



Safety Data Sheet

RF 1319-2 Urethane Casting Part A

Section 1. Identification

Product Identifier RF 1319-2 Urethane Casting Part A
Synonyms N/A
Manufacturer Stock Numbers 34720A; RF 1319-2 (Slow) Part A

Recommended use Component of Polyurethane.
Uses advised against N/A

Manufacturer Contact

Address Resin Formulators
18027 Bishop Avenue
Carson, CA, 90746
USA

Phone (310) 204-6159 Emergency Phone (800) 424-9300 Fax (310) 202-7247
CHEMTREC

Email sales@evroberts.com Website http://www.evroberts.com

Section 2. Hazards Identification

Classification ACUTE TOXICITY - INHALATION - Category 3
EYE DAMAGE/IRRITATION - Category 2A
SENSITIZATION - RESPIRATORY - Category 1
SENSITIZATION - SKIN - Category 1
SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 3
Signal Word Danger

Pictogram



Hazard Statements

Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause respiratory irritation
Toxic if inhaled

Precautionary Statements

Response

If experiencing respiratory symptoms: Call a poison center or doctor immediately
If eye irritation persists: 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 inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If on skin: Wash with plenty of soap and water for a minimum of 15 minutes and contact a doctor immediately
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray.
Contaminated work clothing must not be allowed out of the workplace.
In case of inadequate ventilation wear respiratory protection.
Use only outdoors or in a well-ventilated area.
Wash completely and thoroughly after handling and remove and clean all clothing and shoes before reuse.
Wear eye protection/face protection.
Wear protective gloves.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with federal, state and local environmental control regulations. Incineration is the preferred method.

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Routes of Entry

Skin Contact, Eye Contact, Inhalation

Acute Inhalation Effects of Overexposure

Inhalation of vapors and mist of dicyclohexylmethane-4,4'-diisocyanate at concentration above the applicable exposure limit can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limit with similar symptoms as well as an asthma attack. Exposure well above the exposure limit may lead to bronchitis, bronchial spasm

and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever, chills) has also been reported.

Chronic Inhalation Effects of Overexposure

As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanates at levels well below the applicable exposure limits. These symptoms, which include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent.

Acute Skin Contact Effects of Overexposure

Dicyclohexylmethane-4,4'-diisocyanate is a primary skin irritant. It reacts with skin protein and moisture and can cause irritation. Symptoms of skin irritation can include redness, swelling, rash, scaling or blistering. Dicyclohexylmethane-4,4'-diisocyanate is also a potent skin sensitizer. Experience indicates that direct skin contact is the route of exposure most likely to cause sensitization. Once sensitized, an individual may react even to airborne levels below the applicable exposure limit with the following symptoms: itching and tingling of the earlobes and neck, rash, hives, swelling of the arms and legs or other symptoms common to allergic dermatitis. These symptoms may be immediate or delayed for several hours.

Chronic Skin Contact Effects of Overexposure

Prolonged contact with the isocyanate can cause reddening, swelling, rash, scaling or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material or even as a result of vapor-only exposure. Animal tests have indicated that respiratory sensitization may result from skin contact with Dicyclohexylmethane-4,4'-diisocyanate. (See section 11)

Acute Eye Contact Effects of Overexposure

Liquid, vapors and mist of this product are irritation and can cause tearing, reddening and swelling of the eyes, possibly accompanied by a stinging sensation.

Chronic Eye Contact Effects of Overexposure

None known.

Acute Ingestion Effects of Overexposure

Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract.

Chronic Ingestion Effects of Overexposure

None known.

Carcinogenicity

This product and its components are not listed by NTP, IARC or regulated as a carcinogen by OSHA.

Medical Conditions Aggravated by Exposure

Skin allergies, asthma and any other respiratory disorders (bronchitis, emphysema, hyperreactivity), eczema.

Hazards Not Classified

Lachrymator

Section 3. Ingredients

CAS	Ingredient Name	Weight %
Not Established	Polyisocyanate prepolymer based on Methylenedicyclohexyl diisocyanate	60-70 %
5124-30-1	Cyclohexane, 1,1'-methylenebis[4-isocyanato-	30-40 %

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

Section 4. First-Aid Measures

Eye Contact	Severe irritant to the eyes. Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. Obtain medical attention IMMEDIATELY.
Skin Contact	Remove contaminated clothing and shoes immediately. Immediately flush contaminated skin with plenty of soap and water for at least 15 minutes. . Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. After washing, cover affected skin with polyethylene glycol (300-500 molecular weight) and wash again immediately with soap and water to thoroughly remove polyethylene glycol and residual isocyanate. Repeat if necessary. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing. Seek medical attention if irritation or allergic dermatitis symptoms develop or if gross exposure occurs.
Inhalation	Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. Consult physician.
Ingestion	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Give victim a glass of water or milk. Wash out mouth with water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Notes To Physician	Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation frequently. Work place vapors could produce reversible corneal epithelial edema impairing vision. Skin: This compound is a potent skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritation nature of the compound. symptomatic. Inhalation: Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Extinguishing media: Use alcohol-resistant foam, carbon dioxide, dry chemical or water spray when fighting fires involving this material.
Unsuitable Extinguishing Media	N/A
Flash Point	>392 Degrees F (200 Degrees C) Pensky-Martens Closed Cup (ASTM D-93)
Special Fire Fighting Procedures	Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, Dicyclohexylmethane-4,4'-diisocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion.

Unusual Fire/Explosion Hazards

Closed container may explode when exposed to extreme heat or burst when contaminated with water (CO2 evolved).

Section 6. Accidental Release Measures

Major Spills

For Major Spills, call CHEMTREC at 1-800-424-9300

Spills, Leaks or Releases

Evacuate nonessential personnel. Remove all sources of ignition and ventilate the area. Dike or impound spilled material and control further spillage if feasible. Notify appropriate authorities if necessary. Cover the spill with absorbent (e.p., vermiculite, sawdust, Fuller's earth) and pour decontamination solution equal amounts of: 1. a mixture of mineral spirits 80%, VM&P Naphtha 15%, and Household Detergent 5% and 2. a mixture of 50/50 monoethanol amine-water, totalling two times the estimated spill pool volume, over the spill area and allow to react for 15 minutes. Collect material in open containers. Repeat applications of decontamination solution, with scrubbing, followed by absorbent until the surface is decontaminated. Use swype test kits (Colormetric Laboratories, Inc. Des Plaines, IL 708-696-3036) to check for residual surface contamination. Remove containers to a safe place, cover loosely and allow to stand for 72 hours. (See Personal Protection, Section 8)

Neutralization Chemicals

For tools and equipment: a mixture of mineral spirits 80%, VM&P Naphtha 15%, and Household Detergent 5%) followed by the same quantity of 50/50 monoethanol amine-water solution.

Section 7. Handling and Storage

Storage Temperature (Min/Max)

Minimum Storage Temperature: 77 Degrees F (25 Degrees C)
Maximum Storage Temperature: 122 Degrees F (25 Degrees C)

Ideal Storage Temperature

Ideal storage temperature is 86-104 Degrees F (30-40 Degrees C)

Shelf Life

12 Months @ 77°F (25°C)

Special Sensitivity

If container is exposed to temperatures above 122 Degrees F (50 Degrees C), such as in a fire situation, it can be pressurized and possibly rupture violently. Dicyclohexylmethane-4,4'-diisocyanate reacts slowly with water to form CO2 gas. This gas can cause sealed containers to expand and possibly rupture explosively.

Handling/Storage Precautions

Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. At maximum storage temperatures noted, material may slowly polymerize without hazard. Ideal storage temperature range is 86-104 Degrees F. Avoid contact with skin and eyes. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

Other Notes

If Dicyclohexylmethane-4,4'-diisocyanate is stored for prolonged periods at or below a temperature of 77 F (25 C), crystallization and settling of the isomer may occur. Storage in a cold warehouse can cause crystals to form. These crystals can settle to the bottom of the container. If crystals do form, they can be melted easily with moderate heat. It is suggested that a container the size of a drum be warmed for 16-24 hours at 104-122 F (40-50 C). When the crystals are melted, the container should be agitated by rolling or stirring, until the contents are homogeneous. Since heated Dicyclohexylmethane-4,4'-diisocyanate (104-122 F (40-50 C)) will generate vapors more rapidly than product stored at 77 F (25 C), be sure to follow the precautions under Section 8 for personal protection whenever opening a heated Dicyclohexylmethane-4,4'-diisocyanate

container.

Safe Handling Precautions Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage, including any incompatibilities:
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Moisture sensitive.

Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Polyisocyanate prepolymer based on Methylenedicyclohexyl diisocyanate	Not Established	N/A	N/A
	Cyclohexane, 1,1'-methylenebis[4-isocyanato-	Not Established (.054 mg/m ³ TWA) (.005 ppm TWA)	N/A	N/A
Personal Protective Equipment	Goggles, Gloves, Apron, Face Shield, Respirator, PROTECTIVE CLOTHING, RUBBER BOOTS, VENTILATION, CHEMICAL GOGGLES			
Eye/Face Protection	Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).			
Skin Protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min Splash contact Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min			
Body Protection	Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.			
Respiratory Protection	Wear risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)			

Control of Environmental Exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Clear
Odor	Odorless
Odor Threshold	N/A
Solubility	Insoluble
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	~6500 (LV-4@20rpm)
Specific Gravity	1.08
Density lbs/Gal	9.03
Pounds per Cubic Foot	N/A
Flash Point	>392° F (200°C)
FP Method	Closed Cup DIN 51758
pH	N/A
Melting Point	Below 79°F (26°C)
Boiling Point	235°F (113°C)
Boiling Range	113 °C (235 °F) at 1,013 hPa (760 mmHg)
LEL	N/A
UEL	N/A
Evaporation Rate	N/A
Flammability	1
Decomposition Temperature	N/A
Auto-ignition Temperature	437°F (225°C) at 1,013 hPa (760 mmHg)
Vapor Pressure	0.0013 hPa (0.0010 mmHg) at 25
Vapor Density	N/A

Section 10. Stability and Reactivity

Chemical Stability	Stable under recommended storage conditions
Hazardous Polymerization	May occur; Contact with moisture or other materials which react with isocyanates may cause polymerization
Incompatibilities	Water, amines, strong bases, alcohols, metal compounds and surface active materials.
Instability Conditions	Moisture and high heat
Decomposition Products	By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, Dicyclohexylmethane-4,4'-diisocyanate vapors or aerosols.

Section 11. Toxicological Information

Toxicology Information Toxicology Data For: Dicyclohexylmethane-4,4'-diisocyanate

Acute Toxicity:

Oral: LD50 (rat) 1065 mg/kg

Dermal: LD50 (rabbit) 10000 mg/kg

Inhalation: LC50 (rat): For 4-hour exposure periods: 434 mg/m³ (Rat); 295 mg/m³ (28 ppm)(Male Rat); 307 mg/m³ (29 ppm)(Female Rat); LCLo: 200 mg/m³ (19 ppm) (Rat); Noel: 113 mg/m³ (11 ppm); Subacute: Exposure for 4 hours/day, 5 days/week, for 2 weeks: 120 mg/m³ (11 ppm) caused respiratory irritation and decreased growth; 40 mg/m³ (4 ppm) caused initial loss of weight (Rat).

Eye Effects: Mild, reversible irritation (Rabbit)

Skin Effects: Irritation and potent skin sensitizer (Guinea Pig). Irritation (Rabbit)

Sensitization: Two inhalation studies with guinea pigs indicated possible respiratory sensitization. One study also with guinea pigs indicated that Dicyclohexylmethane-4,4'-diisocyanate is not a respiratory sensitizer. An additional study in which Dicyclohexylmethane-4,4'-diisocyanate was applied intradermally and followed by an inhalation challenge resulted in a weak respiratory asensitization response in guinea pigs.

Mutagenicity: Ames test negative for mutagenicity with and without liver enzyme activation. Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Additional Information:

Repeated dose toxicity - Rat - male and female - Inhalation

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.,

Cough, Shortness of breath, Headache, Nausea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

Section 12. Ecological Information

Ecology Data for
Dicyclohexylmethane-
4,4'-diisocyanate

Fish Toxicity: Brachydanio - 96 hours; LC0 = 0.69 mg/l; LC50 = 1.20 mg/l; LC100 = 2.76 mg/l

Section 13. Disposal

Disclaimer	The generation of waste should be avoided or minimized wherever possible.
Disclaimer Part 2	Disposal should be in accordance with local, state, provincial and national regulations. This material is not a hazardous waste under RCRA 40 CFR 261. Small quantities should be treated with a liquid decontaminate. The treated waste is not a hazardous material under RCRA 40 CFR 261. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.
Disclaimer Part 3	Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.
Waste Disposal Method	Waste must be disposed of in accordance with federal, state and local environmental control regulations. Incineration is the preferred method.
Empty Container Precautions	Empty containers must be handled with care due to product residue. Do not heat or cut empty container with electric or gas torch.

Section 14. Transport Information

UN Number	3082
UN Proper Shipping Name	Other regulated substances, liquid, n.o.s.(Dicyclohexylmethane diisocyanate)
DOT Classification	9
Packing Group	III

Section 15. Regulatory Information

OSHA Status	This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200)
TSCA Status	On TSCA Inventory
CERCLA	No Reportable Quantity
SARA 302 Extremely Hazardous Substances	None
SARA 311/312 Hazard Categories	Immediate Health Hazard; Delayed Health Hazard; Reactive Hazard
Sara 313 Components	The following components are subject to reporting levels established by SARA Title III, Section 313: Toxic Chemicals: Dicyclohexylmethane-4,4'-diisocyanate, (CAS: 5124-30-1) 85%, De Minimis Concentration for Section 313 is 1.0%
State Regulations	Dicyclohexylmethane-4,4'-diisocyanate is listed on the Massachusetts Hazardous Substance List, New Jersey Hazardous Substance List, New Jersey Environmental Hazardous Substance List and the Pennsylvania Hazardous Substance List.
California Prop. 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.

Section 16. Other Information

Revision Date	6/10/2018
---------------	-----------

HMIS Rating (Not Regulated)

The HMIS Rating for this product is:
Health: 3* Flammability: 1 Reactivity: 1

For Information Purposes Only - No Longer Regulated

Disclaimer

The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication as part of E.V. Roberts' product safety program. It is not intended to constitute performance information concerning the product. No warranty, expressed or implied, or merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

To determine applicability or effects of any law or regulation with respect to the product, user should consult his legal advisor or the appropriate government agency. E.V. Roberts does not undertake to furnish advice on such matters.



Safety Data Sheet

RF 1319-2 Urethane Casting Part B

Section 1. Identification

Product Identifier RF 1319-2 Urethane Casting Part B
Synonyms RF 1319-2 Part B
Manufacturer Stock
Numbers 34720B; RF 1319-2B

Recommended use Component of Polyurethane
Uses advised against N/A

Manufacturer Contact

Address Resin Formulators
 18027 Bishop Avenue
 Carson, CA, 90746
 USA

Phone
(310) 204-6159

Emergency Phone
(800) 424-9300
CHEMTREC

Fax
(310) 202-7247

Email
sales@evroberts.com

Website
<http://www.evroberts.com>

Section 2. Hazards Identification

Classification ASPIRATION HAZARD - Category 1A
 EYE DAMAGE/IRRITATION - Category 2B
 SKIN CORROSION/IRRITATION - Category 2
Signal Word Warning

Pictogram



Hazard Statements

CAUTION! May cause irritation to upper respiratory tract. Avoid prolonged or repeated inhalation. May cause nausea, vomiting and sensitization of the respiratory tract
Moderately irritating to eyes
Moderately irritating to skin

Precautionary Statements

Response

Do NOT induce vomiting unless directed to do so by medical personnel.
Get medical advice/attention if you feel unwell.
If in eyes: Flush thoroughly with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Seek medical advice if symptoms persist.
If on skin: Wash with plenty of soad and water thoroughly.
If swallowed: Rinse mouth.
Take off contaminated clothing and wash it before reuse.

Prevention

Avoid breathing dust/fume/gas/mist/ vapors/spray.
In case of inadequate ventilation wear respiratory protection.
Wear protective Butyl Gloves, Face Shield, Eye Bath and Safety Shower.

Storage

Keep container closed to protect from contamination. Protect from atmospheric moisture by maintaining a nitrogen atmosphere.

Disposal

Dispose of contents/container in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Developmental Effects

No known significant effects or critical hazards.

Carcinogenicity

This product and its components are not listed by NTP, IARC or regulated as a carcinogen by OSHA.

Note to Physician

Treatment based on judgement of the physician in response to reactions of the patient.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
Mixture	Proprietary Polyol Blend (Non-Hazardous)	90-100 %

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

Section 4. First-Aid Measures

Eye	Flush eye with water for 15 minutes. Get medical attention.
Skin	Remove contaminated clothing and shoes. Wash skin with soap and water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.
Inhalation	Remove person to fresh air. If signs/symptoms develop, get medical attention.
Ingestion	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention
Note to Physician	Treatment based on judgement of the physician in response to reactions of the patient.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable Extinguishing Media	Do not direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire. Hazardous Decomposition Products: CO, CO2
Flash Point	>380 Degrees F (Pensky-Martens Closed Cup)

Section 6. Accidental Release Measures

Major Spills Procedures Clean-up	For Major Spills, call CHEMTREC at 1-800-424-9300 Use absorbent, place in approved containers Clean up spills immediately, observing precautions in Protective Equipment section.
----------------------------------	---

Section 7. Handling and Storage

Storage Precautions	Keep container closed to protect from contamination. Protect from atmospheric moisture by maintaining a nitrogen atmosphere.
Handling Precautions	Use standard industrial practices. After handling, wash hands before eating or smoking.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Proprietary Polyol Blend (Non-Hazardous)	Not Established	N/A	N/A
Personal Protective Equipment	Goggles, Gloves, Face Shield, VENTILATION, CHEMICAL GOGGLES			
Eye Protection	Chemical safety goggles. If there is a potential for splashing, use a full-face shield.			

Skin Protection	The following protective materials are recommended. Gloves - neoprene, nitrile-butadiene rubber, butyl rubber. Thin disposable gloves should be avoided for repeated or long term use. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.
Respiratory Protection	Not ordinarily required
VENTILATION	Have proper ventilation

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Clear
Odor	Odorless
Odor Threshold	N/A
Solubility	N/A
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	~350 (LV-2 @ 20rpm)
Specific Gravity	1.1
Density lbs/Gal	9.16
Pounds per Cubic Foot	N/A
Flash Point	380°F
FP Method	Closed Cup (Pensky)
pH	N/A
Melting Point	N/A
Boiling Point	N/A
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	N/A
Flammability	1
Decomposition Temperature	N/A
Auto-ignition Temperature	N/A
Vapor Pressure	N/A
Vapor Density	N/A

Section 10. Stability and Reactivity

Chemical Stability	Stable under recommended storage conditions
Hazardous Polymerization	Will not occur
Incompatibilities	Strong oxidizing materials
Decomposition Products	Depending on temperature, air supply and presence of other materials hazardous decomposition products, may include but are not limited to: aldehydes, ketones, organic acids and polymer fragments.

Section 11. Toxicological Information

Toxicology Information No data

Section 12. Ecological Information

Ecological Information No data

Section 13. Disposal

Waste Disposal Method Waste must be disposed of in accordance with federal, state and local environmental control regulations. Incineration is the preferred method.

Empty Container Precautions Empty containers must be handled with care due to product residue. Do not heat or cut empty container with electric or gas torch.

Section 14. Transport Information

UN Number N/A

UN Proper Shipping Name N/A

DOT Classification Not Regulated

Packing Group N/A

DOT Not hazardous by DOT regulations

DOT Proper Shipping Name Not Regulated

Section 15. Regulatory Information

Disclaimer The regulatory information is not intended to be comprehensive. Other regulations may apply to this material. To determine applicability or effects of any law or regulation with respect to the product, user should consult his legal advisor or the appropriate government agency.

U.S. Federal Regulations United States Federal Regulations:

US EPA CERCLA Hazardous Substances (40 CFR 302)
Residual propylene oxide (typical)

SARA 311/312 Hazard Categories:
Not Evaluated

US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III
Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):
Not Evaluated

US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III
Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:
Not Evaluated

State Right-To-Know Information:

For details of your regulatory requirement, you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:
Not Evaluated

New Jersey Environmental Hazardous Substances List and/or New Jersey, RTK
Special Hazardous Substances Lists:
Not Evaluated

California Prop 65: This product contains the following chemicals, which the
state of California has found to cause cancer, birth defects or other reproductive
harm:
None

Section 16. Other Information

Revision Date

6/10/2018

HMIS Rating (Not
Regulated)

The HMIS Rating for this product is:
Health: 1 Flammability: 1 Reactivity: 0

0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

Disclaimer

The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication as part of E.V. Roberts' product safety program. It is not intended to constitute performance information concerning the product. No warranty, expressed or implied, or merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

To determine applicability or effects of any law or regulation with respect to the product, user should consult his legal advisor or the appropriate government agency. E.V. Roberts does not undertake to furnish advice on such matters.