxicological information	on	
Information on likely routes of ex	posure	
Inhalation	Mist from processing.	
Skin contact	Skin contact.	
Eye contact	Eye contact.	
Ingestion	No known significant effects	or critical hazards.
Symptoms related to the physical, chemical and toxicological characteristics	No specific data.	
Information on likely routes of exp Acute Toxicity	posure	
Components	Species	Results
Skin corrosion/irritation	May cause skin irritation after without proper cleaning can o	r prolonged exposure. Prolonged exposure or repeated exposure
Serious eye damage/eye irritation	Expected to be slightly irritati	
Respiratory or skin sensitization Respiratory sensitization	Inhalation of vapors or mists may cause irritation to the respiratory system.	
Skin sensitization	This product is not expected	to cause skin irritation.
Germ cell mutagenicity	Not considered a mutagenic hazard	
Carcinogenicity	No component of this product is identified as a probable, possible, or confirmed carcinogen by IARC, NTP, Monographs, or OSHA.	
Reproductive toxicity	No known significant effects or critical hazards.	
Specific target organ toxicity		
Single exposure Repeated exposure	Not expected to be a hazard. Not expected to be a hazard.	

Aspiration HazardContains Distillates (petroleum), hydrotreated – Which is a category 1 Aspiration Hazard. The<br/>likely hood of aspirating the product in this form is very low due to the high viscosity.Chronic effectsNot Classified.Further informationUsed oils may contain harmful impurities that have accumulated during use. The concentration<br/>of such impurities will depend on use and may present risks to health and the environment on<br/>disposal. Used oil should be handled with caution and skin contact should be avoided when

# 12. Ecological information

Ecotoxicity			
Product/ingredient name	Results	Species	Exposure
Petroleum Distillates			
	Acute LC50 2,900 µg/l Fresh water	Fish - Rainbow trout, Donaldson tr	out 96 h

Oatey Dark Cutting Oil

possible.

Acute LC50 2,200 µg/l Fresh water	Fish - Bluegill	96 h
	· · · · · · · · · · · · · · · · · · ·	

Persistence and degradability	Not Available.
Bio accumulative potential	Not Available.
Mobility in soil	Liquid under most conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Other adverse effects	No known significant effects of critical hazards.

# 13. Disposal considerations

IMD		Not Regulated
IMD		Not Regulated
	Transportation Hazard classes	
	Packing group Environmental hazards Marine polluntant	
15.	Regulatory information	
U.S.	Federal regulations	TSCA 12(b) - Chemical export notification: None required. TSCA 5(a)2 - Final significant new use rules: Not listed
		TSCA 5(a)2 - Proposed significant new use rules: Not listed TSCA 5(e) - Substances consent order: Not listed
SAR	A 311/312	
Cla	ssification	Not applicable
	tate regulations ifornia Prop 65	This product does not contain a chemical known to the State of California to cause cancer, birth

# 16. Other information, including date of preparation or last revision

Issue Date	12-May-2015
Revision Date	-
Version #	01
HMIS Rating	Health: 1 Flammability: 1 Physical Hazards: 0
Disclaimer	Oatey Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



# SAFETY DATA SHEET

VIG 2 8 pages 3

# 1. Identification **Product identifier**

### **Oatey ABS Special Milky Clear**

	•	
Other means of identification SDS number	1300E	
Synonyms	Part Numbers: 30922, 30923, 30924, 30	0929
Recommended use	Joining ABS Pipes	
<b>Recommended restrictions</b>	None known.	· .
Manufacturer/Importer/Supplier	r/Distributor information	
Company Name Address	Oatey Co. 4700 West 160th St. Cleveland, OH 44135	
Telephone E-mail Transport Emergency Emergency First Aid Contact person	216-267-7100 info@oatey.com Chemtrec 1-800-424-9300 (Outside the 1-877-740-5015 MSDS Coordinator	US 1-703-527-3887)
2. Hazard(s) identificatior	1	
Physical hazards	Flammable liquids	Category 2
	Serious and damage/eve irritation	Category 24

### Health hazards Serious eye damage/eye irritation Category 2A Specific target organ toxicity, single exposure Category 3 respiratory tract irritation Specific target organ toxicity, single exposure Category 3 narcotic effects Category 1 Aspiration hazard Not classified.

### **OSHA** defined hazards

### Label elements



Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Use only outdoors or in a well-ventilated area. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection.
Response	Do NOT induce vomiting. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Supplemental information	

Not applicable.

# 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Methyl ethyl ketone	78-93-3	30-60
Acrylonitrile-butadiene-styrene copolymers	9003-56-9	15-40
Acetone	67-64-1	10-30

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

T. Thot ald modellee	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash off with soap and water.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Water. Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do
equipment/instructions	so without risk.
equipment/instructions Specific methods	so without risk. Use standard firefighting procedures and consider the hazards of other involved materials.
• •	so without risk.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.
·	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

# 8. Exposure controls/personal protection

# Occupational exposure limits

# US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	т	уре	Va	lue	
Acetone (CAS 67-64-1)	F	EL	24	00 mg/m3	
			10	00 ppm	
Methyl ethyl ketone (CAS	F	ΈL	59	0 mg/m3	
78-93-3)					
			20	0 ppm	
US. ACGIH Threshold Li	mit Values				
Components	т	уре	Va	lue	
Acetone (CAS 67-64-1)	S	TEL	75	60 ppm	
, ,	Т	WA	50	0 ppm	
Methyl ethyl ketone (CAS	S	TEL	30	00 ppm	
78-93-3)	т	WA	20	0 ppm	
US. NIOSH: Pocket Guid	e to Chemical Hazar	ds			
Components	т	уре	Va	llue	
Acetone (CAS 67-64-1)	T	WA		00 mg/m3	
			25	i0 ppm	
				o ppm	
	S	TEL		5 mg/m3	
Methyl ethyl ketone (CAS 78-93-3)	S	ITEL	88	5 mg/m3	
	_	TEL WA	88	95 mg/m3 90 ppm	
Methyl ethyl ketone (CAS 78-93-3)	_		88 30 59	5 mg/m3	
	_		88 30 59	15 mg/m3 10 ppm 10 mg/m3	
78-93-3)	Т		88 30 59	15 mg/m3 10 ppm 10 mg/m3	
78-93-3) ogical limit values	Т		88 30 59	15 mg/m3 10 ppm 10 mg/m3	
78-93-3) ogical limit values ACGIH Biological Expos	T ure Indices	WA	88 30 59 20	95 mg/m3 10 ppm 10 mg/m3 10 ppm	

Oatey ABS Special Milky Clear

# ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*
* - For sampling details, ple	ase see the source doo	ument.		
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.			
Individual protection measure	es, such as personal p	rotective equipme	nt	
Eye/face protection	Wear safety glasse	s with side shields	(or goggles).	
Skin protection				
Hand protection	Wear protective glo	ves.		
Other	Wear appropriate c	hemical resistant cl	othing.	
Respiratory protection	If engineering contr limits (where applic been established), a	able) or to an accep	otable level (in c	ntrations below recommended exposure ountries where exposure limits have not rn.
Thermal hazards	Wear appropriate th	nermal protective cl	othing, when ne	cessary.
General hygiene considerations	When using, do not	eat, drink or smoke	9.	

# 9. Physical and chemical properties

•
Translucent.
Liquid.
Liquid.
Milky.
Solvent.
Not available.
Not available.
Not available.
151 °F (66.11 °C)
14.0 - 23.0 °F (-10.05.0 °C)
5.5 - 8
Not available.
osive limits
1.8
11.8
Not available.
Not available.
145 mm Hg @ 20 C
2.5
0.87 - 0.91
Not available.
Not available.
Not available.
Not available.
500 - 1500 cP

Oatey ABS Special Milky Clear

Other information	
Density	7.40 lb/gal
VOC (Weight %)	310 g/l SQACMD Method 304

# 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

# 11. Toxicological information

Information on likely routes of	exposure
Inhalation	May be fatal if swallowed and enters airways. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

### Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.			
Components	Species	Test Results		
Acetone (CAS 67-64-1)		······································		
Acute				
Dermal				
LD50	Rabbit	20 ml/kg		
Inhalation				
LC50	Rat	50 mg/l, 8 Hours		
Oral				
LD50	Rat	5800 mg/kg		
* Estimates for product may b	be based on additional componen	t data not shown.		
Skin corrosion/irritation	Prolonged skin contact may ca	use temporary irritation.		
Serious eye damage/eye irritation	Causes serious eye irritation.			
Respiratory or skin sensitizatio	n			
<b>Respiratory sensitization</b>	Not available.			
Skin sensitization	This product is not expected to cause skin sensitization.			
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.			
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.			
OSHA Specifically Regulate Not listed.	ed Substances (29 CFR 1910.10	01-1050)		
Reproductive toxicity	This product is not expected to	cause reproductive or developmental effects.		
Specific target organ toxicity - single exposure	Respiratory tract irritation. Narcotic effects.			

ľ.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

# 12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment

	possibility	y that large or frequent spills can h	nave a harmful or damaging effect on the environment.		
Components		Species	Test Results		
Acetone (CAS 67-64-1)					
Aquatic					
Fish	LC50	Fathead minnow (Pimephal	les promelas) >100 mg/l, 96 hours		
* Estimates for product may	be based on	additional component data not sh	iown.		
Persistence and degradability	No data i	s available on the degradability of	this product.		
Bioaccumulative potential	No data a	available.			
Partition coefficient n-octa	nol / water (	(log Kow)			
Acetone (CAS 67-64-1)		-0.24			
Methyl ethyl ketone (CAS 78	-93-3)	0.29			
Mobility in soil	No data a	No data available.			
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.				
13. Disposal consideration	ons				
Disposal instructions	and its co sewers/wa	ntainer must be disposed of as ha ater supplies. Do not contaminate . Dispose of contents/container in	ntainers at licensed waste disposal site. This material azardous waste. Do not allow this material to drain into ponds, waterways or ditches with chemical or used accordance with local/regional/national/international		
Local disposal regulations	Dispose ir	n accordance with all applicable re	egulations.		
Hazardous waste code	The waste disposal c	code should be assigned in discussion company.	ussion between the user, the producer and the waste		
Waste from residues / unused products	product re	of in accordance with local regulati esidues. This material and its conta instructions).	ons. Empty containers or liners may retain some ainer must be disposed of in a safe manner (see:		
Contaminated packaging	Empty cor	ntainers should be taken to an apr	proved waste handling site for recycling or disposal		

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

# 14. Transport information

UN1133
Adhesives
3
-
3
II
Read safety instructions, SDS and emergency procedures before handling.
T11, TP1, TP8, TP27
150
201
243
UN1133
Adhesives
3
-

Oatey ABS Special Milky Clear

Packing group	11 	
Environmental hazards	No.	
ERG Code	3L	and an announce and man before bondling
• •	Read safety instructions, SDS	and emergency procedures before handling.
IMDG	1014400	
UN number	UN1133	
UN proper shipping name	ADHESIVES	
Transport hazard class(es)	•	
Class	3	
Subsidiary risk	- 	
Packing group Environmental hazards	11	
	No	
Marine pollutant EmS	No. F-E, S-D	
		and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.	
15. Regulatory information		
• •		Chemical" as defined by the OSHA Hazard Communication
US federal regulations	Standard, 29 CFR 1910.1200. All components are on the U.S	Chemical" as defined by the OSHA Hazard Communication
TSCA Section 12(b) Export N	lotification (40 CFR 707, Subp	it. D)
Not regulated.		
	l Substances (29 CFR 1910.10	001-1050)
Not listed.		
<b>CERCLA Hazardous Substar</b>	nce List (40 CFR 302.4)	
Acetone (CAS 67-64-1)		LISTED
Methyl ethyl ketone (CAS	78-93-3)	LISTED
Superfund Amendments and Rea	authorization Act of 1986 (SAF	RA)
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No	
SARA 302 Extremely hazard	•	
Not listed.		
SARA 311/312 Hazardous	No	
chemical		
SARA 313 (TRI reporting) Not regulated.		
Other federal regulations		
Clean Air Act (CAA) Section	112 Hazardous Air Pollutants	(HAPs) List
Not regulated.		
Not regulated.	112(r) Accidental Release Pre	vention (40 CFR 68.130)
Safe Drinking Water Act	Not regulated.	
(SDWA)	-	
Drug Enforcement Admi Chemical Code Number	nistration (DEA). List 2, Esser	ntial Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and
Acetone (CAS 67-64-		6532
Methyl ethyl ketone (C		6714
-		empt Chemical Mixtures (21 CFR 1310.12(c))
Acetone (CAS 67-64-		35 %WV 35 %WV
Methyl ethyl ketone (0	JAU (0-33-3)	00 /044V

DEA Exempt Chemica	I Mixtures Code Num	ber	
Acetone (CAS 67-6		6532	
Methyl ethyl ketone		6714	
US state regulations	California Safe Drin is not known to con	king Water and Toxic Enforcement / tain any chemicals currently listed at	Act of 1986 (Proposition 65): This material scarcinogens or reproductive toxins.
US. Massachusetts R	TK - Substance List		
Acetone (CAS 67-6 Methyl ethyl ketone <b>US. New Jersey Work</b>	e (CÁS 78-93-3)	Jht-to-Know Act	
Acetone (CAS 67-6 Methyl ethyl ketone <b>US. Pennsylvania Wo</b> i	e (CÁS 78-93-3)	light-to-Know Law	· · · · · · · · · · · · · · · · · · ·
Acetone (CAS 67-6 Methyl ethyl ketone <b>US. Rhode Island RTK</b>	e (CÁS 78-93-3)		
Acetone (CAS 67-6 Methyl ethyl ketone			
US. California Proposition	65		
California Safe Drinking any chemicals currently	Water and Toxic Enfor listed as carcinogens of	cement Act of 1986 (Proposition 65) r reproductive toxins.	: This material is not known to contain
International Inventories			
Country(o) or region			<b>•</b> • • • • • •

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Νο
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	Νο
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

# 16. Other information, including date of preparation or last revision

issue date	30-July-2014
Revision date	10-December-2014
Version #	02
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.

35754 9 pgs

# SAFETY DATA SHEET Nashua 357 Spray Adhesive



LEADERSHIP BY DESIGN

## IDENTIFICATION

Product Name Recommended use of the chemical and restrictions on use Identified uses

**Company Identification** 

**Customer Information Number** 

Emergency Telephone Number Chemtrec Number Nashua 357 Spray Adhesive

Spray Adhesive Berry Plastics Corporation 25 Forge Parkway Franklin, MA 02038 (800) 248-7659 (Monday – Friday 8:00 am to 5:00 pm) msdstechnical@berryplastics.com

Within USA and Canada: 1-800-424-9300 CCN22955 Outside USA and Canada: +1 703-741-5970 (collect calls accepted) May 6, 2014 May 29, 2013

# **Issue Date**

#### **Supersedes Date**

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

### 2. HAZARD IDENTIFICATION

#### Hazard Classification

Flammable Aerosols - Category 1

- Serious eye damage/eye irritation Category 2A
- Skin corrosion/irritation Category 2
- Specific Target Organ Toxicity Repeat Exposure Category 2
- Specific Target Organ Toxicity Single Exposure Category 3
- Toxic to Reproduction Category 2
- Aspiration hazard Category 1

### Label Elements Hazard Symbols







Signal Word: Danger

### **Hazard Statements**

Extremely flammable aerosol. Causes serious eye irritation.

Causes skin irritation.

May cause drowsiness or dizziness

May cause damage to organs (nervous system) through prolonged or repeated exposure (Inhalation). May be fatal if swallowed and enters airways.

### 2. HAZARD IDENTIFICATION

### **Precautionary Statements**

### Prevention

Pressurized container: Do not pierce or burn, even after use.

Do not spray on an open flame or other ignition source.

Keep away from heat/sparks/open flame/hot surfaces. - No smoking.

Wear eye protection/face protection/protective gloves/protective clothing.

Do not handle until all safety precautions have been read and understood.

Obtain special instructions before use.

Avoid breathing fume/gas/mist/vapors/spray.

Wash hands thoroughly after handling.

Use only outdoors or in a well-ventilated area.

#### Response

If swallowed: Immediately call a poison center/doctor/physician. Do not induce vomiting.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists, get medical advice/attention.

Take off contaminated clothing and wash before re-use.

If exposed or concerned: Get medical attention/advice.

If on skin: Wash with plenty of soap and water.

If skin irritation occurs, get medical advice/attention.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center or doctor/physician if you feel unwell.

### Storage

Protect from sunlight.

Store in a well-ventilated place. Keep container tightly closed.

Do not expose to temperatures exceeding 50 °C/122 °F.

Store locked up.

### Disposal

Dispose of contents/container in accordance with local regulation.

### **Other Hazards**

None identified.

# 2. HAZARD IDENTIFICATION

## **Specific Concentration Limits**

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	55 - 65 %
Acute dermal toxicity	55 - 65 %
Acute inhalation toxicity	70 - 80%
Acute aquatic toxicity	70 - 80%

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Synonyms:

This product is a mixture.

3.

### Safety Data Sheet Nashua 357 Spray Adhesive

COMPOSITION/INFORMATION ON INGREDIENTS		
Component	CAS Number	Concentration
Acetone	67-64-1	20 - 30%
n-Hexane	110-54-3	10 - 20%
Dimethyl Ether	115-10-6	10 - 20%
Propane	74-98-6	10 - 20%
2-methylpentane	107-83-5	1 - 10%
3-methylpentane	96-14-0	1 - 10%

### 4. FIRST- AID MEASURES

### Description of necessary first-aid measures

#### Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

### Skin

Immediately flood the skin with large quantities of water for at least 15 minutes, preferably under a shower. Remove contaminated clothing and continue washing. Contaminated clothing should be washed or dry-cleaned before re-use. Obtain medical attention if blistering occurs or redness persists. Ingestion

Do not induce vomiting. Have victim drink 1-3 glasses of water to dilute stomach contents. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately. Never give anything by mouth to an unconscious or convulsing person.

### Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

### Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

### Indication of immediate medical attention and special treatment needed

#### Notes to Physicians

Treat symptomatically.

### 5. FIRE - FIGHTING MEASURES

### Suitable Extinguishing Media

Use foam, dry chemical or carbon dioxide. Be aware of the possibility of re-ignition. Keep containers and surroundings cool with water spray.

#### Specific hazards arising from the chemical

Vapors can travel a considerable distance to a source of ignition and flashback. Flashback can occur if air temperature exceeds flash point. Be aware of possibility of re-ignition. For aerosol products – exposure to temperature over 130°F may cause containers to burst and release highly flammable gas.

#### **Special Protective Actions for Fire-Fighters**

Wear full protective clothing and self-contained breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES

# Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing. Eliminate all sources of ignition. Use non-sparking scoops for flammable materials.

### **Environmental Precautions**

Prevent the material from entering drains or watercourses. Notify authorities if spill has entered watercourse or sewer or has contaminated soil or vegetation. Dispose in accordance with federal, state and local regulations.

### Methods and materials for containment and cleaning up

Contain and absorb using earth, sand or other insert material. Transfer into suitable containers for recovery or disposal.

### 7. HANDLING AND STORAGE

### Precautions for safe handling

Keep from reach of children. Do not puncture, incinerate or place aerosol product containers in compactors. Use in well ventilated area. Use local exhaust ventilation. Avoid inhaling vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use. Do not flame cut, braze or use welding torch on container. Intentional misuse by deliberately concentrating or inhaling the vapors from this product may be harmful or fatal.

#### **Conditions for safe storage**

Store away from sources of heat or ignition. Storage area should be: cool - dry - well ventilated - away from incompatible materials - out of direct sunlight - away from sources of ignition (heat, sparks, flames, and pilot lights) Do not store above 120°F.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control parameters**

Exposure limits are listed below, if they exist.

### Hexane

ACGIH: TLV 50ppm 8h TWA. (skin) OSHA: PEL 500ppm (1800 mg/m<sup>3</sup>) 8h TWA. Can be absorbed through skin. Acetone ACGIH: TLV 500 ppm 8h TWA. ACGIH (STEL): 750 ppm 15min. OSHA: PEL 1000 ppm (2400 mg/m<sup>3</sup>) 8h TWA. Propane ACGIH: See ACGIH Appendix F: Minimal Oxygen Content. OSHA: PEL 1000ppm (1800 mg/m<sup>3</sup>) 8h TWA. 2-Methylpentane as Hexane, Isomers other than n-Hexane ACGIH: TLV 500 ppm 8h TWA. ACGIH (STEL): 1000 ppm 15min 3-Methylpentane as Hexane, Isomers other than n-Hexane ACGIH: TLV 500 ppm 8h TWA. ACGIH (STEL): 1000 ppm 15min

# **Safety Data Sheet** Nashua 357 Spray Adhesive

### EXPOSURE CONTROLS/PERSONAL PROTECTION 8.

# Appropriate engineering controls

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

# Individual protection measures

**Respiratory Protection** Wear respiratory protection if there is a risk of exposure to high vapor concentrations, aerosols or if applied to hot surfaces. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

# **Skin Protection**

Butyl gloves are recommended.

# **Eye/Face Protection**

Chemical goggles or safety glasses with side shields. **Body Protection** 

If there is danger of splashing, wear: overall or apron

#### PHYSICAL AND CHEMICAL PROPERTIES 9.

### Appearance

Physical State	Aerosol
Color	11 h h
Odor	No data available
Odor Threshold	No data available
рН	Not applicable
Specific Gravity	0.703 estimated
Boiling Range/Point (°C/F)	Not determined
Melting Point (°C/F)	Not determined
Flash Point (PMCC) (°C/F)	-104.44 °C/-156°F Propellant estimated
Vapor Pressure	Not determined
Evaporation Rate	Faster than butyl acetate
Solubility in Water Vapor Density (Air = 1)	No data available Heavier than air
VOC (g/l) VOC (%)	No data available No data available
Partition coefficient (n- octanol/water)	Not applicable
Viscosity	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available No data available
Upper explosive limit	No data available
Lower explosive limit Flammability (solid, gas)	No data available

#### STABILITY AND REACTIVITY 10.

### Reactivity

Data is not available

### **Chemical Stability** Stable under normal conditions.

# Possibility of hazardous reactions Hazardous polymerization will not occur.

### **Conditions to Avoid**

Heat, sparks, flames - contact with incompatible materials

**Incompatible Materials** Strong oxidizers

# Hazardous Decomposition Products Oxides of carbon - aldehydes

#### TOXICOLOGICAL INFORMATION 11.

### **Acute Toxicity**

Acetone Oral LD50 (rat) 5800 mg/kg Dermal LD50 (rabbit) 20,000 mg/kg Inhalation LC50 (rat) 76 mg/l 4hr n-Hexane Oral LD50 (rat) >16,000 mg/kg Dermal LD50 (rabbit) >2000 mg/kg

# Specific Target Organ Toxicity (STOT) – single exposure

Inhalation of this product may cause narcotic effects such as drowsiness or dizziness (Hexane, Acetone, 2-methylpentane, 3-methylpentane).

# Specific Target Organ Toxicity (STOT) – repeat exposure

Hexane: May cause adverse effects to the nervous system through repeated inhalation exposure..

# Serious Eye damage/Irritation

Acetone: Undiluted acetone was severely irritating to rabbit eyes, mild irritation was observed for acetone concentrations of 30% and lower. Hexane: Not irritating to eyes in rabbit studies.

# Skin Corroslon/Irritation

Acetone: Repeated exposure may cause skin dryness and cracking. Hexane: Irritating to skin in animal studies. 2-methylpentane: May cause skin irritation. 3-methylpentane: May cause skin irritation.

# **Respiratory or Skin Sensitization**

Acetone: No indications of a sensitizing potential of acetone were found in a guinea pig maximization test.

Hexane: Not sensitizing to skin in Mouse local lymph node assay (LLNA)

#### TOXICOLOGICAL INFORMATION 11.

# Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

# Germ Cell Mutagenicity

Available data indicates this product is not expected to be mutagenic.

# **Reproductive Toxicity**

Hexane: In animal studies adverse reproductive and developmental effects were seen.

Available data indicates this product may be an aspiration hazard. May be fatal if swallowed and enters airways.

#### ECOLOGICAL INFORMATION 12.

# Ecotoxicity

Hexane: Aquatic Chronic 2: Toxic to aquatic life with long lasting effects. (ECHA) 2-methylpentane: Aquatic Chronic 2: Toxic to aquatic life with long lasting effects. (ECHA) 3-methylpentane: Aquatic Chronic 2: Toxic to aquatic life with long lasting effects. (ECHA)

# Mobility in soil

No relevant studies identified.

# Persistence/Degradability

No relevant studies identified.

# **Bioaccumulative Potential**

No relevant studies identified.

# Other adverse effects

No relevant studies identified.

#### DISPOSAL CONSIDERATIONS 13.

Dispose of in accordance with all applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near to the container. Use non-sparking tools. Do not incinerate closed containers. Empty containers may contain hazardous residues. Dispose of containers with care.

#### TRANSPORT INFORMATION 14.

DOT CFR 172.101 Data UN Proper Shipping	Consumer Commodity, ORM-D (US ground shipment only) Aerosols
Name UN Class UN Number	(2.1) UN1950
UN Packaging Group Classification for AIR	None Consult current IATA Regulations prior to shipping by air.
Transportation (IATA) Environmental Hazards	Not a marine pollutant

### 15. REGULATORY INFORMATION

### United States TSCA Inventory

All ingredients have been verified for inclusion or are exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

#### Canada DSL and NDSL Inventory

All ingredients in this product have been verified for inclusion or are exempt from listing on the Domestic Substance List (DSL).

### WHMIS Classification

### B5. D.2 A

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

#### **California Proposition 65**

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

### SARA Title III Sect. 311/312 Categorization

Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard, Fire Hazard, Sudden Release of Pressure

#### SARA Title III Sect. 313

This product contains a chemical that is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: Hexane (110-54-3)

### 16. OTHER INFORMATION

### **NFPA** Ratings

NFPA Code for Health - 2 NFPA Code for Flammability - 4 NFPA Code for Reactivity - 0 NFPA Code for Special Hazards - None

# **HMIS Ratings**

HMIS Code for Health - 2\* HMIS Code for Flammability - 4 HMIS Code for Physical Hazard - 0 HMIS Code for Personal Protection - See Section 8 \*Chronic

#### Legend

ACGIH: American Conference of Governmental Industrial Hygienists CAS#: Chemical Abstracts Service Number ECHA: European Chemicals Agency EC50: Effect Concentration 50% IARC: International Agency for Research on Cancer LC50: Lethal Concentration 50% LD50: Lethal Dose 50% N/A: Denotes no applicable information found or available OSHA: Occupational Safety and Health Administration PEL: Permissible Exposure Limit STEL: Short Term Exposure Limit

### 16. OTHER INFORMATION

TLV: Threshold Limit Value TSCA: Toxic Substance Control Act

### Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

### Prepared By:

EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Berry Plastics Corporation assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the **material** for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use **or disposal** of the material is in accordance with applicable Federal, State, and local laws and regulations.





# SAFETY DATA SHEET

# **RECTORSEEK™ MID-TEMP**

Normal temperature leak locator

O MACA

SECTION 1 - PRODUCT AND COMPANY INFORMATION

- Product Name RectorSeek™ Mid-Temp
- Product Codes 60554, 60434, 60273, 60158, 60111

Chemical Family Organic/Inorganic

Use Leak locator

Manufacturer's Name The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA

Date of Validation January 23, 2015

Date of Preparation October 4, 2012

- HMIS Codes
  - Health 1
    - Flammability 0
      - Reactivity 0
        - PPI B

Emergency Telephone No. Chemtrec 24 Hours (800)-424-9300 USA (703)-527-3887 International

Technical Service Telephone No. (800)-231-3345 or (713)-263-8001

# SECTION 2 - HAZARDS IDENTIFICATION

# GHS CLASSIFICATION

# Physical Hazards: None

# **Health Hazards**

Acute Toxicity: Oral: Not Classified Dermal: Not Classified Inhalation: Not Classified Skin Corrosion/Irritation: Not Classified Serious Eye Damage/Eye Irritation: Not Classified Respiratory or Skin Sensitization: Not Classified Germ Cell Mutagenicity: Not Classified Carcinogenicity: Not Classified Reproductive Toxicology: Not Classified

Target Organ Systemic Toxicity - Single Exposure: Not Classified Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

# ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified Acute aquatic toxicity: Not Classified Chronic aquatic toxicity: Not Classified Bioaccumulation potential: Not Classified Rapid degradability: Not Classified

# GHS Label elements, including precautionary statements

Pictogram: None

Signal Word: None

Hazard Statements: None

Precautionary Statements: P102 - Keep out of reach of children. P264 - Wash hands thoroughly after handling.

# **Summary Of Acute Hazards**

None known.

# Route Of Exposure, Signs And Symptoms

INHALATION None.

EYE CONTACT May cause slight eye irritation.

SKIN CONTACT None.

INGESTION

May cause nausea and vomiting. Not expected to produce toxic effects unless large amounts are ingested.

# SUMMARY OF CHRONIC HAZARDS

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None known.

# SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient: Nonylphenol Polyethylene Glycol Ether Percentage By Weight: 1-5 CAS Number: 127087-87-0

EC#: Unlisted

SECTION 4 - FIRST AID MEASURES

If inhaled:	N/A
If on skin:	Wash with water.
	Flush eyes with large amounts of water. Get medical attention if irritation persists.
If swallowed:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

### Extinguishing Media

Non-flammable. Use agents appropriate for surrounding fires.

Special Fire Fighting Procedures: Wear self-contained full face piece breathing apparatus and other protective clothing.

Unusual Fire And Explosion Hazards: None.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled: Use absorbent materials to prevent footing hazard and to contain.

SECTION 7 - HANDLING AND STORAGE

Precautions To Be Taken In Handling And Storing: Keep container closed and upright when not in use.

**Other Precautions:** Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

KEEP OUT OF REACH OF CHILDREN.

# SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient Units
Nonylphenol Polyethylene Glycol Ether
ACGIH TLV: N/D
OSHA PEL: N/D

Respiratory Protection (Specify Type): None required.

Ventilation - Local Exhaust: Acceptable

Special: N/A

Mechanical (General): Acceptable

Other: N/A

Protective Gloves: Wear rubber gloves.

Eye Protection: Safety glasses (ANSI Z-87.1 or equivalent)

### Other Protective Clothing Or Equipment: N/A

Work/Hygienic Practices: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

# SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling point: Specific gravity (H20 = 1):	212°F (100°C) @ 760 mmHg 0.99
Vapor pressure (mmHg):	< 1 @ 68°F (20°C)
Melting point:	N/A
Vapor Density (Air = 1):	> 1
Evaporation rate (Ethyl Acetate = 1):	< 1
Appearance/Odor:	Blue liquid/Mild odor
Solubility in water:	Soluble
Volatile Organic Compounds (VOC) Content (theoretical percentage by weight):	< 0% or < (0 g/L)
Flash point:	None
Lower explosion limit:	N/D
Upper explosion limit:	N/D
Flash point:	None
Upper explosion limit:	N/D

# SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable Conditions To Avoid: None. Incompatibility (Materials To Avoid): None. Hazardous Decomposition Products: CO, CO<sub>2</sub>, and fragmented hydrocarbons. Hazardous Polymerization: Will not occur.

SECTION 11 - TOXICOLOGY INFORMATION

# **Chronic Health Hazards**

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Toxicology Data

Ingredient Name

# Nonylphenol Polyethylene Glycol Ether

N/D Oral-Rat LD50: N/D Inhalation-Rat LC50:

SECTION 12 - ECOLOGICAL INFORMATION

### **Ecological Data**

Nonylphenol Polyethylene Glycol Ether Ingredient Name: N/D Food Chain Concentration Potential N/D Waterfowl Toxicity N/D BOD N/D Aquatic Toxicity

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated liquid waste.

Disposal Method: Dispose of in accordance with local, state and federal regulations.

# Section 14 - Transportation Information

DOT:	Non-regulated
Ocean (IMDG):	Non-regulated
Air (IATA):	Non-regulated
WHMIS (Canada):	Non-regulated

# SECTION 15 - REGULATORY INFORMATION

# **Regulatory Data**

Ingredient Name:	Nonylphenol Polyethylene Glycol Ether
SARA 313	No second de la seconda de
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

# SECTION 16 - OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made.

Consult RectorSeal for further information: (713) 263-8001





# SAFETY DATA SHEET

C-FLUX® High-quality soft soldering flux

SECTION 1 - PRODUCT AND COMPANY INFORMATION

Product Name	
C-Flux®	

Product Codes 74025, 74026, 74027, 74028, 74029

Chemical Family Organic/Inorganic

Use

Soldering flux

Manufacturer's Name The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA

Date of Validation January 23, 2015

Date of Preparation August 1, 2012 HMIS Codes Health

Flammability 1

Reactivity 0

PPI B

2

Emergency Telephone No. Chemtrec 24 Hours (800)-424-9300 USA (703)-527-3887 International

Technical Service Telephone No. (800)-231-3345 or (713)-263-8001

# SECTION 2 - HAZARDS IDENTIFICATION

# EMERGENCY OVERVIEW

OSHA Hazards Irritant

### **GHS CLASSIFICATION**

Physical Hazards None

### **Health Hazards**

Acute Toxicity: Oral: Not Classified Dermal: Not Classified Inhalation: Not Classified Skin Corrosion/Irritation: Not Classified Serious Eye Damage/Eye Irritation: Not Classified Respiratory or Skin Sensitization: Not Classified Germ Cell Mutagenicity: Not Classified Carcinogenicity: Not Classified

Reproductive Toxicology: Not Classified Target Organ Systemic Toxicity - Single Exposure: Not Classified Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

#### ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified Acute aquatic toxicity: Not Classified Chronic aquatic toxicity: Not Classified Bioaccumulation potential: Not Classified Rapid degradability: Not Classified

#### GHS Label elements, including precautionary statements



GHS07: Exclamation Mark/Irritant Signal Word: **Warning** 

Hazard Statements:

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

**Precautionary Statements:** 

P102 - Keep out of reach of children.

P262 - Do not get in eyes, on skin, or on clothing.

P264 - Wash hands thoroughly after handling.

P281 Use personal protective equipment as required.

#### **Summary Of Acute Hazards**

Irritation to respiratory system from fumes evolved during soldering. Eye contact may cause intense irritation and injury.

#### **Route Of Exposure, Signs And Symptoms**

#### INHALATION

Irritation to respiratory system from fumes evolved during soldering.

#### EYE CONTACT

Contact may cause intense irritation and injury.

#### Contact may caus

SKIN CONTACT May cause skin irritation.

#### INGESTION

Nausea, vomiting, irritation to digestive system.

#### SUMMARY OF CHRONIC HAZARDS

Short term effects to liver and kidneys can occur. Chemical irritation from continued skin contact can occur. Continuous industrial use in small unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of respiratory tract.

## MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

SECTION 3 -	COMPOSITION/INFORMATION	ΟN	NGREDIENTS
-------------	-------------------------	----	------------

Ingredient:	Zinc Chloride
Percentage By Weight:	< 20
CAS#:	7646-85-7
EC#:	231-592-0
Ingredient:	Ammonium Chloride
Percentage By Weight:	< 1
CAS Number:	12125-02-9
EC#:	235-186-4
Ingredient:	Zinc Oxide
Percentage By Weight:	< 10
CAS Number:	1314-13-2
EC#:	215-222-5
Ingredient:	Tin
Percentage By Weight:	
CAS Number:	7440-31-5
EC#:	231-141-8
Ingredient:	Antimony
Percentage By Weight:	< 1
CAS Number:	7440-36-0
EC#:	231-146-5

## SECTION 4 - FIRST AID MEASURES

If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
Immediately wash with soap and water. Remove and wash any contaminated clothing.
Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention if irritation persists.
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 - Fire Fighting Measures

#### Extinguishing Media

Foam, dry chemical, carbon dioxide or water fog.

**Special Fire Fighting Procedures:** Wear self-contained full face piece breathing apparatus and other protective clothing. Hazardous decomposition products possible (see Section 10). May release ZnO and HCl fumes.

Unusual Fire And Explosion Hazards: Heat may build up pressure and rupture closed containers.

Section 6 - Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up.

Section 7 - Handling and Storage

Precautions To Be Taken In Handling And Storing: Keep container closed and upright when not in use. Store flux at ambient conditions. Wash thoroughly after handling to remove all residue.

Other Precautions: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient

Units

Zinc Chloride	
ACGIH TLV:	
OSHA PEL:	

1 mg/m3 1 mg/m3

Ammonium Chloride ACGIH TLV: OSHA PEL:	10 mg/m3 10 mg/m3
Zinc Oxide ACGIH TLV: OSHA PEL:	5 mg/m3 5 mg/m3
Tin ACGIH TLV: OSHA PEL:	5 mg/m3 5 mg/m3
Antimony ACGIH TLV: OSHA PEL:	0.5 mg/m3 0.5 mg/m3

**Respiratory Protection (Specify Type):** In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air respirators during soldering operations until fumes have dissipated.

Ventilation - Local Exhaust: Acceptable

Special: N/A

Mechanical (General): Acceptable.

Other: N/A

Protective Gloves: Wear rubber gloves.

Eye Protection: Safety glasses (ANSI Z-87.1 or equivalent)

Other Protective Clothing Or Equipment: Coveralls recommended.

Work/Hygienic Practices: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

# SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling point: Specific gravity (H20 = 1):	N/D 1.59
Vapor pressure (mmHg):	N/D
Melting point:	N/D .
Vapor Density (Air = 1):	N/A
Evaporation rate (Ethyl Acetate = 1):	N/A
Appearance/Odor:	Gray paste/No odor
Solubility in water:	Insoluble
Volatile Organic Compounds (VOC) Content (theoretical percentage by weight):	0% or (0 g/L) > 230°F (110°C) SETA CC
Flash point:	
Lower explosion limit:	N/D
Upper explosion limit:	N/D

## SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable

Conditions To Avoid: None

Incompatibility (Materials To Avoid): None known

Hazardous Decomposition Products: Toxic fumes of zinc, chlorine, and HCL may be evolved during soldering.

Hazardous Polymerization: Will not occur.

SECTION 11 - TOXICOLOGY INFORMATION

#### **Chronic Health Hazards**

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Toxicology Data

Ingredient Name

Zinc Chloride	
Oral-Rat LD50:	350 mg/kg
Inhalation-Rat LCLo:	1960 mg/m3/10M

Ammonium Chloride Oral-Rat LD50: Inhalation-Rat LC50:

Zinc Oxide Oral-Rat TDLo: 6846 mg/kg Inhalation-Mouse LC50: 2500 mg/m3

C50: 2500 mg/m3 **Tin** D50: N/D

N/D

N/D

1650 mg/kg

Oral-Rat LD50: Inhalation-Rat LC50:

Antimony Oral-Rat LD50: 7 g/l Inhalation-Rat TCLo: 50 m

7 g/kg 50 mg/m3/7H/52W-I

## Section 12 - Ecological Information

#### **Ecological Data**

Ingredient Name:	Zinc Chloride
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/A
BOD	None
Aquatic Toxicity	7.2 ppm/96 hr/medium bluegill/TLm

Ingredient Name:	Ammonium Chloride
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/A
BOD	N/A
Aquatic Toxicity	6 ppm/96 hr/sunfish/TLm
Ingredient Name:	Zinc Oxide
Food Chain Concentration Potential	N/D
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D
Ingredient Name:	Tin
Food Chain Concentration Potential	N/D
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D
Ingredient Name:	Antimony
Food Chain Concentration Potential	N/D
Waterfowl Toxicity	N/D
BOD	N/D
Aquatic Toxicity	N/D

# Section 13 - Disposal Considerations

# Waste Classification: Non-regulated solid waste

# Disposal Method: Approved landfill

Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

# Section 14 - Transportation Information

DOT:	Non-regulated
Ocean (IMDG):	Non-regulated
Air (IATA):	Non-regulated
WHMIS (Canada):	Non-regulated

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# Section 15 - Regulatory Information

## **Regulatory Data**

Ingredient Name:	Zinc Chloride
SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	1000 lb.
RCRA Code	N/A
Ingredient Name:	Ammonium Chloride
SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A
Ingredient Name:	Zinc Oxide
SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A
Ingredient Name:	Tin
SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A
Ingredient Name:	Antimony
SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	5000 lb.
RCRA Code	N/A

Section 16 - Other Information

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made.

Consult RectorSeal for further information: (713) 263-8001

8/25/2016

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## SAFETY DATA SHEET

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION ------HMIS CODES 1 Health 2 Flammability PRODUCT NAME 0 Reactivity RectorSeal No. 5 В PPI 25112, 25191, 25271, 25300, 25431, 25551, 25552, 25631, 25633, 25780, PRODUCT CODES 25790, 25793 CHEMICAL FAMILY Organic USE EMERGENCY TELEPHONE NO. Pipe Thread Sealant Chemtrec 24 Hours MANUFACTURER'S NAME The RectorSeal Corporation (800)424-9300 USA (703)527-3887 International 2601 Spenwick Drive Houston, Texas 77055 USA TECHNICAL SERVICE TELEPHONE NO. (800)231-3345 or (713)263-8001 DATE OF VALIDATION January 23, 2015 DATE OF PREPARATION Section 2 -- HAZARDS IDENTIFICATION -----EMERGENCY OVERVIEW OSHA Hazards Combustable TARGET ORGANS Not Classified GHS CLASSIFICATION PHYSICAL HAZARDS Combustable liquid (Category 4) HEALTH HAZARDS Acute Toxicity: Oral: Not Classified Dermal: Not Classified Inhalation: Not Classified Skin Corrosion/Irritation: Not Classified Serious Eye Damage/Eye Irritation: Not Classified Skin Sensitization: Not Classified Respiratory Sensitization: Not Classified Germ Cell Mutagenicity: Not Classified Carcinogenicity: See Section 11 Reproductive Toxicology: Not Classified Target Organ Systemic Toxicity - Single Exposure: Not Classified Target Organ Systemic Toxicity - Repeated Exposure: Not Classified Aspiration Toxicity: Not Classified GHS Label elements, including precautionary statements Pictogram: Harmful / Irritant Signal Word: Warning Hazard Statements H303 - May be harmful if swallowed. H313 - May be harmful in contact with skin. H335 + H336 - May cause respiratory irritation, and drowsiness or dizziness. Precautionary Statements P102 - Keep out of reach of children. P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P240 - Ground/Bond container and receiving equipment

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P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P262 - Do not get in eyes, on skin, or on clothing. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P362 - Take off contaminated clothing and wash before reuse. EUH066 - Repeated exposure may cause skin dryness or cracking Precautionary Statements - EU No. 1272/2008 \_\_\_\_\_ SUMMARY OF ACUTE HAZARDS Irritation to eyes, nose and throat; drowsiness, narcosis, tremors and other CNS effects at high concentration. ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS Nasal and respiratory irritation, dizziness, narcosis, headache, nausea, INHALATION CNS depression and unconsciousness. Watering, blurred vision, inflammation and irritation which can result in EYE CONTACT corneal injury. SKIN CONTACT Irritation, dermatitis. Nausea, vomiting; CNS depression; irritation of gastrointestinal tract, INGESTION liver and peritoneal wall; lung congestion. SUMMARY OF CHRONIC HAZARDS Skin irritation and dermatitis. Possible liver and kidney damage. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver or kidneys may have increased susceptibility to excessive exposures. Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS -----INGREDIENT: Diacetone Alcohol PERCENTAGE BY WEIGHT: 20-30 CAS NUMBER: 123-42-2 EC# : 204-626-7 Section 4 -- FIRST AID MEASURES If overcome by exposure, remove victim to fresh air If INHALED: immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential. Wash with soap and water. If irritation occurs, seek If on SKIN: medical attention. Flush eyes with large amounts of water for 15 minutes. If in EYES: Get medical attention. If swallowed, call a physician immediately. Only induce If SWALLOWED: vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. Section 5 -- FIRE FIGHTING MEASURES EXTINGUSING MEDIA Foam, dry chemical, carbon dioxide or water fog. SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products

possible (see Section 10). UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible - moderate flash point. Vapors heavier than air and may travel along the ground or to low spots at considerable distances to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up 8/25/2016

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pressure and rupture containers.	
Section 6 ACCIDENTAL RELEA	SE MEASURES
STEPS TO BE TAKEN IN CASE MATERIAL IS RE sources of ignition. Use absorbent m and to contain. Ventilate area with air ventilation. Avoid flushing into Wear protective clothing and respirat	natural or explosion-proof, forced sewers, drains, waterways, and soil.
Section 7 HANDLING AND STO	RAGE
PRECAUTIONS TO BE TAKEN IN HANDLING AND upright when not in use. Do not stor OTHER PRECAUTIONS: Avoid prolonged or r clothing. Empty containers may conta observe all products precautions. Do KEEP OUT OF REACH OF CHILDREN.	pepeated contact with skin or ain residues; treat as if full and o not reuse empty containers.
Section 8 EXPOSURE CONTROL	S/PERSONAL PROTECTION
INGREDIENT UNITS Diacetone Alcohol ACGIH TLV 50 ppm OSHA PEL 50 ppm RESPIRATORY PROTECTION (SPECIFY TYPE):	
use NIOSH/MSHA approved air purityin supplied air respirators. VENTILATION - LOCAL EXHAUST: Acceptabl SPECIAL: Explosion-proof equipment. MECHANICAL (GENERAL): Preferable OTHER: N/A PROTECTIVE GLOVES: Wear rubber gloves. EYE PROTECTION: Chemical splash goggle OTHER PROTECTIVE CLOTHING OR EQUIPMENT: WORK/HYGIENIC PRACTICES: Where use can areas thoroughly before eating, drin	e es (ANSI Z-87.1 or equivalent) Coveralls recommended. n result in skin contact, wash exposed nking, smoking, or leaving work area.
Launder contaminated Cibining before Section 9 PHYSICAL AND Ch	TEMICAL PROPERTIES
SPECIFIC GRAVITY (H20 = 1): VAPOR PRESSURE (mm Hg): MELTING POINT: VAPOR DENSITY (AIR = 1): EVAPORATION RATE (ETHYL ACETATE = 1): APPEARANCE/ODOR: SOLUBILITY IN WATER: VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight): Flash POINT LOWER EXPLOSION LIMIT UPPER EXPLOSION LIMIT	322 F (161 C) @ 760mm Hg 1.38 0.3 @ 68 F (20 C) N/A 1.1 0.14 Yellow Paste/Mild Odor 23% 23% or (317 g/L) 150 F (65 C) SETA CC N/D N/D
Section 10 STABILITY AND	
<pre>STABILITY: Stable CONDITIONS TO AVOID: Heat, sparks, op Temperatures above 500 F (260 C). INCOMPATIBILITY (MATERIALS TO AVOID): materials, molten alkali metals. HAZARDOUS DECOMPOSITION PRODUCTS: CO,</pre>	oen flames, and strong oxidizing. Gaseous oxygen, strong oxidizing

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Sectio	on 11 TOXICOLOGY INFORMATION	
CHRONIC HEALTH HANNO ingredients	AZARDS s in this product is an IARC, NTP or (	OSHA Lister carcinogen.
TOXICOLOGY DATA Ingredient Name		
Diacetone Alco	ohol Oral-Rat LD50:4000 mg/kg Inhalation-Human TCLo: 100 ppm	
	on 12 Ecological Information	
ECOLOGICAL DATA Ingredient Name		
Diacetone Alco	Food Chain Concentration Potential WATERFOWL TOXICITY BOD AQUATIC TOXICITY	N/A N/A N/A N/A
Waste Classificat	tion: Non-regulated solid waste	
Waste Classifica Disposal Method: Waste from this Resource Conse accordance wit	tion: Non-regulated solid waste	R 261. Dispose of in n regarding pollution.
Waste Classifica Disposal Method: Waste from this Resource Conse accordance with Sectio DOT: OCEAN (IMDG): AIR (IATA): WHMIS (CANADA):	tion: Non-regulated solid waste Approved landfill product is not considered hazardous a rvation and Recovery Act (RCRA) 40 CF h Federal, State, and Local regulatio on 14 TRANSPORTATION INFORMATION Non-Regulated Non-Regulated Non-Regulated Non-Regulated Non-Regulated	R 261. Dispose of in n regarding póllution. 
Waste Classifica Disposal Method: Waste from this Resource Conse accordance with Sectio DOT: OCEAN (IMDG): AIR (IATA): WHMIS (CANADA):	tion: Non-regulated solid waste Approved landfill product is not considered hazardous a rvation and Recovery Act (RCRA) 40 CF h Federal, State, and Local regulatio on 14 TRANSPORTATION INFORMATION Non-Regulated Non-Regulated Non-Regulated	R 261. Dispose of in n regarding póllution. 
Waste Classifica Disposal Method: Waste from this Resource Conse accordance with Sectio DOT: OCEAN (IMDG): AIR (IATA): WHMIS (CANADA):	tion: Non-regulated solid waste Approved landfill product is not considered hazardous a rvation and Recovery Act (RCRA) 40 CF h Federal, State, and Local regulation on 14 TRANSPORTATION INFORMATION Non-Regulated Non-Regulated Non-Regulated Non-Regulated on 15 REGULATORY INFORMATION	R 261. Dispose of in n regarding póllution. 
Waste Classifica Disposal Method: Waste from this p Resource Conse accordance with Section DOT: OCEAN (IMDG): AIR (IATA): WHMIS (CANADA): Section REGULATORY DATA Ingredient Name Diacetone Alcol	tion: Non-regulated solid waste Approved landfill product is not considered hazardous a rvation and Recovery Act (RCRA) 40 CF h Federal, State, and Local regulatio n 14 TRANSPORTATION INFORMATION Non-Regulated Non-Regulated Non-Regulated Non-Regulated on 15 REGULATORY INFORMATION hol SARA 313 N/A TSCA Inventory Yes CERCLA RQ N/A RCRA Code N/A	R 261. Dispose of in n regarding póllution. 

Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001 SDS 0169

www.rectorseal.com/web-media/Metacaulk-1000.html

RE 66640 4 pgs

SAFETY DATA SHEET

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Section 1 PRODUCT AND COMPANY	
PRODUCT NAME Metacaulk 1000 PRODUCT CODES 66640, 66242, 66302, 66303, 66305, 66307, CHEMICAL FAMILY Organic/Inorganic	HMIS CODES Health 1 Flammability 0 Reactivity 0 PPI B , 66309, 66312
USE Firestopping Sealant MANUFACTURER'S NAME The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA	EMERGENCY TELEPHONE NO. Chemtrec 24 Hours (800)424-9300 USA (703)527-3887 International
DATE OF VALIDATION January 23, 2015 DATE OF PREPARATION May 22, 2012	TECHNICAL SERVICE TELEPHONE NO. (800)231-3345 or (713)263-8001
Section 2 HAZARDS IDENTIFICAT	ION
GHS CLASSIFICATION PHYSICAL HAZARDS: None HEALTH HAZARDS Acute Toxicity: Oral: Not Classified Dermal: Not Classified Inhalation: Not Classified Skin Corrosion/Irritation: Not Classified Serious Eye Damage/Eye Irritation: Not Class Respiratory or Skin Sensitization: Not Class Germ Cell Mutagenicity: Not Classified Carcinogenicity: Not Classified Reproductive Toxicology: Not Classified Target Organ Systemic Toxicity - Single Experience Target Organ Systemic Toxicity - Repeated Experience Aspiration Toxicity: Not Classified	ssified osure: Not Classified
ENVIRONMENTAL HAZARDS Hazardous to the Aquatic Environment: Not C Acute aquatic toxicity: Not Classified Chronic aquatic toxicity: Not Classified Bioaccumulation potential: Not Classified Rapid degradability: Not Classified	lassified
GHS Label elements, including precautionary Pictogram: None Signal Word: None Hazard Statements: None Precautionary Statements: P102 - Keep out of reach of children. P264 - Wash hands thoroughly after handling	statements
Classification according to EU Directives 6 LABELING SYMBOLS: None RISK R-PHRASES: NOne SAFETY S-PHRASES:	7/548/EEC or 1999/45/EC

8/25/2016

: Keep out of the reach of children. S2 SUMMARY OF ACUTE HAZARDS May cause skin irritation. ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS INHALATION Not a respiratory irritant. EYE CONTACT Contact may cause eye irritation. SKIN CONTACT Contact may cause skin irritation. INGESTION Possible irritation to mucous membranes of the mouth, throat, and stomach. SUMMARY OF CHRONIC HAZARDS None known. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Persons with pre-existing skin conditions or chemical allergies may be more susceptible to contact effects of the cured elastomer. Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS CAS No. INGREDIENT % by WT UNITS None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200. \_\_\_\_\_\_\_\_\_\_\_\_ Section 4 -- FIRST AID MEASURES \_\_\_\_\_ \_\_\_\_\_ If INHALED: Not a respiratory irritant. If on SKIN: Wash with soap and water. Wash with soap and water. If irritation occurs, seek medical attention. Immediately flush with large amounts of water. If If in EYES: irritation occurs, seek medical attention. If swallowed, call a physician immediately. Only induce If SWALLOWED: vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. Section 5 -- FIRE FIGHTING MEASURES \_\_\_\_\_ EXTINGUSING MEDIA Foam, dry chemical, carbon dioxide or water fog. SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10). UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up and rupture closed containers. \_\_\_\_\_\_\_\_\_\_\_\_ Section 6 -- ACCIDENTAL RELEASE MEASURES \_\_\_\_\_ STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up spills to prevent footing hazard. Avoid flushing into sewers, drains, waterways and soil. Wear protective clothing during clean up. Section 7 -- HANDLING AND STORAGE PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. To prevent freezing and possible rupture of container, do not store below 35 F. OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues and vapors; treat as if full and observe all product precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN. Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION RESPIRATORY PROTECTION (SPECIFY TYPE): None required. VENTILATION - LOCAL EXHAUST: N/A

http://www.rectorseal.com/web-media/Metacaulk-1000.html

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CDECT	N/A	
SPECIAL:		
OTHER: N	L (GENERAL): N/A /A	
	GLOVES: None required.	
EYE PROTEC	CTION: None required.	
OTHER PROT	TECTIVE CLOTHING OR EQUIPMENT	: None required.
areas 1	there use ca	n result in skin contact, wash exposed nking, smoking, or leaving work area.
Launder	contaminated clothing befor	e reuse.
	Section 9 PHYSICAL AND C	HEMICAL PROPERTIES
BOILING PO		212 F (100 C) @ 760mm Hg
SPECIFIC C	GRAVITY (H20 = 1):	1.25
	SSURE (mm Hg):	17 @ 68 F (20 C)
MELTING PC	SITY (AIR = 1):	N/A N/A
	N RATE (ETHYL ACETATE = 1):	>1
APPEARANCE		Red Paste/Mild Odor
	IN WATER:	Soluble
	RGANIC COMPOUNDS(VOC)Content al Percentage By Weight):	
FLASH POIN		<1% or <10 g/L None
LOWER EXPL	OSION LIMIT	None
	OSION LIMIT	None
	Section 10 STABILITY AND	======================================
CONDITIONS INCOMPATIB HAZARDOUS		CO2 and fragmented hydrocarbons.
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not oc	CO2 and fragmented hydrocarbons.
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not oc Section 11 TOXICOLOGY IN	CO2 and fragmented hydrocarbons. cur. FORMATION
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not oc Section 11 TOXICOLOGY IN	CO2 and fragmented hydrocarbons. cur.
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS ======= CHRONIC HE	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not oc Section 11 TOXICOLOGY IN	CO2 and fragmented hydrocarbons. cur. FORMATION
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not oc Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an	CO2 and fragmented hydrocarbons. cur. FORMATION
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not oc Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA	CO2 and fragmented hydrocarbons. cur. FORMATION
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY Ingredient	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not oc Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA	CO2 and fragmented hydrocarbons. cur. FORMATION
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY Ingredient	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not occ Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA Name	CO2 and fragmented hydrocarbons. cur. FORMATION
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY Ingredient	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not occ Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA Name	CO2 and fragmented hydrocarbons. cur. FORMATION IARC, NTP or OSHA listed carcinogen.
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY Ingredient None	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not occ Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA Name Section 12 Ecological Int	CO2 and fragmented hydrocarbons. cur. FORMATION IARC, NTP or OSHA listed carcinogen.
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CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY Ingredient None ECOLOGICAL Ingredient None Waste Clas Disposal M	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not occ Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA Name Section 12 Ecological In DATA Name Food Chain Concentrat WATERFOWL TOXICITY BOD AQUATIC TOXICITY Section 13 DISPOSAL CONSI sification: Non-regulated so ethod: Approved landfil this product is not consider	CO2 and fragmented hydrocarbons. Cur. FORMATION IARC, NTP or OSHA listed carcinogen. formation tion Potential N/A N/A N/A N/A DERATIONS plid waste l1 red hazardous as defined under the
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY Ingredient None ECOLOGICAL Ingredient None None	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not occ Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA Name Section 12 Ecological Int DATA Name Food Chain Concentrat WATERFOWL TOXICITY BOD AQUATIC TOXICITY Section 13 DISPOSAL CONSI sification: Non-regulated so ethod: Approved landfil this product is not consider Conservation and Recovery Ac	CO2 and fragmented hydrocarbons. Cur. FORMATION IARC, NTP or OSHA listed carcinogen. formation tion Potential N/A N/A N/A N/A N/A DERATIONS plid waste L1 red hazardous as defined under the rt (RCRA) 40 CFR 261. Dispose of in
CONDITIONS INCOMPATIB HAZARDOUS HAZARDOUS CHRONIC HE No ingr TOXICOLOGY Ingredient COLOGICAL Ingredient None COLOGICAL Ingredient None None	TO AVOID: None ILITY (MATERIALS TO AVOID): DECOMPOSITION PRODUCTS: CO, POLYMERIZATION: Will not occ Section 11 TOXICOLOGY IN ALTH HAZARDS edient in this product is an DATA Name Section 12 Ecological Inf DATA Name Food Chain Concentrat WATERFOWL TOXICITY BOD AQUATIC TOXICITY Section 13 DISPOSAL CONSI sification: Non-regulated so ethod: Approved landfil this product is not consider Conservation and Recovery Ac ce with Federal, State, and L	CO2 and fragmented hydrocarbons. Cur. FORMATION IARC, NTP or OSHA listed carcinogen. formation tion Potential N/A N/A N/A N/A DERATIONS plid waste L1 red hazardous as defined under the

http://www.rectorseal.com/web-media/Metacaulk-1000.html

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DOT: OCEAN (IMDG): AIR (IATA): WHMIS (CANADA):	Non-Regulated Non-Regulated	www.rectorseal.com/web-media/Metacaulk-1000.html
Sectio	on 15 REGULATOR	Y INFORMATION
REGULATORY DATA Ingredient Name		
None		
	CERCLA RQ RCRA Code	N/A
Sectio	n 16 OTHER INF(	
LABELING SYMBOLS: RISK R-PHRASES: N SAFETY S-PHRASES: S2 : Keep	None	of children.

This document is prepared pursuant to 91/155/EEC ISO 11014-1. The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

8/25/2016

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SAFETY DATA SHEET

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TUMT-1-PRO. 8 pgs



## 1. Identification

Product identifier	MAP-Pro™ Premium Hand Torch Fuel
Other means of identification	
SDS number	WC001
Product code	Varies
Recommended use	Hand Torch Fuel
<b>Recommended restrictions</b>	None known.
Manufacturer/Importer/Supplie	r/Distributor information
Manufacturer/Supplier	Worthington Cylinder Corporation
Address	300 E. Breed St., Chilton, WI 5301
	United States
Contact person	Ann Stiefvater
E-mail address	Ann.Stiefvater@worthingtonindustries.com
Telephone number	1-920-849-1740
Emergency telephone number	1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

### 2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		•
	$\wedge \wedge$	

	• •
Signal word	Danger
Hazard statement	Extremely flammable gas. Contains gas under pressure; may explode if heated.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking.
Response	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	Protect from sunlight. Store in a well-ventilated place.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	May displace oxygen and cause rapid suffocation.
Supplemental information	None.
3. Composition/information	on on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
Propylene		115-07-1	99.5 - 100

Impurities Chemical name		CAS number	%
Propane		74-98-6	0 - 0.5
Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are i percent by volume.		s concentrations are in
4. First-aid measures			
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respirati Call a physician or poison control center immediately.		
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm w (between 100°F/38°C and 110°F/43°C, not exceeding 112°F/44°C). Keep immersed for 20 to 4 minutes. Seek medical assistance.		volved area in warm wate o immersed for 20 to 40
Eye contact	Immediately flush eyes with plenty of water for at I present and easy to do. Continue rinsing. Get med	east 15 minutes. Remo dical attention immediat	ove contact lenses, if tely.
Ingestion	Ingestion is not a typical route of exposure for gas	es or liquefied gases.	
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vaporizing li exposure can cause suffocation from lack of oxyge	quid may cause frostbi en. May cause drowsin	te ("cold burn"). Very hig ess or dizziness.
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory	disorders. Treat sympto	ornatically.
General information	Ensure that medical personnel are aware of the m protect themselves.	aterial(s) involved, and	take precautions to
5. Fire-fighting measures			
Suitable extinguishing media	Dry chemical, CO2, water spray, fog, or foam.		
Unsuitable extinguishing media	Full water jet.		
Specific hazards arising from the chemical	n Selection of respiratory protection for firefighting: follow the general fire precautions indic the workplace.		recautions indicated in
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protect	tive clothing must be w	orn in case of fire.
Fire fighting	Move container from fire area if it can be done wit	hout risk.	
equipment/instructions	Do not extinguish fires unless gas flow can be sto Promptly isolate the scene by removing all person be taken involving any personal risk or without sui not enter any enclosed or confined fire space with self-contained breathing apparatus. Stop flow of n containers cool and to protect personnel effecting water spray to disperse the vapors and to protect from fire control or dilution from entering streams,	is from the vicinity of the itable training. For fires out proper protective en aterial. Use water to k shutoff. If a leak or spi personnel attempting to sewers or drinking wat	e incident. No action sha involving this material, d quipment, including eep fire exposed II has not ignited, use o stop leak. Prevent гипо er supply.
Specific methods	Use standard firefighting procedures and consider	r the hazards of other in	nvolved materials.
General fire hazards	Extremely flammable gas.		
6. Accidental release mea			
Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be ta suitable training. Keep unnecessary personnel aw	/ay.	
sureigenes presentiee	Ensure adequate ventilation. In case of inadequat appropriate personal protective equipment (See S	te ventilation, use respi Section 8).	ratory protection. Wear
		I I I I I I I I I I I I I I I I I I I	In succession where the state of the second second

Methods and materials for containment and cleaning up Environmental precautions Ventilate well, stop flow of gas or liquid if possible. Immediately contact emergency personnel. For waste disposal, see Section 13 of the SDS.

Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sanitary sewers, waterways and/or groundwater.

## 7. Handling and storage

Precautions for safe handling

Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Do not breathe gas. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

#### 8. Exposure controls/personal protection

#### **Occupational exposure limits**

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Impurities	Туре	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm
US. ACGIH Threshold Limit	Values	
Components	Туре	Value
Propylene (CAS 115-07-1)	TWA	500 ppm
US. NIOSH: Pocket Guide to	Chemical Hazards	
Impurities	Туре	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm
Biological limit values	No biological exposure limits noted for	the ingredient(s).
Exposure guidelines	Follow standard monitoring procedure	S.
Appropriate engineering controls		cess enclosures, local exhaust ventilation, or other e levels below recommended exposure limits.
ndividual protection measures,	such as personal protective equipme	ent
Eye/face protection	Wear approved safety glasses or gogg	gles.
Skin protection		·
Hand protection	Wear appropriate chemical resistant g	loves.
Skin protection		4
Other	Wear protective clothing appropriate for the risk of exposure.	
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposur limits (where applicable) or to an acceptable level (in countries where exposure limits have no been established), an approved respirator must be worn.	
Thermal hazards	Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.	
General hygiene considerations	Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.	
). Physical and chemical	properties	
Appearance	Colorless liquefied gas.	
Physical state	Gas.	
Form	Compressed liquefied gas.	
Color	Colorless.	
Ddor	Hydrocarbon or mercaptan if odorized.	
Odor threshold	Not available.	
н	Not applicable.	
lelting point/freezing point	-301 °F (-185 °C)	
nitial boiling point and boiling ange	-54.4 °F (-48 °C) 101.325 kPa	
lash point	-162.0 °F (-107.8 °C)	

MAP-Pro<sup>™</sup> Premium Hand Torch Fuel 909050 Version #: 03 Revision date: 25-November-2015 Issue date: 07-December-2012

Evaporation rate	Not applicable.	
Flammability (solid, gas)	Extremely flammable gas.	
Upper/lower flammability or explosive limits		
Flammability limit - lower (%)	2 %	
Flammability limit - upper (%)	11 %	
Explosive limit - lower (%)	Not available.	
Explosive limit - upper (%)	Not available.	
Vapor pressure	109.73 PSIG (21°C)	
Vapor density	1.5 (0°C) (gas)	
Relative density	0.52 (liquid)	
Solubility(ies)		
Solubility (water)	384 mg/l - Slightly soluble in water.	
Partition coefficient (n-octanol/water)	1.77	
Auto-ignition temperature	927 °F (497.22 °C)	
Decomposition temperature	Not available.	
Viscosity	Not available.	
Other information		
Molecular weight	42 g/mol	
Percent volatile	100 %	
VOC (Weight %)	100 % 100 % EPA estimated	

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur. May form explosive mixture with air. This product may react with oxidizing agents.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

## 11. Toxicological information

#### Information on likely routes of exposure

Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Ingestion	Not likely, due to the form of the product.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.
Information on toxicological eff	fects

Acute toxicity

High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.

Components	Species	Test Results
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Skin corrosion/irritation	Contact with liquefied ga	as might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with lique	fied gas may cause eye damage from frostbite.
Respiratory or skin sensitization	1	
Respiratory sensitization	Not classified.	
Skin sensitization	Not classified.	
Germ cell mutagenicity	Not classified.	
Carcinogenicity	Not classified.	
IARC Monographs. Overall I	Evaluation of Carcinoge	nicity
Propylene (CAS 115-07- NTP Report on Carcinogens	1)	3 Not classifiable as to carcinogenicity to humans.
Not listed. OSHA Specifically Regulate Not regulated.	d Substances (29 CFR 1	910.1001-1050)
Reproductive toxicity	Not classified.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not classified.	
Chronic effects	May cause central nerv	ous system effects.
12. Ecological information	1	
Ecotoxicity	Not expected to be harr	nful to aquatic organisms.
Persistence and degradability	The product is readily b	
Bioaccumulative potential	The product is not expe	
Partition coefficient n-octan Propylene (CAS 115-07-1)		1.77
Mobility in soil	May evaporate quickly.	
Mobility in general	May evaporate quickly.	
Other adverse effects	None known.	
13. Disposal consideration	ns	
Disposal instructions	Use the container until or residual vapor that is flat	empty. Do not dispose of any non-empty container. Empty containers have mmable and explosive. Cylinders should be emptied and returned to a tion point. Do not puncture or incinerate even when empty. Dispose in licable regulations.
Local disposal regulations	Dispose in accordance	with all applicable regulations.
Hazardous waste code	D001: Waste Flammabl	e material with a flash point <140 °F
Waste from residues / unused products		ce with local regulations.
Contaminated packaging	Since emptied containe emptied.	rs may retain product residue, follow label warnings even after container is
14. Transport information		
DOT		
UN number	UN1077	
LIN proper shipping name	Propylene	

UN proper shipping name Propylene MAP-Pro™ Premium Hand Torch Fuel

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Transport hazard class(es)	
Class	2.1
Subsidiary risk	•
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Special provisions	19, T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315
ΙΑΤΑ	
UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1
Subsidiary risk	
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety
	instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1077
UN proper shipping name	Propylene
Transport hazard class(es)	
Class	2.1
Subsidiary risk	• • • • • • • • • • • • • • • • • • •
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
	No.
Marine pollutant	F-D. S-U
EmS	Read safety instructions, SDS and emergency procedures before handling. Read safety
Transport in bulk according to	instructions, SDS and emergency procedures before handling. Not applicable.
Annex II of MARPOL 73/78 and the IBC Code	
15. Regulatory information	
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
TSCA Section 12(b) Export N	otification (40 CFR 707, Subpt. D)
Not regulated.	
OSHA Specifically Regulated	l Substances (29 CFR 1910.1001-1050)
Not regulated.	
CERCLA Hazardous Substan	• •
Propane (CAS 74-98-6) Propylene (CAS 115-07-1)	LISTED LISTED
Superfund Amendments and Rea	uthorization Act of 1986 (SARA)
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - Yes
	Reactivity Hazard - No
SARA 302 Extremely hazard	ous substance

SARA 302 Extremely hazardous substance

Not listed.

chemical			
SARA 313 (TRI reporting) Chemical name		CAS number	% by wt.
Propylene		115-07-1	99.5 - 100
Other federal regulations			
Clean Air Act (CAA) Secti	on 112 Hazardous Air Pollut	ants (HAPs) List	
Not regulated. Clean Air Act (CAA) Secti	on 112(r) Accidental Release	Prevention (40 CFR	68.130)
Propane (CAS 74-98-6 Propylene (CAS 115-0	*		
Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)	Hazardous substance		
Safe Drinking Water Act (SDWA)	Not regulated.		
US state regulations	This product does not con defects or other reproduct		to the State of California to cause cancer, birth
US. Massachusetts R	TK - Substance List		
Propane (CAS 74- Propylene (CAS 1 US. New Jersey Work		Know Act	
Propane (CAS 74- Propylene (CAS 1 US. Pennsylvania Wo		o-Know Law	
Propane (CAS 74- Propylene (CAS 1 US. Rhode Island RTI	15-07-1)		
Propane (CAS 74- Propylene (CAS 1			
US. California Proposition Not Listed.	n 65		
International Inventories			
Country(s) or region	Inventory name		On inventory (yes/no)
Australia	Australian Inventory of Ch		ICS) Yes
Canada	Domestic Substances List		Yes
Canada	Non-Domestic Substance		No
China	Inventory of Existing Cher		
Europe	European Inventory of Ex Substances (EINECS)	isting Commercial Che	Yes
Europe	European List of Notified	Chemical Substances	(ELINCS) No
Japan	Inventory of Existing and	New Chemical Substan	nces (ENCS) Yes
Korea	Existing Chemicals List (E	CL)	Yes
New Zealand	New Zealand Inventory		Yes
Philippines	Philippine Inventory of Ch	emicals and Chemical	Substances Yes

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

(PICCS)

Issue date	07-December-2012
Revision date	25-November-2015
Version #	03

Yes

#### **Further information**

HMIS® ratings

**NFPA** ratings

HMIS® is a registered trade and service mark of the NPCA. HMIS Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard. Health: 1. Flammability: 4. Physical hazard: 1. Health: 1 Flammability: 4 Physical hazard: 1



Disclaimer

All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.



## SAFETY DATA SHEET

The PT1 Spgs

1. Identification		A	
Product identifier	Propane		
Other means of identification			
SDS number	WC002		
Product code	UN1075	×	
Recommended use	Portable fuel.		
<b>Recommended restrictions</b>	None known.		
Manufacturer/Importer/Supplier	/Distributor information		
Manufacturer/Supplier Address	Worthington Cylinder Corporatio 300 E. Breed St., Chilton, WI 53 United States		
Contact person E-mail address Telephone number Emergency telephone number	Ann Stiefvater Ann.Stlefvater@worthingtonindu 1-920-849-1740 1-703-527-3887 International / 0	stries.com CHEMTREC 1-800-424-9300 Domestic	
2. Hazard(s) identification	1		
Physical hazards	Flammable gases Gases under pressure	Category 1 Liquefied gas	
Health hazards	Not classified.		
OSHA defined hazards	Not classified.		
Label elements			
Signal word	Danger		¢
Hazard statement	Extremely flammable gas. Cont	ains gas under pressure; may explode if he	ated.
<b>Precautionary statement</b>		· · · · · · · · · · · · · · · · · · ·	
Prevention		en flames/hot surfaces No smoking.	
Response	Leaking gas fire: Do not exting sources if safe to do so.	uish, unless leak can be stopped safely. Eli	minate all ignition

Storage Disposal Hazard(s) not otherwise classified (HNOC)

### 3. Composition/information on ingredients

## Mixtures

Chemical name	CAS number	%
Propane	74-98-6	87.5-100
Ethane	74-84-0	0-7
Propylene	115-07-1	0-5
Butane	106-97-8	0-2.5

Protect from sunlight. Store in a well-ventilated place.

May displace oxygen and cause rapid suffocation.

Dispose of waste and residues in accordance with local authority requirements.

Chemical name	CAS number	%			
Ethyl Mercaptan	75-08-1	<0.005			
Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas percent by volume.	concentrations are in			
4. First-aid measures					
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.				
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm water (between 100 F/38 C and 110 F/43 C, not exceeding 112 F/44 C). Keep immersed for 20 to 40 minutes. Seek medical assistance.				
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.				
Ingestion	Ingestion is not a typical route of exposure for gases or liquefied gases.				
Most important symptoms/effects, acute and delayed	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite exposure can cause suffocation from lack of oxygen. May cause drowsine	e ("cold burn"). Very high ss or dizziness.			
Indication of immediate medical attention and special treatment needed	Exposure may aggravate pre-existing respiratory disorders. Treat symptomatically.				
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.				
5. Fire-fighting measures					
Suitable extinguishing media	Dry chemical, CO2, water spray, fog, or foam.				
Unsuitable extinguishing media	None known.				
Specific hazards arising from the chemical	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.				
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be wo	orn in case of fire.			
Fire-fighting	Move container from fire area if it can be done without risk.				
equipment/instructions	Do not extinguish fires unless gas flow can be stopped safely; explosive re Promptly isolate the scene by removing all persons from the vicinity of the be taken involving any personal risk or without suitable training. For fires i do not enter any enclosed or confined fire space without proper protective self-contained breathing apparatus. Stop flow of material. Use water to k containers cool and to protect personnel effecting shutoff. If a leak or spill water spray to disperse the vapors and to protect personnel attempting to runoff from fire control or dilution from entering streams, sewers or drinking	incident. No action sha involving this material, equipment, including eep fire exposed has not ignited, use stop leak. Prevent			
General fire hazards	Extremely flammable gas.				
6. Accidental release meas	sures				
Personal precautions, protective equipment and emergency procedures	Evacuate the area promptly. No action shall be taken involving any persor suitable training. Keep unnecessary personnel away.	nal risk or without			
emergency procedures	Ensure adequate ventilation. In case of inadequate ventilation, use respira appropriate personal protective equipment (See Section 8).				
Methods and materials for containment and cleaning up	Ventilate well, stop flow of gas or liquid if possible. Immediately contact en				
Environmental precautions	Should not be released into the environment. Prevent further leakage or s Prevent from entering into soil, ditches, sanitary sewers, waterways and/or				
7. Handling and storage	,				
Precautions for safe handling	Eliminate all sources of ignition. Wear appropriate personal protective equ Eating, drinking, and smoking should be prohibited in areas where this ma and processed. Do not breathe gas. Do not get in eyes, on skin, on clothin adequate ventilation.	terial is handled, stored,			
Propane		SDS U			

Conditions for safe storage, including any incompatibilities

Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

## 8. Exposure controls/personal protection

#### **Occupational exposure limits**

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value		
Propane (CAS 74-98-6)	PEL	1800 mg/m3		
		1000 ppm		
Additives	Туре	Value		
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	25 mg/m3		
		10 ppm		
US. ACGIH Threshold Limi	t Values			
Components	Туре	Value		
Butane (CAS 106-97-8)	STEL	1000 ppm		
Propylene (CAS 115-07-1)	TWA	500 ppm		
Additives	Туре	Value		
Ethyl Mercaptan (CAS 75-08-1)	TWA	0.5 ppm		
US. NIOSH: Pocket Guide	to Chemical Hazards			
Components	Туре	Value		
Butane (CAS 106-97-8)	TWA	1900 mg/m3		
		800 ppm		
Propane (CAS 74-98-6)	TWA	1800 mg/m3		
		1000 ppm		
Additives	Туре	Value		
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	1.3 mg/m3		
10 00 1)		0.5 ppm		
iological limit values	No biological exposure limits noted f	or the ingredient(s).		
ppropriate engineering ontrols	Provide adequate ventilation and min local exhaust ventilation, or other en recommended exposure limits.	nimize the risk of inhalation of gas. Use process enclosures, gineering controls to control airborne levels below		
ndividual protection measures	s, such as personal protective equipn	nent		
Eye/face protection	Wear approved safety glasses or go	ggles.		
Skin protection				
Hand protection	Wear appropriate chemical resistant	gloves.		
Other	Wear protective clothing appropriate	for the risk of exposure.		
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.			
Thermal hazards	Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.			
General hygiene considerations	Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.			
9. Physical and chemical	properties			
	Colorless gas.			
Physical state	Gas.			
Form	Compressed liquefied gas.			
	Colorless.			
Color				
Ddor	Rotten egg.			

Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or exp	losive limits

Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not available.
Relative density	0.504 (liquid) 1.5 (vapor) (air=1) @ 15°C / 60°F
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Molecular weight	45 g/mol
Percent volatile	100 %

## 10. Stability and reactivity

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R	e	а	C	ti	v	ī1	TV I

for otdonity and reading	
Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

## 11. Toxicological information

## Information on likely routes of exposure

information on mory route of	
Ingestion	Not likely, due to the form of the product.
Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.
Information on toxicological ef	fects
A outo toxicity	High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations

## In

Acute toxicity

that reduce oxygen below safe breathing levels. High concent

Components	Species	Test Results
Butane (CAS 106-97-8)		
Acute	,	
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	> 1442 mg/l, 15 Minutes
Propylene (CAS 115-07-1)	· · · · ·	
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Additives	Species	Test Results
Ethyl Mercaptan (CAS 75-08-1)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Mouse	4420 mg/l, 4 Hours
Oral		
LD50	Rat	682 mg/kg
Skin corrosion/irritation	Contact with liquefied gas mi	ight cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied of	gas may cause eye damage from frostbite.
Respiratory or skin sensitization	1	· ·
<b>Respiratory</b> sensitization	Not classified.	A
Skin sensitization	Not classified.	
Germ cell mutagenicity	Not classified.	
Carcinogenicity	Not classified.	
	Evaluation of Carcinogenicity	y
Propylene (CAS 115-07-1	1)	3 Not classifiable as to carcinogenicity to humans.
	I) Not classified.	3 Not classifiable as to carcinogenicity to humans.
Propylene (CAS 115-07-1 Reproductive toxicity Specific target organ toxicity - single exposure		3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity -	Not classified.	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure	Not classified. Not classified.	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard	Not classified. Not classified. Not classified. Not classified.	
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard 12. Ecological information	Not classified. Not classified. Not classified. Not classified.	o aquatic organisms.
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard 12. Ecological information Ecotoxicity	Not classified. Not classified. Not classified. Not classified. Not expected to be harmful to The product is readily bloded	o aquatic organisms. gradable.
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard 12. Ecological information Ecotoxicity Persistence and degradability Bioaccumulative potential	Not classified. Not classified. Not classified. Not classified. Not expected to be harmful to The product is readily blodeg The product is not expected	o aquatic organisms. gradable.
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard <b>12. Ecological information</b> Ecotoxicity Persistence and degradability Bioaccumulative potential Partition coefficient n-octan Propane (CAS Mixture) Butane (CAS 106-97-8)	Not classified. Not classified. Not classified. Not classified. Not expected to be harmful to The product is readily blodeg The product is not expected	o aquatic organisms. gradable.
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard <b>12. Ecological information</b> Ecotoxicity Persistence and degradability Bioaccumulative potential Partition coefficient n-octan Propane (CAS Mixture)	Not classified. Not classified. Not classified. Not classified. Not expected to be harmful to The product is readily blodeg The product is not expected	to aquatic organisms. gradable. to bioaccumulate. 1.77 2.89
Reproductive toxicity Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard <b>12. Ecological information</b> Ecotoxicity Persistence and degradability Bioaccumulative potential Partition coefficient n-octan Propane (CAS Mixture) Butane (CAS 106-97-8) Propane (CAS 74-98-6)	Not classified. Not classified. Not classified. Not classified. Not expected to be harmful to The product is readily blodeg The product is not expected	to aquatic organisms. gradable. to bioaccumulate. 1.77 2.89 2.36

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#### Other adverse effects

None known.

## 13. Disposal considerations

13. Disposar constant	to the sector of
Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

DOT	
UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	
Packing group	Not applicable.
Environmental hazards	
and the History	No
Special proceptions for USP	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	19, T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315
Packaging bulk	
	UN1075
UN number	Petroleum Gases, liquefled
UN proper shipping name	readioun dados, indecida
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
	F-D, S-U
Special precautions for use	r Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	This product is a compressed of inqueied gas and when transported in participation
Annex II of MARPOL 73/78 and	code.
the IBC Code	

## 15. Regulatory information

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication **US federal regulations** Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

Not regulated.	Notification (40 CFR 707, So			
US. OSHA Specifically Regu	ulated Substances (29 CFR	1910.1001-1050)		
Not listed.				
CERCLA Hazardous Substa Butane (CAS 106-97-8)	Ince LIST (40 CPR 302.4)	LISTED		
Ethyl Mercaptan (CAS 75	5-08-1)	LISTED		
Propane (CAS 74-98-6)		LISTED		
Propylene (CAS 115-07-		LISTED		
erfund Amendments and Re	eauthorization Act of 1986 ( Immediate Hazard - No	SARA)		
Hazard categories	Delayed Hazard - No			
	Fire Hazard - Yes			
1	Pressure Hazard - Yes Reactivity Hazard - No			
SARA 302 Extremely hazar				
Not listed.				
SARA 311/312 Hazardous	Yes	•		
chemical				
SARA 313 (TRI reporting)				
Chemical name		CAS number	% by wt.	
Propylene		115-07-1	0-5	
er federal regulations				
Clean Air Act (CAA) Section	n 112 Hazardous Air Polluta	nts (HAPs) List		
Not regulated.			00 400)	
Clean Air Act (CAA) Section	n 112(r) Accidental Release	Prevention (40 CFK	68.130)	
Butane (CAS 106-97-8)				
	5-08-1)			
Ethyl Mercaptan (CAS 7	5-08-1)			
Ethyl Mercaptan (CAS 7 Propane (CAS 74-98-6) Propylene (CAS 115-07- Clean Water Act (CWA)				
Ethyl Mercaptan (CAS 7 Propane (CAS 74-98-6) Propylene (CAS 115-07- Clean Water Act (CWA) Section 112(r) (40 CFR	1)			
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Ethyl Mercaptan (CAS 7 Propane (CAS 74-98-6) Propylene (CAS 115-07- Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Safe Drinking Water Act (SDWA)	1) Hazardous substance			
Ethyl Mercaptan (CAS 7 Propane (CAS 74-98-6) Propylene (CAS 115-07- Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Safe Drinking Water Act (SDWA)	1) Hazardous substance Not regulated.	. •		
Ethyl Mercaptan (CAS 7 Propane (CAS 74-98-6) Propylene (CAS 115-07- Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Safe Drinking Water Act (SDWA) state regulations US. Massachusetts RTK - S Butane (CAS 106-97-8)	1) Hazardous substance Not regulated. Substance List	· •		
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#### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International	Inventories
international	Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. Other information, including date of preparation or last revision

Issue date	05-May-2014
<b>Revision date</b>	25-March-2015
Version #	03
NFPA Ratings	



Disclaimer

All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.

WS Peopane 8 Pgs

## Chemical Name: Propane

Synonyms: Dimethylmethane, Liquefied Petroleum Gas (LPG), Sales Propane, Commercial Propane, Refinery Propane, Product Propane (non-odorized)

## Section 1 - Chemical Product and Company Identification

Company Information Ferrellgas (Blue Rhino) One Liberty Plaza Liberty, MO 64068 Emergency # 800-424-9300 (CHEMTREC) General SDS assistance # 855-738-9178 (Ferrellgas Safety Department)

#### Product Information Product: Propane (odorized) Chemical Name: Propane Chemical Family: Liquified Petroleum Gas (Paraffinic Hydrocarbons) Chemical Formula: C3H8

## Section 2 - Hazards Identification

#### **GHS Classification:**

Flammable Gas - Category 1 Gases Under Pressure - Liquefied Gas

GHS LABEL ELEMENTS

Pictogram(s)



Signal Word

Danger

Hazard Statements

H220 - Extremely flammable gas.

H280 - Contains gas under pressure, may explode if heated.

#### **Precautionary Statements**

Prevention

P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking

Response

P376 - Stop leak if safe to do so.

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - Eliminate all ignition sources if safe to do so.

Storage

P403 - Store in a well-ventilated place.

P405 - Store locked up.

P410 - Protect from sunlight.

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Material Name: Propane

## Section 3 - Composition / Information on Ingredients

	Section 4 - First Aid Measures	
75-08-1	Ethyl Mercaptan	0 - 0.0025
115-07-1	Propylene	0 - 10
74-84-0	Ethane	0 - 5
106-97-8	Butane and heavier	0 - 2.5
74-98-6	Propane	85 - 100
CAS #	Component	Percent

#### First Aid: Eyes

Direct contact with liquid propane can result in eye burns.

In case of contact with eyes, hold eyelids open to allow liquid to evaporate and gently flush with lukewarm water. Cover eyes to protect from light. Seek immediate medical attention.

#### First Aid: Skin

Direct contact with liquid propane can result in skin burns (frostbite).

Remove contaminated clothing. In case of blistering, frostbite or freeze burns seek immediate medical attention.

#### First Aid: Ingestion

Risk of ingestion is extremely low. However, if oral exposure occurs, seek immediate medical assistance.

#### First Aid: Inhalation

This product is classified as a simple asphyxiant. High vapor concentrations may produce a reversible central nervous system depression (anesthesia) and asphyxiation.

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

## Section 5 - Fire Fighting Measures

#### General Fire Hazards

See Section 9 for Flammability Properties.

Liquid releases flammable vapors at well below ambient temperatures and readily forms a flammable mixture with air. Dangerous fire and explosion hazard when exposed to heat, sparks or flame. Vapors are heavier than air and may travel long distances to a point of ignition and flash back.

#### Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

#### Extinguishing Media

Use extinguishing media suitable for the surrounding material, preferably or, any extinguisher suitable for Class B fires, dry chemical, fire fighting foam, CO2, and other gaseous agents. However, fire should not be extinguished unless flow of gas can be immediately stopped.

#### Unsuitable Extinguishing Media

None

Material Name: Propane

## Fire Fighting Equipment/Instructions

Gas fires should not be extinguished unless flow of gas can be immediately stopped. Shut off gas source and allow gas to burn out. If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop leak. Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Isolate area, particularly around ends of storage vessels. Let vessel, tank car or container burn unless leak can be stopped. Withdraw immediately in the event of a rising sound from a venting safety device. Large fires typically require specially trained personnel and equipment to isolate and extinguish the fire.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

## Section 6 - Accidental Release Measures

## **Recovery and Neutralization**

Stop the source of the release, if safe to do so.

### Materials and Methods for Clean-Up

Do not flush down sewer or drainage systems. Do not touch spilled liquid (frostbite/freeze burn hazard!). Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

#### Emergency Measures

Evacuate nonessential personnel and secure all ignition sources. No road flares, smoking or flames in hazard area. Consider wind direction, stay upwind and uphill, if possible. Evaluate the direction of product travel. Vapor cloud may be white, but color will dissipate as cloud disperses - fire and explosion hazard is still present!

### Personal Precautions and Protective Equipment

Do not touch spilled liquid (frostbite/freeze burn hazard!).

#### **Environmental Precautions**

Do not flush down sewer or drainage systems.

#### Prevention of Secondary Hazards

#### None

Section 7 - Handling and Storage

### Handling Procedures

Keep away from flame, sparks, ingnition sources and excessive temperatures. Use only in well ventilated areas.

#### Storage Procedures

Store only in approved containers. Keep away from flame, sparks, excessive temperatures and open flame. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

### Incompatibilities

Keep away from strong oxidizers, ignition sources and heat. Explosion hazard when exposed to chlorine dioxide. Heating barium peroxide with propane causes violent exothermic reaction. Heated chlorine-propane mixtures are explosive under some conditions.

Material Name: Propane

## Section 8 - Exposure Controls / Personal Protection

## Component Exposure Limits

#### Propane (74-98-6)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)

OSHA: 1000 ppm TWA; 1800 mg/m3 TWA

NIOSH: 1000 ppm TWA; 1800 mg/m3 TWA

#### Ethane (74-84-0)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)

Propylene (115-07-1)

ACGIH: 500 ppm TWA

#### Engineering Measures

Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use explosion-proof equipment and lighting in classified/controlled areas.

#### Personal Protective Equipment: Respiratory

Use a NIOSH approved positive-pressure, supplied air respirator with escape bottle or self-contained breathing apparatus (SCBA) for gas concentrations above occupational exposure limits, for potential for uncontrolled release, if exposure levels are not known, or in an oxygen-deficient atmosphere. CAUTION: Flammability limits (i.e., explosion hazard) should be considered when assessing the need to expose personnel to concentrations requiring respiratory protection.

#### Personal Protective Equipment: Hands

Use cold-impervious, insulating gloves where contact with liquid may occur.

#### Personal Protective Equipment: Eyes

Where there is a possibility of liquid contact, wear splash-proof safety glasses and faceshield.

## Personal Protective Equipment: Skin and Body

Where contact with liquid may occur, wear appropriate cold insulating protective clothing and faceshield.

## Section 9 - Physical & Chemical Properties

Appearance: Physical State: Max Vapor Pressure: Boiling Point: Solubility (H2O): Expansion Ratio: Evaporation Rate: Octanol/H2O Coeff.: Flash Point Method: Upper Flammability Limit (UFL): Lower Flammability Limit (LFL):	208 psig @ 100 °F (37.8 °C) -43.8°F (-42.1°C) slight (0.1 to 1.0%) 1 to 270 (from liquid to gas @ 14.7 psia) ND ND PMCC 9.6%	Molecular Weight: Specific Gravity: Burning Rate: VOC:	ND ND -156°F (-104 °C)
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Material Name: Propane

# Section 10 - Chemical Stability & Reactivity Information

#### **Chemical Stability**

This is a stable material.

Hazardous Polymerization

Will not occur.

#### Conditions to Avoid

Keep away from strong oxidizers, ignition sources and heat.

## **Incompatible Products**

Explosion hazard when exposed to chlorine dioxide. Heating barium peroxide with propane causes violent exothermic reaction. Heated chlorine-propane mixtures are explosive under some conditions.

## Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke) may be formed during combustion.

# Section 11 - Toxicological Information

### Acute Toxicity

#### A: General Product Information

Propane exhibits some degree of anesthetic action and is mildly irritating to the mucous membranes. At high concentrations propane acts as a simple asphyxiant without other significant physiological effects. High concentrations may cause death due to oxygen depletion.

## Potential Health Effects: Skin Corrosion Property/Stimulativeness

Vapors are not irritating. Direct contact to skin or mucous membranes with liquefied product or cold vapor may cause freeze burns and frostbite. Contact to mucous membranes with liquefied product may cause frostbite and freeze burns. Signs of frostbite include a change in the color of the skin to gray or white, possibly followed by blistering. Skin may become inflamed and painful.

## Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors are not irritating. However, contact with liquid or cold vapor may cause frostbite, freeze bums, and permanent eye damage.

### Potential Health Effects: Ingestion

Ingestion is unlikely. Contact with mucous membranes with liquefied product may cause frostbite and freeze burns.

## Potential Health Effects: Inhalation

This product is considered to be non-toxic by inhalation. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no long-term effects. Numbness, a "chilly" feeling, and vomiting have been reported from accidental exposures to high concentrations. This product is a simple asphyxiant. In high concentrations it will displace oxygen from the breathing atmosphere, particularly in confined spaces. Signs of asphyxiation will be noticed when oxygen is reduced to below 16%, and may occur in several stages. Symptoms may include rapid breathing and pulse rate, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscular weakness, tremors, cyanosis, narcosis and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur when the atmospheric oxygen concentration is reduced to about 6% to 8% or less.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

## Material Name: Propane

## Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

#### Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

## Carcinogenicity

## A: General Product Information

This product is not reported to have any carcinogenic effects.

## Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

## Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ repeat effects.

## Aspiration Respiratory Organs Hazard

This product is not reported to have any aspiration hazard effects.

Section 12 - Ecological Information

## Ecotoxicity

## A: General Product Information

Liquid release is only expected to cause localized, non-persistent environmental damage, such as freezing. Biodegradation of this product may occur in soil and water. Volatilization is expected to be the most important removal process in soil and water. This product is expected to exist entirely in the vapor phase in ambient air.

## B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data is available for this product's components.

## Persistence/Degradability

No information available.

## Bioaccumulation

No information available.

#### Mobility in Soil

No information available.

Section 13 - Disposal Considerations

## Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

## Section 14 - Transportation Information

## **DOT** Information

UN #: 1075 or 1978 Hazard Class: 2.1 Shipping Name: Petroleum Gases, Liquefied Placard:



Material Name: Propane

# Section 15 - Regulatory Information

## **Regulatory Information**

#### **Component Analysis**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Propylene (115-07-1)

SARA 313: 1.0 % de minimis concentration

SARA Secti	ion 311/312	- Hazard	Classes
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Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
		X	X	

## SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER) Propylene (115-07-1) CONCENTRATION PERCENT BY VOLUME 30 max

#### State Regulations

#### Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Propane	74-98-6	No	Yes	Yes	Yes	Yes	Yes
Ethane	74-84-0	No	Yes	Yes	Yes	Yes	Yes
Propylene	115-07-1	Yes	Yes	Yes	Yes	Yes	Yes

**Component Analysis - WHMIS IDL** 

No components are listed in the WHMIS IDL.

Additional Regulatory Information

#### Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EU
Propane	74-98-6	Yes	DSL	EINECS
Ethane	74-84-0	Yes	DSL	EINECS
Propylene	115-07-1	Yes	DSL	EINECS

Material Name: Propane

* * * Section 16 - Other Information * * *			
NFPA® Hazard Rating	Health Fire Reactivity	2 4 0	
HMIS® Hazard Rating	Health Fire Physical	2 4 0	Moderate Severe Minimal

## Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry; TSCA = Toxic Substance Control Act; EU = European Union; CAN = Canada

#### Literature References

None

## Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

#### **Issue** Information

This Safety Data Sheet supersedes all previous editions. Issued: January, 2015 Issued by: FerrelIgas Safety Department FerrelIgas One Liberty Plaza

Liberty, MO 64068

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SDS ID: Stock Code FT

Revision date: December 23, 2015
Section 1., CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:Flux-Tyte Solder Flux PasteSynonyms:NoneChemical family:N/AProducer:J.C. Whitlam Manufacturing Company200 West Walnut StreetP.O. Box 380Wadsworth, Ohio 44282-0380www.icwhitlam.com

# Telephone: 330-334-2524 Available during normal business hours

Emergency: 330-334-2524 Available during normal business hours

# Section 2. HAZARDS IDENTIFICATION

Health Hazards: Skin corrosion/irritation, Category 1B Serious eye damage/eye irritation, Category 1

Hazard Statement:

Causes severe skin burns and eye damage.



## **Precautionary Statements**

Inhalation: Do not breathe dusts or mists. Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.

Ingestion: Rinse mouth. Do not induce vomiting.

**Skin Contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

# Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Material information:	· · · · · · · · · · · · · · · · · · ·	
	CAS No.	Weight %
Name	8009-03-8	60 - 100
Petrolatum		15 - 40
	7646-85-7	15-40
Zinc chloride	12125-02-9	1-5
Ammonium chloride	12120-02-0	

\*Note: The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.

Section 4. FIRST AID MEASURES

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

**Skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Ingestion: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Call a physician or poison control center immediately. Remove contact lenses, if present and easy to do.

#### Symptoms/effects:

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

## Immediate medical

attention/action:

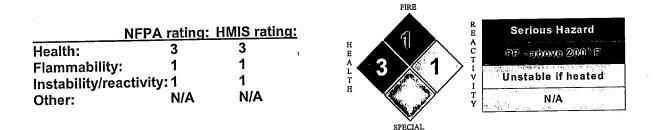
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

## Section 5. FIREFIGHTING MEASURES

SuitableDry chemical, alcohol foam, carbon dioxide. Do not use water jet, as thisextinguishingmay spread burning material.media:Diamond and a spread burning material.

**Specific hazards:** Product will float and can be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

**Special fire-fighting procedures:** Firefighters should wear proper full protective equipment and self-contained breathing apparatus. Move containers from fire area if it can be done without risk. Water spray may be ineffective. Water spray may only be useful in cooling equipment and containers exposed to heat and flame.



Flux-Tyte Solder Flux Paste

## Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Clean-up personnel should wear appropriate chemically protective equipment and respiratory protection.
Large Spill:	For large product users or spills involving large quantities, it is recommended that the purchaser establish a spill prevention, control and countermeasure plan. This plan should include procedures for proper storage, as well as clean-up of spills or leaks. The procedure should conform to safe practices and provide for proper recovery and/or disposal.
Methods for Containment and Clean up	Eliminate all sources of heat and flame. Ventilate area of release. If material is in paste form, scrape up into suitable containers. If material is in dust form, clean up using dustless methods (for example, HEPA vacuum). Do not use compressed air. Place any recovered material in closed, labelled containers for recycling or disposal (see below). Keep out of waterways. Notify the appropriate authorities as required.
Section 7. HA	

Handling:	Wear appropriate chemically protective equipment. Use in a well ventilated area. Avoid inhalation and ingestion of product, and activities that generate dust or fume. Avoid contact with skin, eyes, and clothing. Keep melting temperatures as low as possible to minimize the generation of fumes. NOTE: Inadvertent contaminants to product, such as moisture, ice, snow, grease or oil can cause an explosion when charged to a molten metal bath or melting furnace. (Preheating metal will remove moisture from product). Keep away from oxidizing materials and incompatibles. Use caution when opening cap. Keep container closed when not in use. Wash thoroughly after handling.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible material, heat and flame. Practice good housekeeping procedures to prevent accumulation of dust or refuse. Keep material dry.

## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposu Name	CAS No.	ACGIH <sup>®</sup> TLV <sup>®</sup> Exposure Limits:	Federal OSHA PELs	OSHA PELs 1989 c
Zinc chloride	7646-85-7	1 mg/m <sup>3</sup> (fume) (TWA) 2 mg/m <sup>3</sup> (fume) (STEL)	1 mg/m³ (fume)	N/A
Ammonium chloride	12125-02-9	10 mg/m³ (fume) (TWA)	10 mg/m <sup>3</sup> (fume) (TWA) (final rule/vacated value)	N/A

Engineering measures:

An eyewash station and safety shower should be made available in the immediate working area. Other equipment, including chemically resistant apron, may be required according to workplace standards.

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection:	For prolonged exposure or if the TLV is exceeded, wear NIOSH- approved respirators. Use in well ventilated area. Use general ventilation for prolonged exposures or if the TLV is not known.
Skin and body protection:	Gloves impervious to the material must be worn. Advice should be sought from glove suppliers.
Eye protection:	Safety goggles, to prevent product from entering the eyes. Safety glasses or goggles AND a full face shield are recommended around molten metal.
Hygiene measures:	Avoid inhalation of vapors, fumes and dusts. Avoid contact with eyes, skin and clothing. Do not permit eating, drinking or the use of cosmetics or tobacco products while handling or processing material, or in product work areas. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Remove soiled clothing and wash it thoroughly before reuse.

## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brownish to white paste
Physical state (solid/liquid/gas):	Paste
Substance type (pure/mixture):	Mixture
Color:	Brownish to white
Odor:	Slight petroleum
Molecular weight:	Not Available
pH:	Not Available
Boiling point/range (5-95%):	Not Available
Melting point/range:	95°F (35°C)
Decomposition temperature:	Not Available
Specific gravity:	0.87 @ 60°F (15.6°C)
Vapor density:	Not Available
Vapor pressure:	Not Available
Evaporation rate (Butyl acetate= 1):	Not Available
Flash point, method used:	360°-430°F (182°C-221°C) (TCC)
Water solubility:	Insoluble
VOC Content:	11.7 g/l, <1%
Auto-ignition temperature:	No data
Flammable limits in air — lower (%):	No data
Flammable limits in air — upper (%):	No data

## Section 10. STABILITY AND REACTIVITY

#### **Reactivity:**

Stable under ambient pressure and temperature.

Stability:

Stable under the recommended storage and handling conditions prescribed. May be corrosive to metals such as copper and its alloys (e.g. brass, bronze), aluminum, ferrous metals (e.g. cast iron), carbon steel and some stainless steels (e.g. 303, 310, 321, 400 series).

Flux-Tyte Solder Flux Paste

Possibly hazardous reactions:	Contact with acids may evolve hydrogen chloride gas. Contact with strong alkalis may evolve ammonia gas.
Conditions to avoid:	Avoid extreme heat and direct flame. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizers (e.g. chlorine, peroxides, etc.), strong acids, strong alkalis, potassium, turpentine, cyanide, sulfides, powdered zinc, halogenated compounds, lead and silver salts.

Hazardous decomposition products: Ammonia.

Polymerization: Will not occur.

## Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity: No data available.

Product information:

Name	CAS No.	Inhalation:	Oral:	Dermal:
Petrolatum	8009-03-8	LD <sub>50</sub> (Rabbit) N/A	LD50 (Rabbit) N/A	LD <sub>50</sub> (Rabbit) 3,600 mg/kg
Zinc chloride	7646-85-7	LD₅₀ (Rabbit) N/A	LD <sub>50</sub> (Rabbit) 350 mg/kg	LD <sub>50</sub> (Rabbit) N/A
Ammonium chloride	12125-02-9	LD₅0 (Rabbit) N/A	LD₅₀ (Rabbit) 1,650 mg/kg	LD₅₀ (Rabbit) N/A

 $LC_{50}$  - The concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

**Chronic toxicity:** Prolonged or repeated skin contact may cause severe drying and cracking of the skin (dermatitis).

Sensitization: None known

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity effects: No data available

Persistence: No data available

**Degradability:** No data available

## Section 13. DISPOSAL CONSIDERATIONS

**Cleanup considerations:** Review federal, state and local government requirements prior to disposal. May have value on a recycled basis. Dispose in accordance with all applicable government regulations.

## Section 14. TRANSPORT INFORMATION

**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Zinc chloride)

UN No: UN3260

Primary Class(es): 8

Subsidiary Class(es): None

Packing Group: III

**Other Shipping Information:** Within Canada, the 'Limited Quantity Exemption' may apply for containers which hold 5 Kilograms or less of the product. Under the TDGR, refer to Section 1.17 for additional 'Limited Quantity Exemption' requirements, if shipping under this exemption.

## Section 15. REGULATORY INFORMATION

U.S. federal regulatory information:

No information available

**NOTE:** User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

#### Section 16. OTHER INFORMATION

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, the J.C. Whitlam Manufacturing Company, Inc., and its related operations or divisions (Whitlam) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Whitlam assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.

WL FT4 6Pgs

# WHITLAM

# Safety Data Sheet

## SDS ID: Stock Code FT

Revision date: December 23, 2015 Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Flux-Tyte Solder Flux Paste Product name: None Synonyms: N/A Chemical family: J.C. Whitlam Manufacturing Company Producer: 200 West Walnut Street P.O. Box 380 Wadsworth, Ohio 44282-0380 www.jcwhitlam.com

#### 330-334-2524 Available during normal business hours **Telephone:**

330-334-2524 Available during normal business hours **Emergency:** 

# Section 2. HAZARDS IDENTIFICATION

Health Hazards: Skin corrosion/irritation, Category 1B Serious eye damage/eye irritation, Category 1

Hazard Statement:

Causes severe skin burns and eye damage.



## **Precautionary Statements**

Do not breathe dusts or mists. Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Inhalation:

Rinse mouth. Do not induce vomiting. Ingestion:

Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Wash thoroughly after handling. Skin Contact: Wear protective gloves/protective clothing/eye protection/face protection.

Rinse cautiously with water for several minutes. Remove contact lenses, if Eye Contact: present and easy to do. Continue rinsing.

# Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Material information: Name	CAS No. 8009-03-8	Weight % 60 - 100
Petrolatum Zinc chloride	7646-85-7	<u>15 - 40</u> 1 - 5
Ammonium chloride	12125-02-9	limited Due to variation

\*Note: The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.

Section 4. FIRST AID MEASURES

Inhalation:	If breathing is difficult, remove to fresh air and keep at rest in a position	
	comfortable for breathing. Call a physician if symptoms develop or persist.	

Skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Ingestion: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Call a physician or poison control center immediately. Remove contact lenses, if present and easy to do.

#### Symptoms/effects:

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

## Immediate medical

## attention/action:

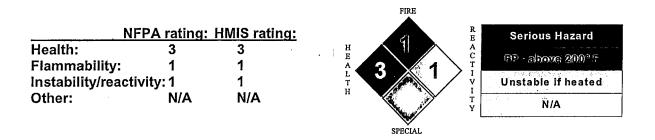
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

#### Section 5. FIREFIGHTING MEASURES

SuitableDry chemical, alcohol foam, carbon dioxide. Do not use water jet, as thisextinguishingmay spread burning material.media:Diamond and a spread burning material.

**Specific hazards:** Product will float and can be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

**Special fire-fighting procedures:** Firefighters should wear proper full protective equipment and self-contained breathing apparatus. Move containers from fire area if it can be done without risk. Water spray may be ineffective. Water spray may only be useful in cooling equipment and containers exposed to heat and flame.



Flux-Tyte Solder Flux Paste

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Section 6. ACCIDENTAL RELEASE MEASURES				
Personal Precautions:	Clean-up personnel should wear appropriate chemically protective equipment and respiratory protection.			
Large Spill:	For large product users or spills involving large quantities, it is recommended that the purchaser establish a spill prevention, control and countermeasure plan. This plan should include procedures for proper storage, as well as clean-up of spills or leaks. The procedure should conform to safe practices and provide for proper recovery and/or disposal.			
Methods for Containment and Clean up	Eliminate all sources of heat and flame. Ventilate area of release. If material is in paste form, scrape up into suitable containers. If material is in dust form, clean up using dustless methods (for example, HEPA vacuum). Do not use compressed air. Place any recovered material in closed, labelled containers for recycling or disposal (see below). Keep out of waterways. Notify the appropriate authorities as required.			
Section 7. HA	NDLING AND STORAGE			
Handling:	Wear appropriate chemically protective equipment. Use in a well ventilated area. Avoid inhalation and ingestion of product, and activities that generate dust or fume. Avoid contact with skin, eyes, and clothing. Keep melting temperatures as low as possible to minimize the generation of fumes. NOTE: Inadvertent contaminants to product, such as moisture, ice, snow, grease or oil can cause an explosion when charged to a molten metal bath or melting furnace. (Preheating metal will remove moisture from product). Keep away from oxidizing materials and incompatibles. Use caution when opening cap. Keep container closed when not in use. Wash thoroughly after handling.			
Storage:	Store in a cool, dry, well-ventilated area away from incompatible material, heat and flame. Practice good housekeeping procedures to prevent accumulation of dust or refuse. Keep material dry.			

## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## **Occupational Exposure Limits:**

Name	CAS No.	ACGIH <sup>®</sup> TLV <sup>®</sup> Exposure Limits:	Federal OSHA PELs	OSHA PELs 1989 c
Zinc chloride	7646-85-7	1 mg/m <sup>3</sup> (fume) (TWA) 2 mg/m <sup>3</sup> (fume) (STEL)	1 mg/m <sup>3</sup> (fume)	N/A
Ammonium chloride	12125-02-9	10 mg/m³ (fume) (TWA)	10 mg/m³ (fume) (TWA) (final rule/vacated value)	N/A

## Engineering measures:

An eyewash station and safety shower should be made available in the immediate working area. Other equipment, including chemically resistant apron, may be required according to workplace standards.

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection:	For prolonged exposure or if the TLV is exceeded, wear NIOSH- approved respirators. Use in well ventilated area. Use general ventilation for prolonged exposures or if the TLV is not known.
Skin and body protection:	Gloves impervious to the material must be worn. Advice should be sought from glove suppliers.
Eye protection:	Safety goggles, to prevent product from entering the eyes. Safety glasses or goggles AND a full face shield are recommended around molten metal.
Hygiene measures:	Avoid inhalation of vapors, fumes and dusts. Avoid contact with eyes, skin and clothing. Do not permit eating, drinking or the use of cosmetics or tobacco products while handling or processing material, or in product work areas. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Remove soiled clothing and wash it thoroughly before reuse.

## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Physical state (solid/liquid/gas):	Light brownish to white paste Paste
Substance type (pure/mixture):	Mixture
Color:	Brownish to white
Odor:	Slight netroleum
Molecular weight:	Not Available
pH:	Not Available
Boiling point/range (5-95%):	Not Available
Melting point/range:	95°F (35°C)
Decomposition temperature:	Not Available
Specific gravity:	0.87 @ 60°F (15.6°C)
Vapor density:	Not Available
Vapor pressure:	Not Available
Evaporation rate (Butyl acetate= 1):	Not Available
Flash point, method used:	360°-430°F (182°C-221°C) (TCC)
Water solubility:	Insoluble
VOC Content:	11.7 g/l, <1%
Auto-ignition temperature:	No data
Flammable limits in air — lower (%):	No data
Flammable limits in air — upper (%):	No data

#### Section 10. STABILITY AND REACTIVITY

**Reactivity:** 

Stability:

Stable under ambient pressure and temperature.

Stable under the recommended storage and handling conditions prescribed. May be corrosive to metals such as copper and its alloys (e.g. brass, bronze), aluminum, ferrous metals (e.g. cast iron), carbon steel and some stainless steels (e.g. 303, 310, 321, 400 series).

Flux-Tyte Solder Flux Paste

Possibly hazardous reactions:	Contact with acids may evolve hydrogen chloride gas. Contact with strong alkalis may evolve ammonia gas.
Conditions to avoid:	Avoid extreme heat and direct flame. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizers (e.g. chlorine, peroxides, etc.), strong acids, strong alkalis, potassium, turpentine, cyanide, sulfides, powdered zinc, halogenated compounds, lead and silver salts.

Hazardous decomposition products: Ammonia.

Polymerization:

Will not occur.

## Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity: No data available.

Product information:

Name	CAS No.	Inhalation:	Oral:	Dermal:
Petrolatum	8009-03-8	LD <sub>50</sub> (Rabbit) N/A	LD₅₀ (Rabbit) N/A	LD <sub>50</sub> (Rabbit) 3,600 mg/kg
Zinc chloride	7646-85-7	LD₅₀ (Rabbit) N/A	LD₅₀ (Rabbit) 350 mg/kg	LD₅₀ (Rabbit) N/A
Ammonium chloride	12125-02-9	LD₅0 (Rabbit) N/A	LD <sub>50</sub> (Rabbit) 1,650 mg/kg	LD₅₀ (Rabbit) N/A

 $LC_{50}$  - The concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

**Chronic toxicity:** Prolonged or repeated skin contact may cause severe drying and cracking of the skin (dermatitis).

Sensitization: None known

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity effects: No data available

Persistence: No data available

**Degradability:** No data available

## Section 13. DISPOSAL CONSIDERATIONS

**Cleanup considerations:** Review federal, state and local government requirements prior to disposal. May have value on a recycled basis. Dispose in accordance with all applicable government regulations.

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## Section 14. TRANSPORT INFORMATION

Proper Shipping Name: CORROSIVE SOLID, ACIDIÇ, INORGANIC, N.O.S. (Zinc chloride)

UN No: UN3260

Primary Class(es): 8

Subsidiary Class(es): None

Packing Group: III

**Other Shipping Information:** Within Canada, the 'Limited Quantity Exemption' may apply for containers which hold 5 Kilograms or less of the product. Under the TDGR, refer to Section 1.17 for additional 'Limited Quantity Exemption' requirements, if shipping under this exemption.

#### Section 15. REGULATORY INFORMATION

U.S. federal regulatory information:

No information available

**NOTE:** User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

#### Section 16. OTHER INFORMATION

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, the J.C. Whitlam Manufacturing Company, Inc., and its related operations or divisions (Whitlam) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Whitlam assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.

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# WHITLAM

## Safety Data Sheet

## SDS ID: Stock Code IG

Revision date: February 4, 2015

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

"Blue Magic" Industrial Grade Pipe Thread Compound Product name: None Synonyms: Pipe Thread Hydrocarbon Mixture Chemical family: J.C. Whitlam Manufacturing Company Producer: 200 West Walnut Street P.O. Box 380 Wadsworth, Ohio 44282-0380 www.jcwhitlam.com

#### 330-334-2524 Available during normal business hours Telephone:

800-255-3924 Available 24 hours CHEMTEL Emergency:

# Section 2. HAZARDS IDENTIFICATION

## EMERGENCY OVERVIEW

Harmful if swallowed. Prolonged or repeated skin contact may cause drying, cracking, or irritation. High vapor concentrations may cause drowsiness and result in irritation of the eyes, nose, and throat and central nervous system (CNS) depression.

## GHS Hazard and precautionary statements

WARNING — Serious Eye Irritation (category 2A), H319 Skin Irritation (category 2), H315 Acute oral toxicity (category 4), H302 Acute inhalation toxicity (category 4), H332 May cause drowsiness or dizziness (category 3), H336



## **Precautionary Statements:**

P264: Wash skin thoroughly after handling. P280: Wear protective gloves and eye protection. P303 + P361: IF ON SKIN, immediately remove all contaminated clothing and wash before reuse. P305 + P351: IF IN EYES, Remove contact lenses if present and easy to do so, rinse with water for several minutes. P337 + P313: If eye or skin irritation persists - get medical advice/attention. P403 + P223: Store in a cool, well-ventilated place. Keep container tightly closed.

May cause irritation to mucous membranes and upper respiratory tract. In high Inhalation: concentrations, vapors and aerosol mists have a narcotic effect and may cause headache, central nervous system depression, fatigue, dizziness, and nausea. Severe overexposure may cause red blood cell damage. Chronic: Repeated or prolonged exposure may result in blood, liver, or kidney damage. See Section 11 (Toxicological Information) for additional information. May cause irritation of the digestive tract, stomach pain, nausea, and vomiting. Ingestion: May be absorbed through the skin during prolonged or repeated contact, Skin contact: causing irritation, dermatitis, weakness, headache and nausea.

Blue Magic Industrial Grade Pipe Thread Compound

## Eye contact: Exposure to vapors or liquid may cause eye irritation.

**Carcinogenic** The IARC and ACGIH designate Ethylene glycol butyl ether (2-Butoxyethanol) and Isopropyl alcohol (2-Propanol) as category 3 – confirmed animal carcinogen with unknown relevance to humans. The ACGIH designates Ethylene glycol butyl ether (2-Butoxyethanol) as category A3– confirmed animal carcinogen with unknown relevance to humans.

# Section 3. COMPOSITION // INFORMATION ON INGREDIENTS

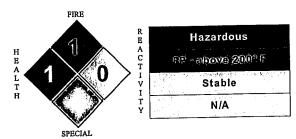
laterial information:	CAS No.	Weight %
Ethylene glycol butyl ether Synonym: 2-Butoxyethanol	111-76-2	12-17
sopropyl alcohol Synonym: 2-Propanol	67-63-0	10-15

\***Note:** The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.

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Section 4. FI	RST AID MEASURES		
Inhalation:	Move exposed persons to fresh air. If the person is not breathing or breathing is irregular, provide artificial respiration or oxygen by trained personnel. Seek medical attention.		
Skin contact:	Quickly remove contaminated clothing and shoes. Wash affected skin with soap and water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.		
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. If conscious and alert, rinse the mouth with water. Call a physician or poison control center immediately.		
Eye contact:	Check for and remove any contact lenses. Immediately consult physician after flushing eyes with tepid water for 15 minutes.		
Section 5 EIF	REFIGHTING MEASURES		
Suitable extinguishing media:	Small fires — Class B fire-extinguishing media including water spray, foam, CO <sub>2</sub> or dry powder. Do not use a water stream, as this will spread the fire.		
Specific hazaro	ds: Fire or intense heat may cause violent rupture of product containers. Vapors may form explosive mixtures with air. Application of extinguishing media to hot surfaces requires special precautions. During emergency conditions, overexposure to decomposition products including carbon oxides may cause a health hazard. Symptoms may not be immediately apparent.		

**Special protective equipment for firefighters:** Full protective equipment including selfcontained breathing apparatus should be used. Do not allow run-off from fire-fighting to enter drains or water courses.

NFPA	rating:	HMIS rating:
Health:	1	1
Flammability:	1	1
Instability/reactivity	: 0	0
Other:	N/A	<u>Н (</u> РРЕ)



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Section 6. AC	
Personal Precautions:	Immediately contact emergency personnel. Evacuate any potentially affected area and isolate personnel from entry. Ventilate closed spaces before entering them. Vapor can collect in lower areas.
Large Spill:	Personnel must have appropriate training, per Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8)
Methods for Containment and Clean up	Shut off source if possible and if safe. Eliminate all ignition sources. Prevent entry into waterways, sewers, basements or confined areas. Advise applicable authorities if material has entered sewers or water courses.

Section 7. HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapors. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Launder soiled clothing thoroughly before
Storage:	re-use. Keep all containers tightly closed when not in use. Store out of direct sunlight and on an impermeable floor. Do not store with incompatible materials. See
	Section 10, Stability and Reactivity.

# Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Occupational Exposure Limits:** Federal OSHA ACGIH® TLV® CAS No. OSHA PELs 1989 <sup>C</sup> Name PELs **Exposure Limits:** Ethylene glycol butyl 25 ppm <sup>A</sup> ether 50 ppm <sup>A</sup> 20 ppm <sup>A</sup> 111-76-2 Synonym: 2-Butoxyethanol 400 ppm <sup>A</sup> 200 ppm <sup>A</sup> Isopropyl alcohol 400 ppm <sup>A</sup> 67-63-0 500 ppm <sup>в</sup> 400 ррт <sup>в</sup> Synonym: 2-Propanol

All exposure limits listed are 8-hour time weighted average (TWA) — except where noted otherwise.

<sup>A</sup> Time Weighted Average (TWA) is an average exposure over the course of an 8-hour work shift.
 <sup>B</sup> A Short Term Exposure Limit TWA over the course of 15 minutes.

PEL — Permissible Exposure Limit is the maximum 8-hour TWA concentration of a chemical that a worker may be exposed to under Occupational Safety and Health Administration (OSHA) regulations.
 <sup>c</sup> Federal OSHA 1989 PELs were vacated but are in use and enforced by many state OSHA plans.

Engineering measures: Local accept

Local exhaust ventilation is preferable. General ventilation is acceptable if exposure to materials in this section is maintained below applicable exposure limits.

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection:	When engineering controls are not sufficient to reduce exposure to levels below applicable exposure limits, seek professional advice prior to respirator selection and use. For concentrations less than 10 times the exposure limits, wear a properly fitted NIOSH/ MSHA-approved respirator with organic vapor cartridges.
Skin and body protection:	Wear impervious clothing and gloves to prevent contact. Use the manufacturer's degradation and permeation data for protective material selection.
Eye protection: Hygiene measures:	Wear safety spectacles with unperforated sideshields, or goggles. Avoid repeated or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove contaminated clothing and launder before reuse.
Other precautions:	Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Blue paste
Physical state (solid/liquid/gas):	Paste
Substance type (pure/mixture):	Mixture
Color:	Blue
Odor:	Mild odor
Molecular weight:	Not Available
pH:	Not Applicable
Boiling point/range (5-95%):	Not Available
Melting point/range:	Not Available
Decomposition temperature:	Not Available
Specific gravity:	1.41
Vapor density:	(AIR = 1) <1
Vapor pressure:	0.88 mm Hg at 68°F
Evaporation rate (Butyl acetate= 1):	0.6
Flash point, method used:	Above 200 °F; UN test N.1
Water solubility:	Slight
VOC Content:	310 grams/liter (SCAQMD Rule 1168 Test Method316A)
Auto-ignition temperature:	921°F; 494°C
Flammable limits in air — lower (%):	1.1
Flammable limits in air — upper (%):	12.7

Section 10. STABILITY AND REACTIVITY		
Reactivity:	No data available	
Stability:	Stable under recommend	ed storage conditions.
Possibly hazardous reaction Conditions to avoid:	vapors may form an explo Heat, flames, sparks, tem direct sunlight.	
Incompatible Materials:	Strong oxides, chlorine, a	cids, alkalies, peroxides.
Hazardous decomposition p Polymerization:	roducts: By fire, Carbon dioxide, C Will not occur.	arbon monoxide
I.C. Whitlam B	lue Magic Industrial Grade Pipe Thread Compound	Page 4 of 6

# Section 11- TOXICOLOGICAL INFORMATION

Acute toxicity: Excessive exposure leads to depression of the central nervous system. Causes eve irritation, moderate skin irritation.

#### Product information:

Name	CAS No.	Inhalation:	Dermal:	Oral:
Ethylene glycol butyl		LC₅₀ (Rat): ~700 ppm, 7 hours; LC₅₀ (Guinea pig): ~932 ppm, 4 hours;	LD <sub>50</sub> (Rat) >2,000 mg/kg LD <sub>50</sub> (Guinea pig) >2,000 mg/kg	Acute LD₅₀ (Rat):1,746 mg/kg Acute LD₅₀ (Guinea pig):1,414 mg/kg
Isopropyl alcohol Synonym: 2-Propanol	67-63-0	LC₅₀ (Rat): 16,000 ppm, 8 hours	LD₅₀ (Rabbit) 12,800 mg/kg	LD <sub>50</sub> (Rat) 5,000 to 5,045 mg/kg

 $LC_{50}$  — The concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

**Chronic toxicity:** The IARC and ACGIH designates Ethylene glycol butyl ether (2-Butoxyethanol) and Isopropyl alcohol (2-Propanol) as category 3 – confirmed animal carcinogen with unknown relevance to humans. Repeated or prolonged exposure in excess of exposure limits in Section 8 may cause damage to the lungs, liver, blood, and kidney.

Sensitization: Not known to cause sensitization in humans.

Section 12. ECOLOGICAL INFORMATION			
<b>Ecotoxicity effects:</b> LC <sub>50</sub> Harlequinfish, Red rasbora 96-hour 4,200 mg/l. LC <sub>50</sub> Fathead minnow 96-hour 9,640 to 10,000 mg/l. EC <sub>50</sub> Water flea 48-hour 1,550 mg/l.			
Persistence	The estimated half-life (2-Butoxyethanol) in groundwater ranges from 14 days to 8 weeks; and in soil 7 days to 4 weeks.		
Degradability:	Expected to be readily biodegradable.		
Section 13. DISP	OSAL CONSIDERATIONS		
Cleanup	This product is not a hazardous waste as defined under RCRA 40 CFR 261. Do not incinerate a closed container. Disposal of this material must		

**Cleanup considerations:** 261. Do not incinerate a closed container. Disposal of this material must be done in accordance with federal, state and/or local regulations. The material destined for disposal must be characterized properly and may differ from the product described in this SDS if mixed with other wastes.

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## Section 14. TRANSPORT INFORMATION

## Please refer to DOT regulation 49 CFR 172.101:

**Transport information:** This material is not regulated under DOT when transported via U.S. commerce routes: and IATA, and IMO via international routes **Hazardous Materials Description:** (DOT and IATA):

UN/identification no.: Proper shipping name:	Not Applicable Not Applicable Not Applicable	
Hazard class: Packing group: DOT reportable quantity (lbs.):	Not Applicable Not Applicable	

# Section 15: REGULATORY INFORMATION

## U.S. federal regulatory information:

## U.S. RCRA (40 CFR 261)

This product is not a hazardous waste as defined under RCRA 40 CFR 261.

## State and community right-to-know regulations:

The following component(s) of this material are identified on the regulatory lists below:

## U.S. TSCA Chemical inventory Section 8(b)

**OSHA** — This product is determined to be hazardous as defined in the OSHA Hazard Communications Standard (29 CFR 1910.1200)

**CERCLA** Sections 102a/103 (40 FR 302.4): No ingredients are listed.

Some Components of this product are listed in the following sections of SARA:

SARA Title III Section 302 - N/A

SARA Title III Section 304 - N/A

SARA Title III Section 313 — Ethylene glycol butyl ether (2-Butoxyethanol) 1% reporting threshold Isopropyl alcohol (2-Propanol) 100 % reporting threshold

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute health hazard:	Yes
Chronic health hazard:	Yes
Fire hazard:	No
Reactive Hazard:	No
Pressure Hazard:	No

## **California Proposition 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## WHMIS (Canada)

Class D-2B: Material causing other toxic effects

**NOTE:** User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

## Section 16. OTHER INFORMATION

## Standards and Certification Listings:

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, the J.C. Whitlam Manufacturing Company, Inc., and its related operations or divisions (Whitlam) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Whitlam assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.

WL TU (14,32) 6 Pgs-



SDS ID: Stock Code TU

Revision date: February 4, 2015
Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:"T-U Type 555" Thread Sealing CompoundSynonyms:NoneChemical family:Pipe Thread Hydrocarbon MixtureJ.C. Whitlam Manufacturing Company200 West Walnut StreetP.O. Box 380Wadsworth, Ohio 44282-0380www.jcwhitlam.com

Telephone: 330-334-2524 Available during normal business hours

Emergency: CHEMTEL 800-255-3924 Available 24 hours

Section 2. HAZARDS IDENTIFICATION

## EMERGENCY OVERVIEW

Harmful if swallowed. Prolonged or repeated skin contact may cause drying, cracking, or irritation. High vapor concentrations may cause drowsiness and result in irritation of the eyes, nose, and throat and central nervous system (CNS) depression.

# GHS Hazard and precautionary statements

WARNING — Serious Eye Irritation (category 2A), H319 Skin Irritation (category 2), H315 Acute oral toxicity (category 4), H302 Acute inhalation toxicity (category 4), H332 May cause drowsiness or dizziness (category 3), H336

## Precautionary Statements

P264: Wash skin thoroughly after handling. P280: Wear protective gloves and eye protection. P303 + P361: IF ON SKIN, immediately remove all contaminated clothing and wash before reuse. P305 + P351: IF IN EYES, Remove contact lenses if present and easy to do so, rinse with water for several minutes. P337 + P313: If eye or skin irritation persists – get medical advice/attention. P403 + P223: Store in a cool, well-ventilated place. Keep container tightly closed.

Inhalation: May cause irritation to mucous membranes and upper respiratory tract. In high concentrations, vapors and aerosol mists have a narcotic effect and may cause headache, central nervous system depression, fatigue, dizziness, and nausea. Severe overexposure may cause red blood cell damage.
 Chronic: Repeated or prolonged exposure may result in blood, liver, or kidney damage. See Section 11 (Toxicological Information) for additional information.
 May cause irritation of the digestive tract, stomach pain, nausea, and vomiting.

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T-U Type 555 Thread Sealing Compound

Page 1 of 6

Skin contact:	May be absorbed through the skin during prolonged or repeated contact, causing irritation, dermatitis, weakness, headache and nausea.
Eye contact:	Exposure to vapors or liquid may cause eye irritation.
Carcinogenic	The IARC and ACGIH designate Ethylene glycol butyl ether (2-Butoxy- ethanol) and Isopropyl alcohol (2-Propanol) as category 3 – confirmed animal carcinogen with unknown relevance to humans. The ACGIH designates Ethylene glycol butyl ether (2-Butoxyethanol) as category A3– confirmed animal carcinogen with unknown relevance to humans.

## Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Material information:

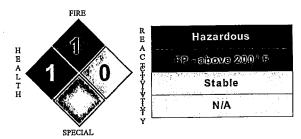
Name 🔨	CAS No.	Weight %
Ethylene glycol butyl ether Synonym: 2-Butoxyethanol	111-76-2	12-17
Isopropyl alcohol Synonym: 2-Propanol	67-63-0	10-15

\*Note: The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.

Section 41 FIRST AID MEASURES		
Inhalation:	Move exposed persons to fresh air. If the person is not breathing or breathing is irregular, provide artificial respiration or oxygen by trained personnel. Seek medical attention.	
Skin contact:	Quickly remove contaminated clothing and shoes. Wash affected skin with oap and water. Get medical attention if symptoms occur. Wash contaminated lothing before reuse.	
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. If conscious and alert, rinse the mouth with water. Call a physician or poison control center immediately.	
Eye contact:	Check for and remove any contact lenses. Immediately consult physician after flushing eyes with tepid water for 15 minutes.	
Section 5. FIR	REFIGHTING MEASURES	
Suitable extinguishing media:	Small fires — Class B fire-extinguishing media including water spray, foam, CO <sub>2</sub> or dry powder. Do not use a water stream, as this will spread the fire.	
Specific hazard	Is: Fire or intense heat may cause violent rupture of product containers. Vapors may form explosive mixtures with air. Application of extinguishing media to hot surfaces requires special precautions. During emergency conditions, overexposure to decomposition products including carbon oxides may cause a health hazard. Symptoms may not be immediately apparent.	

**Special protective equipment for firefighters:** Full protective equipment including selfcontained breathing apparatus should be used. Do not allow run-off from fire-fighting to enter drains or water courses.

NFPA	rating:	HMIS rating:
Health:	1	1
Flammability:	1	1
Instability/reactivity	:0	0
Other:	N/A	H (PPE)



Section 6. AC	CIDENTAL RELEASE MEASURES
Personal Precautions:	Immediately contact emergency personnel. Evacuate any potentially affected area and isolate personnel from entry. Ventilate closed spaces before entering them. Vapor can collect in lower areas.
Large Spill:	Personnel must have appropriate training, per Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8).
Methods for Containment and Clean up	Shut off source if possible and if safe. Eliminate all ignition sources. Prevent entry into waterways, sewers, basements or confined areas. Advise applicable authorities if material has entered sewers or water courses.

Section 7 HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapors. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Launder soiled clothing thoroughly before re-use.
Storage:	Keep all containers tightly closed when not in use. Store out of direct sunlight and on an impermeable floor. Do not store with incompatible materials. See Section 10, Stability and Reactivity.

## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Name	CAS No.	ACGIH <sup>®</sup> TLV <sup>®</sup> Exposure Limits:	Federal OSHA PELs	OSHA PELs 1989 <sup>c</sup>
Ethylene glycol butyl ether Synonym: 2- Butoxyethanol	111-76-2	20 ppm <sup>A</sup>	50 ppm <sup>A</sup>	25 ppm <sup>A</sup>
Isopropyl alcohol Synonym: 2-Propanol	67-63-0	200 ррт <sup>A</sup> 400 ррт <sup>в</sup>	400 ppm <sup>A</sup>	400 ррт <sup>А</sup> 500 ррт <sup>В</sup>

- - Limitor

All exposure limits listed are 8-hour time weighted average (TWA) - except where noted otherwise.

<sup>A</sup> Time Weighted Average (TWA) is an average exposure over the course of an 8-hour work shift. <sup>B</sup> A Short Term Exposure Limit TWA over the course of 15 minutes.

PEL — Permissible Exposure Limit is the maximum 8-hour TWA concentration of a chemical that a worker may be exposed to under Occupational Safety and Health Administration (OSHA) regulations. <sup>c</sup> Federal OSHA 1989 PELs were vacated but are in use and enforced by many state OSHA plans.

**Engineering measures:** 

Local exhaust ventilation is preferable. General ventilation is acceptable if exposure to materials in this section is maintained below applicable exposure limits.

T-U Type 555 Thread Sealing Compound

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection:	When engineering controls are not sufficient to reduce exposure to levels below applicable exposure limits, seek professional advice prior to respirator selection and use. For concentrations less than 10 times the exposure limits, wear a properly fitted NIOSH/ MSHA-approved respirator with organic vapor cartridges.
Skin and body protection:	Wear impervious clothing and gloves to prevent contact. Use the manufacturer's degradation and permeation data for protective material selection.
Eye protection: Hygiene measures:	Wear safety spectacles with unperforated sideshields, or goggles. Avoid repeated or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove contaminated clothing and launder before reuse.
Other precautions:	Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

# Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow paste
Physical state (solid/liquid/gas):	Paste
Substance type (pure/mixture):	Mixture
Color:	Yellow
Odor:	Mild odor
Molecular weight:	Not Available
pH:	Not Applicable
Boiling point/range (5-95%):	Not Available
Melting point/range:	Not Available
Decomposition temperature:	Not Available
Specific gravity:	1.41
Vapor density:	(AIR = 1) <1
Vapor pressure:	0.88 mm Hg at 68°F
Evaporation rate (Butyl acetate= 1):	0.6
Flash point, method used:	Above 200 °F; UN test N.1
Water solubility:	Slight
VOC Content:	310 grams/liter (SCAQMD Rule 1168 Test Method316A)
Auto-ignition temperature:	921°F; 494°C
Flammable limits in air — lower (%):	1.1
Flammable limits in air — upper (%):	12.7

#### Section 10. STABILITY AND REACTIVITY en Carlos Transforme 84949 19

Reactivity:	No data available
Stability:	Stable under recommended storage conditions.
Possibly hazardous reactions: Conditions to avoid:	Vapors may form an explosive mixture with air Heat, flames, sparks, temperature extremes, and direct sunlight.
Incompatible Materials:	Strong oxides, chlorine, acids, alkalies, peroxides.
Hazardous decomposition products: Polymerization:	By fire, Carbon dioxide, Carbon monoxide Will not occur.

## Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity: Excessive exposure leads to depression of the central nervous system. Causes eye irritation, moderate skin irritation.

#### Product information:

Name	CAS No.	Inhalation:	Dermal:	Oral:
Ethylene glycol butyl	111-76-2	LC₅₀ (Rat): ~700 ppm,	LD <sub>50</sub> (Rat) >2,000	Acute LD <sub>50</sub> (Rat):1,746
ether		7 hours;	mg/kg	mg/kg
Synonym: 2-		LC₅₀ (Guinea pig):	LD <sub>50</sub> (Guinea pig)	Acute LD <sub>50</sub> (Guinea
Butoxyethanol		~932 ppm, 4 hours;	>2,000 mg/kg	pig):1,414 mg/kg
lsopropyl alcohol	67-63-0	LC₅₀ (Rat): 16,000	LD₅₀ (Rabbit)	LD <sub>50</sub> (Rat) 5,000 to
Synonym: 2-Propanol		ppm, 8 hours	12,800 mg/kg	5,045 mg/kg

 $LC_{50}$  — The concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

**Chronic toxicity:** The IARC and ACGIH designates Ethylene glycol butyl ether (2-Butoxyethanol) and Isopropyl alcohol (2-Propanol) as category 3 – confirmed animal carcinogen with unknown relevance to humans. Repeated or prolonged exposure in excess of exposure limits in Section 8 may cause damage to the lungs, liver, blood, and kidney.

Sensitization: Not known to cause sensitization in humans.

Section 12. ECO	LOGICAL INFORMATION
Ecotoxicity effects	LC <sub>50</sub> Harlequinfish, Red rasbora 96-hour 4,200 mg/l. LC <sub>50</sub> Fathead minnow 96-hour 9,640 to 10,000 mg/l. EC <sub>50</sub> Water flea 48-hour 1,550 mg/l.
Persistence	The estimated half-life (2-Butoxyethanol) in groundwater ranges from 14 days to 8 weeks; and in soil 7 days to 4 weeks.
Degradability:	Expected to be readily biodegradable.
Section 13. DISP	OSAL CONSIDERATIONS
Cleanup considerations:	This product is not a hazardous waste as defined under RCRA 40 CFR 261. Do not incinerate a closed container. Disposal of this material must be done in accordance with federal, state and/or local regulations. The material destined for disposal must be characterized properly and may differ from the product described in this SDS if mixed with other wastes.
Section 14. TRAI	NSPORT INFORMATION

Please refer to DOT regulation 49 CFR 172.101: Transport information: This material is not regulated under DOT when transported via U.S. commerce routes: and IATA, and IMO via international routes Hazardous Materials Description: (DOT and IATA):

UN/identification no.:	Not Applicable
Proper shipping name:	Not Applicable
Hazard class:	Not Applicable
Packing group:	Not Applicable
DOT reportable quantity (lbs.):	Not Applicable

## Section 15 REGULATORY INFORMATION

## U.S. federal regulatory information:

## U.S. RCRA (40 CFR 261)

This product is not a hazardous waste as defined under RCRA 40 CFR 261.

## State and community right-to-know regulations:

The following component(s) of this material are identified on the regulatory lists below:

## U.S. TSCA Chemical inventory Section 8(b)

**OSHA** — This product is determined to be hazardous as defined in the OSHA Hazard Communications Standard (29 CFR 1910.1200)

**CERCLA** Sections 102a/103 (40 FR 302.4): No ingredients are listed.

Some Components of this product are listed in the following sections of **SARA**: SARA Title III Section 302 — N/A SARA Title III Section 304 — N/A SARA Title III Section 313 — Ethylene glycol butyl ether (2-Butoxyethanol) 1% reporting threshold

Isopropyl alcohol (2-Propanol) 100 % reporting threshold

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute health hazard:	Yes
Chronic health hazard:	Yes
Fire hazard:	No
Reactive Hazard:	No
Pressure Hazard:	No

## California Proposition 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

#### WHMIS (Canada)

Class D-2B: Material causing other toxic effects

**NOTE:** User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

## Section 16: OTHER INFORMATION

## Standards and Certification Listings:

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, the J.C. Whitlam Manufacturing Company, Inc., and its related operations or divisions (Whitlam) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Whitlam assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.

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## Safety Data Sheet

SDS ID: Stock Code AF

Revision date: April 27, 2017 Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:"Freeze Fighter" Anti-Freeze SolutionSynonyms:NoneChemical family:Propylene Glycol mixtureProducer:J.C. Whitlam Manufacturing Company200 West Walnut StreetP:O. Box 380Wadsworth, Ohio 44282-0380www.jcwhitlam.com

# Telephone: 330-334-2524 Available during normal business hours

## Emergency: CHEMTEL 800-255-3924 Available 24 hours

# Section 2. HAZARDS IDENTIFICATION

## EMERGENCY OVERVIEW

Appearance: blue liquid. May cause adverse reproductive effects based upon animal studies. May cause eye and skin irritation. May cause respiratory tract irritation and digestive tract irritation

# GHS Classification in accordance with 29 CFR 1910.1200

Reproductive Toxicity (Category 1B), H360

## Signal Word and Hazard statements

DANGER — May damage fertility or the unborn child

## Precautionary Statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P263 Avoid contact during pregnancy/while nursing.
P280 Use personal protective equipment as required, (see section 8)
P308+313 If exposed or concerned, get medical advice/attention.
P405 Store locked up.

Inhalation:	P260 Do not breathe mist. May cause respiratory tract irritation.
Ingestion:	P270 Do not eat, drink or smoke when using this product. May cause irritation of the digestive tract.
Skin contact:	P264 Wash hands thoroughly after handling. May cause irritation from prolonged or repeated contact.
Eye contact:	May cause eye irritation.
Carcinogenic:	No ingredients listed by the IARC, NTP, OSHA, or the ACHIH.



## Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### **Material information:**

Name	CAS No.	Weight %
Sodium tetraborate decahydrate	1303-96-4	<5
Non-hazardous ingredients	Not Applicable	>95

\***Note:** The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.

## Section 4. FIRST AID MEASURES

**General Advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of the dangerous area.

- Inhalation: Move exposed persons to fresh air. If the person is not breathing or breathing is irregular, provide artificial respiration or oxygen by trained personnel. Consult a physician.
- Skin contact: Remove contaminated clothing and shoes. Wash affected skin with soap and water. Get medical attention if symptoms occur. Wash contaminated clothing before reuse.
- Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If conscious and alert, rinse the mouth with water. Call a physician or poison control center immediately.
- **Eye contact:** Check for and remove any contact lenses, if easy to do so. If eye irritation persists, consult physician after flushing eyes with tepid water for 15 minutes.

## Section 5. FIREFIGHTING MEASURES

Suitable extinguishing media:	Use alcohol foam, carbon dioxide, or dry chemical.
Specific hazards:	Combustion products may include borane/boron oxides. Sodium oxides.
Advice for Firefighters:	Full protective equipment including self-contained breathing apparatus should be used. Do not allow run-off from fire-fighting to enter drains or water courses.

				FIRE		
NFPA	rating	HMIS rating:			R	Hazardous
Health:	0	1*	н		Ā	
Flammability:	0	0	E A		C T	FP-chove 200 F
Instability/reactivity:	0	0	L T		/ v	Stable
Other:	N/A	B (PPE)	н	$\checkmark$ $\checkmark$	I	
*Chronic health haza	rd: Fe	rtility or Unborn	child		Y	N/A
				SPECIAL		

## Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid mist formation. Immediately contact emergency personnel. Evacuate any potentially affected area and isolate personnel from entry. Personnel must have appropriate training, per Occupational Safety and
Large Spill:	Health Administration (OSHA) 29 CFR 1910.120. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8).
Methods for Containment and Clean up	Shut off source if possible and if safe. Prevent entry into waterways and sewers. Dyke and/or absorb with vermiculite or other suitable material. Keep absorbed material in closed containers for disposal. Advise applicable authorities if material has entered sewers or water courses.

## Section 7. HANDLING AND STORAGE

Handling:	Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapors. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Launder soiled clothing thoroughly before re-use.
Storage:	Keep all containers tightly closed when not in use. Do not store with incompatible materials. See Section 10, Stability and Reactivity.

## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Occupational Exposure Limits:

Name	CAS No.	ACGIH <sup>®</sup> TLV <sup>®</sup> Exposure Limits:	Federal OSHA PELs	OSHA PELs 1989 <sup>c</sup>
Sodium tetraborate decahydrate	1303-96-4	2 <sup>A,D</sup>	Not Estab.	10 <sup>A</sup>

All exposure limits listed are 8-hour time weighted average (TWA) — except where noted otherwise.

<sup>A</sup> Time Weighted Average (TWA) is an average exposure over the course of an 8-hour work shift. Airborne aerosol (mist) as measured in milligrams (mist) per cubic meter of air.

<sup>B</sup> A Short Term Exposure Limit TWA over the course of 15 minutes.

PEL — Permissible Exposure Limit is the maximum 8-hour TWA concentration of a chemical that a worker may be exposed to under Occupational Safety and Health Administration (OSHA) regulations. <sup>c</sup> Federal OSHA 1989 PELs were vacated but are in use and enforced by many state OSHA plans. <sup>D</sup> Inhalable aerosol (mist).

**Engineering measures:** Local exhaust ventilation is preferable. General ventilation is acceptable if exposure to materials in this section is maintained below applicable exposure limits.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection:	When engineering controls are not sufficient to reduce exposure to levels below applicable exposure limits, seek professional advice prior to respirator selection and use. Wear a properly fitted NIOSH/ MSHA-approved respirator.
Skin and body protection:	Wear impervious clothing and nitrile rubber gloves to prevent contact. Use the manufacturer's degradation and permeation data for protective material selection.
Eye protection:	Wear safety spectacles with unperforated sideshields, or goggles.

Hygiene measures:

Avoid repeated or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove contaminated clothing and launder before reuse. Not applicable

## Other precautions:

## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Pink liquid
Physical state (solid/liquid/gas):	Liquid
Substance type (pure/mixture):	Mixture
Color:	Pink
Odor:	Sweet odor
Molecular weight:	Not available
pH:	Not Applicable
Boiling point/range (5-95%):	Not Available
Melting point/range:	Not Available
Decomposition temperature:	Not Available
Specific gravity:	1.04
Vapor density:	(AIR = 1) 2.62
Vapor pressure:	0.22 mm Hg at 68°F
Evaporation rate (Butyl acetate= 1):	<0.1
Flash point, method used:	211°F; 99.4°C
Water solubility:	100%
VOC Content:	Not Available
Auto-ignition temperature:	Not Available
Flammable limits in air — lower (%):	2.6
Flammable limits in air upper (%):	12.6

## Section 10. STABILITY AND REACTIVITY

Reactivity:	No data available
Stability:	Stable under recommended storage conditions. This product is hygroscopic.
Possibly hazardous reactions:	No data available
Conditions to avoid:	Never use welding, thermal cutting, or spark- producing equipment near the product because the product, or its residue, can ignite or explode.
Incompatible Materials:	Oxidizing agents, reducing agents, acid chlorides, acid anhydrides, and chloroformates.
Hazardous decomposition products:	In a fire with limited oxygen: propionaldehyde, carbon monoxide.
Polymerization:	Will not occur.

## Section 11. TOXICOLOGICAL INFORMATION

## Acute toxicity:

#### **Product information:**

Name	CAS No.	Inhalation:	Dermal:	Oral:
Sodium tetraborate decahydrate	1303-96-4	No data available.	LD₅₀ (Rabbit) 10,000 mg/kg	Acute LD <sub>50</sub> (Rat):4,500- 5,000 mg/kg
Propylene glycol	57-55-6	No data available.	LD₅₀ (Rabbit) 20,800 mg/kg	No data available.

 $LC_{50}$  — the concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

**Carcinogenicity:** The IARC, NTP, and OSHA: No component of this product, present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen.

**Reproductive toxicity:** RTCHS: VZ2275000. Sodium tetraborate decahydrate is identified as having fetotoxicity in animals. It is a presumed human reproductive toxicant. Animal feeding studies in rat, mouse, and dog, at high doses, have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in the rat, mouse, and rabbit, at high doses demonstrate developmental effects on the fetus.

Sensitization: Not known to cause sensitization in humans.

## Section 12. ECOLOGICAL INFORMATION

Ecotoxicity effects:	Sodium tetraborate decahydrate LC <sub>50</sub> Carassius auratus (goldfish) 72-hour 178 mg/l. EC <sub>50</sub> Daphnia magna (water flea) 48-hour 1,085-1,402 mg/l. Propylene glycol
	EC <sub>50</sub> Water flea 48-hour >10,000 mg/l.

Persistence: No data available.

**Degradability:** No data available.

## Section 13. DISPOSAL CONSIDERATIONS

**Cleanup considerations:** This product is not a hazardous waste as defined under U.S. E.P.A. RCRA 40 CFR 261. Disposal of this material must be done in accordance with federal, state, provincial, and/or local regulations. P501 Dispose of contents/ container to an approved waste disposal plant. The material destined for disposal must be characterized properly and may differ from the product described in this SDS if mixed with other wastes.

## Section 14. TRANSPORT INFORMATION

#### Please refer to DOT regulation 49 CFR 172.101:

**Transport information:** This material is not regulated under DOT when transported via U.S. commerce routes: and IATA, and IMO via international routes **Hazardous Materials Description:** (DOT and IATA):

UN/identification no.:	Not Applicable
Proper shipping name:	Not Applicable
Hazard class:	Not Applicable
Packing group:	Not Applicable
DOT reportable quantity (lbs.):	Not Applicable

## Section 15. REGULATORY INFORMATION

#### U.S. federal regulatory information:

#### U.S. RCRA (40 CFR 261)

This product is not a hazardous waste as defined under RCRA 40 CFR 261.

## State and community right-to-know regulations:

The following component(s) of this material are identified on the regulatory lists below:

#### U.S. TSCA Chemical inventory Section 8(b)

**OSHA** — This product is determined to be hazardous as defined in the OSHA Hazard Communications Standard (29 CFR 1910.1200)

**CERCLA** Sections 102a/103 (40 FR 302.4): No ingredients are listed.

Some Components of this product are listed in the following sections of **SARA**: SARA Title III Section 302 — N/A SARA Title III Section 304 — N/A SARA Title III Section 313 — N/A SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21) Acute health hazard: No

Chronic health hazard:YesFire hazard:NoReactive Hazard:NoPressure Hazard:No

## California Proposition 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

#### WHMIS (Canada)

Class D-2A; D-2B: Material causing other toxic effects. CAS# 1303-96-4 is listed on Canada's DSL List. CAS# 1303-96-4 is listed on Canada's Ingredient Disclosure List.

**NOTE:** User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

## Section 16. OTHER INFORMATION

#### **Standards and Certification Listings:**

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, the J.C. Whitlam Manufacturing Company, Inc., and its related operations or divisions (Whitlam) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Whitlam assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.

# 6 pages

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## Safety Data Sheet

SDS ID: Stock Code FT Revision date: April 27, 2017

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:Flux-Tyte Solder Flux PasteSynonyms:NoneChemical family:N/AProducer:J.C. Whitlam Manufacturing Company200 West Walnut StreetP.O. Box 380Wadsworth, Ohio 44282-0380www.jcwhitlam.com

## Telephone: 330-334-2524 Available during normal business hours

Emergency: 330-334-2524 Available during normal business hours

## Section 2. HAZARDS IDENTIFICATION

Health Hazards: Skin corrosion/irritation, Category 1B Serious eye damage/eye irritation, Category 1

#### Hazard Statement:

Causes severe skin burns and eye damage.



#### **Precautionary Statements**

- Inhalation: Do not breathe dusts or mists. Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.
- Ingestion: Rinse mouth. Do not induce vomiting.
- **Skin Contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
- **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

# Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Material information:

Name	CAS No.	Weight %
Name Petrolatum	8009-03-8	60 - 100
Zinc chloride	7646-85-7	15 - 40
	12125-02-9	1 - 5
Ammonium chloride	12125-02-9	1-5

\***Note:** The above weight percentages are represented in ranges as estimates. Due to variation among production batches, component percentages may vary.

## Section 4. FIRST AID MEASURES

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

**Skin contact:** Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Ingestion: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Call a physician or poison control center immediately. Remove contact lenses, if present and easy to do.

#### Symptoms/effects:

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

## Immediate medical

attention/action:

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

## Section 5. FIREFIGHTING MEASURES

SuitableDry chemical, alcohol foam, carbon dioxide. Do not use water jet, as thisextinguishingmay spread burning material.media:Disconting material

**Specific hazards:** Product will float and can be re-ignited at the water's surface. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

**Special fire-fighting procedures:** Firefighters should wear proper full protective equipment and self-contained breathing apparatus. Move containers from fire area if it can be done without risk. Water spray may be ineffective. Water spray may only be useful in cooling equipment and containers exposed to heat and flame.

NFPA	rating:	HMIS rating:	FIRE	Serious Hazard
Health: Flammability:	3	3	H A C	FP edayo 2009 F
Instability/reactivity:		1		Unstable if heated
Other:	N/A	N/A	H T Y	N/A
			SPECIAL	

## Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Clean-up personnel should wear appropriate chemically protective equipment and respiratory protection.
Large Spill:	For large product users or spills involving large quantities, it is recommended that the purchaser establish a spill prevention, control and countermeasure plan. This plan should include procedures for proper storage, as well as clean-up of spills or leaks. The procedure should conform to safe practices and provide for proper recovery and/or disposal.
Methods for Containment and Clean up	Eliminate all sources of heat and flame. Ventilate area of release. If material is in paste form, scrape up into suitable containers. If material is in dust form, clean up using dustless methods (for example, HEPA vacuum). Do not use compressed air. Place any recovered material in closed, labelled containers for recycling or disposal (see below). Keep out of waterways. Notify the appropriate authorities as required.

Section 7. HANDLING AND STORAGE

Handling:	Wear appropriate chemically protective equipment. Use in a well ventilated area. Avoid inhalation and ingestion of product, and activities that generate dust or fume. Avoid contact with skin, eyes, and clothing. Keep melting temperatures as low as possible to minimize the generation of fumes. NOTE: Inadvertent contaminants to product, such as moisture, ice, snow, grease or oil can cause an explosion when charged to a molten metal bath or melting furnace. (Preheating metal will remove moisture from product). Keep away from oxidizing materials and incompatibles. Use caution when opening cap. Keep container closed when not in use. Wash thoroughly after handling.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible material, heat and flame. Practice good housekeeping procedures to prevent accumulation of dust or refuse. Keep material dry.

## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Occupational Exposure Limits:

Name	CAS No.	ACGIH <sup>®</sup> TLV <sup>®</sup> Exposure Limits:	Federal OSHA PELs	OSHA PELs 1989 c
Zinc chloride	7646-85-7	1 mg/m <sup>3</sup> (fume) (TWA) 2 mg/m <sup>3</sup> (fume) (STEL)	1 mg/m³ (fume)	N/A
Ammonium chloride	12125-02-9	10 mg/m³ (fume) (TWA)	10 mg/m <sup>3</sup> (fume) (TWA) (final rule/vacated value)	N/A

## Engineering measures:

An eyewash station and safety shower should be made available in the immediate working area. Other equipment, including chemically resistant apron, may be required according to workplace standards.

## PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection:	For prolonged exposure or if the TLV is exceeded, wear NIOSH- approved respirators. Use in well ventilated area. Use general ventilation for prolonged exposures or if the TLV is not known.
Skin and body protection:	Gloves impervious to the material must be worn. Advice should be sought from glove suppliers.
Eye protection:	Safety goggles, to prevent product from entering the eyes. Safety glasses or goggles AND a full face shield are recommended around molten metal.
Hygiene measures:	Avoid inhalation of vapors, fumes and dusts. Avoid contact with eyes, skin and clothing. Do not permit eating, drinking or the use of cosmetics or tobacco products while handling or processing material, or in product work areas. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Remove soiled clothing and wash it thoroughly before reuse.

# Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brownish to white paste
Physical state (solid/liquid/gas):	Paste
Substance type (pure/mixture):	Mixture
Color:	Brownish to white
Odor:	Slight petroleum
Molecular weight:	Not Available
pH:	Not Available
Boiling point/range (5-95%):	Not Available
Melting point/range:	95°F (35°C)
Decomposition temperature:	Not Available
Specific gravity:	0.87 @ 60°F (15.6°C)
Vapor density:	Not Available
Vapor pressure:	Not Available
Evaporation rate (Butyl acetate= 1):	Not Available
Flash point, method used:	360°-430°F (182°C-221°C) (TCC)
Water solubility:	Insoluble
VOC Content:	11.7 g/l, <1%
Auto-ignition temperature:	No data
Flammable limits in air — lower (%):	No data
Flammable limits in air — upper (%):	No data

## Section 10. STABILITY AND REACTIVITY

Reactivity:	Stable under ambient pressure and temperature.
Stability:	Stable under the recommended storage and handling conditions prescribed. May be corrosive to metals such as copper and its alloys (e.g. brass, bronze), aluminum, ferrous metals (e.g. cast iron), carbon steel and some stainless steels (e.g. 303, 310, 321, 400 series).

Possibly hazardous reactions:	Contact with acids may evolve hydrogen chloride gas. Contact with strong alkalis may evolve ammonia gas.	
Conditions to avoid:	Avoid extreme heat and direct flame. Contact with incompatible materials.	
Incompatible Materials:	Strong oxidizers (e.g. chlorine, peroxides, etc.), strong acids, strong alkalis, potassium, turpentine, cyanide, sulfides, powdered zinc, halogenated compounds, lead and silver salts.	
Hazardous decomposition products: Ammonia.		

Polymerization: Will not occur.

## Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity: No data available.

#### **Product information:**

Name	CAS No.	Inhalation:	Oral:	Dermal:
Petrolatum	8009-03-8	LD <sub>50</sub> (Rabbit) N/A	LD <sub>50</sub> (Rabbit) N/A	LD <sub>50</sub> (Rabbit) 3,600 mg/kg
Zinc chloride	7646-85-7	LD <sub>50</sub> (Rabbit) N/A	LD₅₀ (Rabbit) 350 mg/kg	LD <sub>50</sub> (Rabbit) N/A
Ammonium chloride	12125-02-9	LD₅0 (Rabbit) N/A	LD <sub>50</sub> (Rabbit) 1,650 mg/kg	LD <sub>50</sub> (Rabbit) N/A

 $LC_{50}$  - The concentration of the chemical in air that kills 50% of the test animals in a given time (usually four hours).

# **Chronic toxicity:** Prolonged or repeated skin contact may cause severe drying and cracking of the skin (dermatitis).

Sensitization: None known

Section	12.	ECOLOGICAL	N

Ecotoxicity effects: No data available

Persistence: No data available

Degradability: No data available

## Section 13. DISPOSAL CONSIDERATIONS

**Cleanup considerations:** Review federal, state and local government requirements prior to disposal. May have value on a recycled basis. Dispose in accordance with all applicable government regulations.

## Section 14. TRANSPORT INFORMATION

**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Zinc chloride)

UN No: UN3260

Primary Class(es): 8

Subsidiary Class(es): None

Packing Group: III

**Other Shipping Information:** Within Canada, the 'Limited Quantity Exemption' may apply for containers which hold 5 Kilograms or less of the product. Under the TDGR, refer to Section 1.17 for additional 'Limited Quantity Exemption' requirements, if shipping under this exemption.

## Section 15. REGULATORY INFORMATION

U.S. federal regulatory information:

No information available

**NOTE:** User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.

#### Section 16. OTHER INFORMATION

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, the J.C. Whitlam Manufacturing Company, Inc., and its related operations or divisions (Whitlam) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Whitlam assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.



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## Safety Data Sheet

#### 1 - Identification

## Product Name: WD-40 Multi-Use Product Aerosol NOT FOR SALE IN CALIFORNIA

Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion

**Restrictions on Use: None identified** 

SDS Date Of Preparation: 07/20/2014

	Manufacturer: WD-40 Company
	Address: 1061 Cudahy Place (92110)
	P.O. Box 80607
	San Diego, California, USA
1	92138 -0607
	Telephone:
	Emergency only: 1-888-324-7596 (PROSAR)
	Information: 1-888-324-7596
	Chemical Spills: 1-800-424-9300 (Chemtrec)
	1-703-527-3887 (International Calls)
	( ) 00 01. 000. (million million )

#### 2 – Hazards Identification

Hazcom 2012/GHS Classification: Flammable Aerosol Category 1 Gas Under Pressure: Compressed Gas Aspiration Toxicity Category 1

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

## Label Elements: DANGER! Extremely Flammable Aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Prevention Keep away from heat, sparks, open flames, hot surfaces - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Response IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. Storage Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Disposal Dispose of contents and container in accordance with local and national regulations.

3 - Comp	osition/Information	on	Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
Aliphatic Hydrocarbon	64742-47-8	45-50	Flammable Liquid Category 3

			Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9	<25	Not Hazardous
	64742-65-0		
	64742-53-6		
	64742-54-7		
	64742-71-8		
LVP Aliphatic Hydrocarbon	64742-47-8	12-18	Aspiration Toxicity Category 1
Carbon Dioxide	124-38-9	2-3	Simple Asphyxiant
			Gas Under Pressure,
			Compressed Gas
Non-Hazardous Ingredients	Mixture	<10	Not Hazardous

Note: The exact percentages are a trade secret.

#### 4 – First Aid Measures

**Ingestion (Swallowed):** Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

**Eye Contact:** Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.

Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

**Signs and Symptoms of Exposure**: May cause eye and respiratory irritation. Inhalation may cause coughing, headache and dizziness. Skin contact may cause drying of the skin.

Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

#### 5 – Fire Fighting Measures

Suitable (and unsuitable) Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire. Specific Hazards Arising from the Chemical: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.

**Special Protective Equipment and Precautions for Fire-Fighters**: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

#### 6 – Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.

Methods and Materials for Containment/Cleanup: Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

#### 7 – Handling and Storage

**Precautions for Safe Handling:** Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

Chemical Occupational Exposure Limits		
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)	
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL	
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)	
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)	
Non-Hazardous Ingredients	None Established	

#### 8 – Exposure Controls/Personal Protection

# The Following Controls are Recommended for Normal Consumer Use of this Product Appropriate Engineering Controls: Use in a well-ventilated area.

#### Personal Protection:

Eye Protection: Avoid eye contact. Always spray away from your face.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

#### For Bulk Processing or Workplace Use the Following Controls are Recommended

Appropriate Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

#### Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.

**Respiratory Protection:** None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice. **Work/Hygiene Practices:** Wash with soap and water after handling.

Appearance:	Light amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n- octanol/water:	Not established
Flash Point:	122°F (49°C) Tag Closed Cup (concentrate)	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas)	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	412 grams/liter (49.5%)	Pour Point:	-63°C (-81.4°F ) ASTM D-97

#### 9 – Physical and Chemical Properties

#### 10 – Stability and Reactivity

**Reactivity:** Not reactive under normal conditions **Chemical Stability:** Stable Possibility of Hazardous Reactions: May react with strong oxidizers generating heat. Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

## 11 – Toxicological Information

#### Symptoms of Overexposure:

Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.

Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.

Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.

**Ingestion:** This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.

Chronic Effects: None expected.

**Carcinogen Status:** None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.

Reproductive Toxicity: None of the components is considered a reproductive hazard.

#### Numerical Measures of Toxicity:

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg and the dermal toxicity greater than 2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

#### 12 – Ecological Information

Ecotoxicity: No specific aquatic toxicity data is currently available, however components of this product are not expected to be harmful to aquatic organisms

Persistence and Degradability: Component are readily biodegradable.

Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients. Mobility in Soil: No data available

Other Adverse Effects: None known

## 13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

## 14 - Transportation Information\_

DOT Surface Shipping Description:

UN1950, Aerosols, 2.1 Ltd. Qty (Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark) IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY

ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1 NOTE: WD-40 does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

#### 15 – Regulatory Information

#### U.S. Federal Regulations:

**CERCLA 103 Reportable Quantity:** This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many

states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

**EPA Toxic Substances Control Act (TSCA) Status**: All of the components of this product are listed on the TSCA inventory.

**VOC Regulations**: This product complies with the consumer product VOC limits of the US EPA and states adopting the OTC VOC rules but does not comply with CARB.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)**: This product does not contain chemicals regulated under California Proposition 65.

**Canadian Environmental Protection Act**: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.

Canadian WHMIS Classification: Class A (Compressed gas), Class B-5 (Flammable Aerosol)

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:

Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

Revision Date: July 20, 2014

Supersedes: May 23, 2014

Revision Summary: Convert to Hazcom 2012. Changes in all sections.

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APPROVED By: I. Kowalski

Regulatory Affairs Dept.

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