



Safety Data Sheet

RF 2286 Pre-Mixed and Frozen Part A

Section 1. Identification

Product Identifier	RF 2286 Pre-Mixed and Frozen Part A		
Synonyms	N/A		
Manufacturer Stock Numbers	N/A		
Recommended use	Epoxy Resin		
Uses advised against	Strong oxidizer. Contact with other combustible material can cause fire.		
Manufacturer Contact			
Address	Resin Formulators 18027 Bishop Avenue Carson, CA, 90746 USA		
	Phone	Emergency Phone	Fax
	(310) 204-6159	(800) 424-9300 CHEMTREC	(310) 202-7247
	Email	Website	
	sales@evroberts.com	http://www.evroberts.com	

Section 2. Hazards Identification

Classification	ACUTE TOXICITY - INHALATION - Category 5 EYE DAMAGE/IRRITATION - Category 2B SKIN CORROSION/IRRITATION - Category 2
Signal Word	Warning

Pictogram



Hazard Statements

Causes eye irritation
May be harmful if inhaled
Moderately irritating to skin

Precautionary Statements

Response

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: Call a POISON CENTER or doctor/... if you feel unwell

Prevention

Wash ...thoroughly after handling.

Storage

Protect from sunlight. Store in a well-ventilated place.

Disposal

N/A

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Form

Viscous Liquid

OSHA/HCS Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200)

EMERGENCY OVERVIEW

WARNING!
CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE RESPIRATORY TRACT IRRITATION. HEATED MATERIAL CAN CAUSE THERMAL BURNS.

Potential Health Effects

Inhalation

Slightly irritating to eyes and respiratory tract.

Ingestion

No hazard in normal industrial use.

Skin

Irritating to skin. May cause sensitization by skin contact. Heated material can cause thermal burns.

Potential Chronic Health Effects

Chronic Health Effects

None known

Carcinogenicity

No known significant effects or critical hazards

Mutagenicity

No known significant effects or critical hazards

Teratogenicity

No known significant effects or critical hazards

Developmental Effects

No known significant effects or critical hazards.

Fertility Effects

No known significant effects or critical hazards.

Target Organs

Review Section 2 and 11 for any additional assessments.

Over-Exposure

Inhalation:

Signs/Symptoms

Adverse symptoms may include the following: respiratory tract irritation, coughing

Ingestion:
No specific data

Skin:
Adverse symptoms may include the following: irritation, redness

Eyes:
Adverse symptoms may include the following: pain or irritation, watering, redness.

Medical conditions aggravated by over-exposure:
Pre-existing skin disorders may be aggravated by over-exposure to this product.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	> 80 %
17557-23-2	Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxyethylene)]bis-	< 20 %

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

Section 4. First-Aid Measures

Eye	Immediately flush with plenty of clean running water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes lifting eyelids occasionally. Have eyes examined immediately and tested by medical personnel.
Skin	In case of contact, immediately flush contaminated skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. For hot product, flush contaminated skin with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, breathing is Irregular or 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. 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. Get medical attention if adverse health effects persist or are severe.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed Do NOT Induce Vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. In general, no treatment is necessary unless large quantities of product are ingested. Give 1 or 2 glasses of water to drink. Call medical personnel for immediate attention.

Protection of First Aid Personnel	In the event of body contact with molten material, immediately cool with running water. Do not attempt to remove material from skin. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Note to Physician	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	<p>Flammability of the product: In a fire or if heated, a pressure increase will occur and the container may burst.</p> <p>Extinguishing media: - Suitable : Use dry chemical, CO2, water spray (fog) or foam. - Not suitable : Do not use water jet.</p> <p>Special exposure hazards: 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.</p> <p>Hazardous combustion products: Decomposition products may include the following materials: Carbon monoxide, Fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity. No specific data.</p> <p>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.</p>
Unsuitable Extinguishing Media	N/A

Section 6. Accidental Release Measures

Personal precautions	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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when Ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
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)
Large Spills	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small Spills

Stop leak if without risk. Move containers from spill area. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labeled appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Handling

Put on appropriate personal protective equipment (see section 8). Do not eat, drink or smoke when using this product. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid breathing of vapors or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.

Storage

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. 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. Note: This resin may be handled, shipped and stored at elevated temperatures in bulk.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Ingredient Name	ACGIH TLV	OSHA PEL	STEL
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	N/A	none	N/A
Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-	N/A	none	N/A

Personal Protective Equipment

Goggles, Gloves, Apron, Face Shield, Respirator, VENTILATION, EYE WASH AND SAFETY SHOWER

Consult local authorities

Consult local authorities for acceptable exposure limits.

Recommended Monitoring Procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering Measures

Use only with adequate ventilation. 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 containments below any recommended or statutory limits.

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

Respiratory	that eyewash stations and safety showers are close to the workstation location. Use a properly fitted, air-purifying or air-fed 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.
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. Material of gloves for long term application (Btt>480min): Butyl-rubber. Ethyl vinyl alcohol laminate (EVAL) Nitrile rubber. Neoprene gloves. Polyvinyl chloride (PCV) Gauntlet type Material of gloves for short term/splash application (10min) Butyl-rubber. Ethyl vinyl alcohol laminate (EVAL) Nitrile rubber. Neoprene gloves. Polyvinyl chloride (PCV) Gauntlet type
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicated this is necessary to avoid exposure to liquid splashed, mist or dusts.
Skin Protection	Personal protective equipment for the body should be selected based on the task being performed and the risk involved and should be approved by a specialist before handling the product.
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.

Section 9. Physical and Chemical Properties
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Physical State	Viscous Liquid
Color	Clear
Odor	N/A
Odor Threshold	N/A
Solubility	Negligible
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	1
Density lbs/Gal	1.17
Pounds per Cubic Foot	N/A
Flash Point	249°C (480°F)
FP Method	Pensky-Martens Close Cup ASTM D 93

pH	N/A
Melting Point	N/A
Boiling Point	> 260°C (500°F)
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	N/A
Flammability	N/A
Decomposition Temperature	N/A
Auto-ignition Temperature	N/A
Vapor Pressure	0.03 mbar @ 77°C (171°F)
Vapor Density	N/A

Section 10. Stability and Reactivity

Chemical Stability	Stable under normal conditions.
Polymerization	Polymerization will not occur
Conditions to Avoid	Strong oxidizer.
Materials to Avoid	Reactive or incompatible with the following materials: Oxidizing materials, strong acids, strong alkalis.
Other Hazards	Reacts with considerable heat release with some curing agents.
Hazardous Decomposition Products	Decomposition products may include the following materials: Carbon Oxides

Section 11. Toxicological Information

Acute Toxicity Data	4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer: LD50 Oral - Rat - 30,000 mg/kg LD50 Oral - Mouse - 20,000 mg/kg LD50 Oral - Rabbit - 19.8 mg/kg LD50 Dermal - Rat - >1,200 mg/kg LD50 Dermal - Mouse >1,270 mg/kg
Other Toxicological Information	Carcinogenicity Classification Ingredient Name: 4, 4' - Isopropylidenediphenol-Epichlorohydrin Copolymer ACGIH: Not Classified IARC: Not Classified NTP: Not Listed OSHA: Not Regulated

Section 12. Ecological Information

Environmental effects	No known significant effects or critical hazards.
Other Adverse Effects	No known significant effects or critical hazards.

Section 13. Disposal

Waste disposal

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport Information

UN Number N/A
UN Proper Shipping Name N/A
DOT Classification N/A
Packing Group N/A

Section 15. Regulatory Information

HCS Classification Irritating material, Sensitizing material
Regulatory for Canada WHMIS (Canada)
Class D-2B: Material causing other toxic effects (Toxic)
Canadian Lists: Canadian NPRI: None required.

U.S. Federal Regulations SARA 311/312 CLASSIFICATION:
Immediate (acute) health hazard.

SARA 313 - SUPPLIER NOTIFICATION:
This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372. None Required

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES:
None required

International Regulations Chemical Inventories:
Europe inventory: All components are listed or exempted.
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Korea inventory (KECI): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Japan inventory (ENCS): All components are listed or exempted.
Canada inventory: All components are listed or exempted.
United States inventory (TSCA 8b): All components are listed or exempted.

Section 16. Other Information

Revision Date 4/3/2018

HMIS Rating (Not Regulated) The HMIS Rating for this product is:
Health: 2 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.



Safety Data Sheet

RF 2286 Pre-Mixed and Frozen Part B

Section 1. Identification

Product Identifier	RF 2286 Pre-Mixed and Frozen Part B		
Synonyms	N/A		
Manufacturer Stock Numbers	N/A		
Recommended use	Hardner		
Uses advised against	Strong oxidizer. Contact with other combustible material can cause fire.		
Manufacturer Contact			
Address	Resin Formulators 18027 Bishop Avenue Carson, CA, 90746 USA		
	Phone	Emergency Phone	Fax
	(310) 204-6159	(800) 424-9300 CHEMTREC	(310) 202-7247
	Email	Website	
	sales@evroberts.com	http://www.evroberts.com	

Section 2. Hazards Identification

Classification	ACUTE TOXICITY - DERMAL - Category 4 ACUTE TOXICITY - ORAL - Category 4 SENSITIZATION - SKIN - Category 1 SKIN CORROSION/IRRITATION - Category 1B
Signal Word	Danger

Pictogram



Hazard Statements

Causes severe skin burns and eye damage
Harmful if swallowed
Harmful in contact with skin
May cause an allergic skin reaction

Precautionary Statements

Response

Call a poison center/doctor/ ... /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.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If on skin: Wash with plenty of water/ ...
If skin irritation or rash occurs: Get medical advice/attention.
If swallowed: Call a poison center/doctor/ ... / if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Immediately call a poison center/doctor/ ...
Rinse mouth.
Specific treatment (see ... on this label)
Take off immediately all contaminated clothing and wash it before reuse.
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.
Do not breathe dust/fume/gas/mist/ vapors/spray.
Do not eat, drink or smoke when using this product.
Wash ...thoroughly after handling.
Wear protective Butyl Gloves, Face Shield, Eye Bath and Safety Shower.
Wear protective gloves.
Wear protective gloves/protective clothing/eye protection/face protection.

Storage

Protect from sunlight. Store in a well-ventilated place.
Store locked up.

Disposal

Dispose of contents/container to ...

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Form

Viscous Liquid

OSHA/HCS Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200)

EMERGENCY OVERVIEW

WARNING!
CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE RESPIRATORY TRACT IRRITATION. HEATED MATERIAL CAN CAUSE THERMAL BURNS.

Potential Health Effects

Inhalation Slightly irritating to eyes and respiratory tract.
Ingestion No hazard in normal industrial use.
Skin Irritating to skin. May cause sensitization by skin contact. Heated material can cause thermal burns.

Potential Chronic Health Effects

Chronic Health Effects None known
Carcinogenicity No known significant effects or critical hazards
Mutagenicity No known significant effects or critical hazards
Teratogenicity No known significant effects or critical hazards
Developmental Effects No known significant effects or critical hazards.
Fertility Effects No known significant effects or critical hazards.
Target Organs Review Section 2 and 11 for any additional assessments.
Over-Exposure
Signs/Symptoms Inhalation:
Adverse symptoms may include the following: respiratory tract irritation, coughing

Ingestion:
No specific data

Skin:
Adverse symptoms may include the following: irritation, redness

Eyes:
Adverse symptoms may include the following: pain or irritation, watering, redness.

Medical conditions aggravated by over-exposure:
Pre-existing skin disorders may be aggravated by over-exposure to this product.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
112-24-3	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-	100 %

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

Section 4. First-Aid Measures

Eye Immediately flush with plenty of clean running water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes lifting eyelids occasionally. Have eyes examined immediately and tested by medical personnel.

Skin In case of contact, immediately flush contaminated skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. In the event of any complaints or

symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. For hot product, flush contaminated skin with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze. Get medical attention immediately.

Inhalation Move exposed person to fresh air. Keep person warm and at rest. If not breathing, breathing is irregular or 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. 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. Get medical attention if adverse health effects persist or are severe.

Ingestion Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. In general, no treatment is necessary unless large quantities of product are ingested. Give 1 or 2 glasses of water to drink. Call medical personnel for immediate attention.

Protection of First Aid Personnel In the event of body contact with molten material, immediately cool with running water. Do not attempt to remove material from skin. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Note to Physician No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media Flammability of the product:
In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media:

- Suitable : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable : Do not use water jet.

Special exposure hazards:

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.

Hazardous combustion products:

Decomposition products may include the following materials:
Carbon monoxide, Fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity. No specific data.

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.

Unsuitable Extinguishing Media N/A

Section 6. Accidental Release Measures

Personal precautions	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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when Ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
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)
Large Spills	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small Spills	Stop leak if without risk. Move containers from spill area. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labeled appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Do not eat, drink or smoke when using this product. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid breathing of vapors or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.
Storage	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. 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. Note: This resin may be handled, shipped and stored at elevated temperatures in bulk.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-	N/A	1 ppm, skin, TWA 6 mg/m3, inhalation	N/A

Personal Protective Equipment	Goggles, Gloves, Apron, Face Shield, Respirator, VENTILATION, EYE WASH AND SAFETY SHOWER
Consult local authorities	Consult local authorities for acceptable exposure limits.
Recommended Monitoring Procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Engineering Measures	Use only with adequate ventilation. 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 containments below any recommended or statutory limits.
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.
Respiratory	Use a properly fitted, air-purifying or air-fed 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.
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. Material of gloves for long term application (Btt>480min): Butyl-rubber. Ethyl vinyl alcohol laminate (EVAL) Nitrile rubber. Neoprene gloves. Polyvinyl chloride (PCV) Gauntlet type Material of gloves for short term/splash application (10min) Butyl-rubber. Ethyl vinyl alcohol laminate (EVAL) Nitrile rubber. Neoprene gloves. Polyvinyl chloride (PCV) Gauntlet type
Eye protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicated this is necessary to avoid exposure to liquid splashed, mist or dusts.
Skin Protection	Personal protective equipment for the body should be selected based on the task being performed and the risk involved and should be approved by a specialist before handling the product.
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.

Section 9. Physical and Chemical Properties
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Physical State	Liquid
Color	Amber
Odor	Fishy
Odor Threshold	N/A
Solubility	Negligible
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	N/A
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	249°C (480°F)
FP Method	Pensky-Martens Close Cup ASTM D 93
pH	N/A
Melting Point	N/A
Boiling Point	> 260°C (500°F)
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	N/A
Flammability	N/A
Decomposition Temperature	N/A
Auto-ignition Temperature	N/A
Vapor Pressure	0.03 mbar @ 77°C (171°F)
Vapor Density	N/A

Section 10. Stability and Reactivity

Chemical Stability	Stable under normal conditions.
Polymerization	Polymerization will not occur
Conditions to Avoid	Strong oxidizier.
Materials to Avoid	Reactive or incompatible with the following materials: Oxidizing materials, strong acids, strong alkalis.
Other Hazards	Reacts with considerable heat release with some curing agents.
Hazardous Decomposition Products	Decomposition products may include the following materials: Carbon Oxides

Section 11. Toxicological Information

Additional Information	Effects on Eye : Causes eye burns. May cause blindness. Severe eye irritation.
	Effects on Skin : Toxic in contact with skin. Causes skin burns.
	Inhalation Effects : Can cause severe eye, skin and respiratory tract burns. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

Ingestion Effects : If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Symptoms : Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease., Skin disorders and Allergies., Adverse skin effects (such as rash, irritation or corrosion), Adverse eye effects (such as conjunctivitis or corneal damage), Adverse respiratory effects (such as cough, tightness of chest or shortness of breath), Asthma.

Acute toxicity

Acute Oral Toxicity : LD50 : 1,716 mg/kg Species : Rat.

Inhalation : No data is available on the product itself.

Acute Dermal Toxicity : LD50 : 1,465 mg/kg Species : Rabbit.

Skin corrosion/irritation : Severe skin irritation.

Serious eye damage/eye irritation: Severe eye irritation.

Sensitization. : May cause sensitization by skin contact. Sensitization has occurred in laboratory animals after repeated exposures.

Chronic toxicity or effects from long term exposures

Carcinogenicity : No data available.

Reproductive toxicity : No data is available on the product itself.

Germ cell mutagenicity : Results from a battery of short term genotoxicity tests on this material or its components indicate mutagenic activity.

Specific target organ systemic toxicity (single exposure): No data available.

Specific target organ systemic toxicity (repeated exposure): No data available.

Aspiration hazard : No data available.

Section 12. Ecological Information

Environmental effects No known significant effects or critical hazards.

Other Adverse Effects No known significant effects or critical hazards.

Section 13. Disposal

Waste disposal The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-product should at all times comply with the requirements of environmental protection and waste

disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport Information

UN Number 2259
UN Proper Shipping Name Triethylenetetramine
DOT Classification 8
Packing Group II
Additional Information IMDG/IATA
UN/ID No. : UN2259
Proper shipping name : TRIETHYLENETETRAMINE
Class or Division : 8
Packing group : II Label(s) : 8
Marine Pollutant : No

Section 15. Regulatory Information

Additional Information EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification Acute Health Hazard Chronic Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

Section 16. Other Information

Revision Date 4/3/2018

HMIS Rating (Not Regulated) The HMIS Rating for this product is:
Health: 2 Flammability: 1 Reactivity: 0

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

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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.