



Safety Data Sheet

RF 1144 Part A

Section 1. Identification

Product Identifier	RF 1144 Part A		
Synonyms	Epoxy syntactic resin		
Manufacturer Stock Numbers	35069		
Recommended use	Epoxy Resin		
Uses advised against	Avoid high temperatures, flames and contact with strong oxidizing agents. Can react vigorously with strong oxidizing agents, strong acids, and strong alkalis.		
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	EYE DAMAGE/IRRITATION - Category 2B SKIN CORROSION/IRRITATION - Category 2
Signal Word	Warning
Pictogram	



Hazard Statements	Causes eye irritation 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.
Prevention	Wash ...thoroughly after handling.
Storage	N/A
Disposal	N/A
Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	
Form	Thixotropic paste.
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 the respiratory system.
Ingestion	Not expected to be harmful under normal conditions of use.
Skin	Irritating to skin. May cause sensitization by skin contact. Heated material can cause thermal burns.
Eye	Irritating to eyes. Heated material can cause thermal burns.
Potential Chronic Health Effects	
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 hazard in normal industrial use.
Skin	Adverse symptoms may include the following: irritation, redness.
Eye	Adverse symptoms may include the following: pain, watering, redness.
Medical Conditions Aggravated by Exposure	Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See MSDS section 11 – Toxicological information.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
17557-23-2	Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis(oxymethylene)]bis-	<15 %
65997-17-3	Glass, oxide, chemicals	>30 %
25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	30-60 %
Proprietary	Epoxy Novolac Resin	5-15 %

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 Contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing 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 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 if adverse health effect persist or are severe. 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.
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:
Use an extinguishing agent suitable for the surrounding fire.

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 Oxides

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.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Oxirane, 2,2'-[(2,2-dimethyl-1,3-propanediyl)bis (oxymethylene)]bis-	N/A	none	N/A
	Glass, oxide, chemicals	N/A	N/A	N/A
	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	N/A	none	N/A
	Epoxy Novolac Resin	N/A	N/A	N/A
Personal Protective Equipment	Goggles, Gloves, CHEMICAL GOGGLES, PROTECTIVE CLOTHING			
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.			
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.			
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

Physical State	Paste
Color	Clear, Brown
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	0.7
Pounds per Cubic Foot	N/A
Flash Point	251°C (484° F)
FP Method	Pensky- Martens Closed 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 recommended storage temperatures and pressures.
Hazardous 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

Acute Toxicity Data	4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer: LD50 Oral - Rat - 30,000 mg/kg LD50 Dermal - Rat - >1,200 mg/kg
Other Toxicological Information	Carcinogenicity Classification Ingredient Name: 4, 4' - Isopropylidenediphenol-Epichlorohydrin Copolymer
Carcinogenicity Classification Ingredient name	ACGIH: Not classified IARC: Not classified NTP: Not listed OSHA: Not regulated EU: Not classified

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.
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Section 14. Transport Information

UN Number	N/A
UN Proper Shipping Name	N/A
DOT Classification	N/A
Packing Group	N/A
All Regulatory Classification	This product is not regulated by CFR, TDG, IMO, IMDG or IATA

Section 15. Regulatory Information

US Regulations

HCS Classification

Irritating material, Sensitizing material

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

State Regulations

Massachusetts RTK Substances - None required

New Jersey RTK Hazardous Substances - None required

Pennsylvania RTK Hazardous Substances - None required

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: Oxirane,(phenoxymethyl)- 122-60-1

Section 16. Other Information

Revision Date

9/8/2015

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 1144 Part B

Section 1. Identification

Product Identifier RF 1144 Part B
Synonyms Cycloaliphatic amine
Manufacturer Stock
Numbers 35069

Recommended use Cycloaliphatic amine
Uses advised against CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.
Nitrous acid and other nitrosating agents
Oxidizing agents (i.e. acetic acid, citric acid, etc.).
Mineral acids.
Sodium hypochlorite.
Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.
Oxidizing agents.

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 ACUTE TOXICITY - DERMAL - Category 4
ACUTE TOXICITY - INHALATION - Category 4

	ACUTE TOXICITY - ORAL - Category 4 CORROSIVE TO METALS - Category 1 EYE DAMAGE/IRRITATION - Category 2A
Signal Word	Warning
Pictogram	
Hazard Statements	Causes serious eye irritation Harmful if inhaled Harmful if swallowed Harmful in contact with skin May be corrosive to metals
Precautionary Statements	
Response	Absorb spillage to prevent material damage. Call a poison center/doctor/ ... /if you feel unwell. 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: Remove person to fresh air and keep comfortable for breathing. If on skin: Wash with plenty of water/ ... If swallowed: Call a poison center/doctor/ ... / if you feel unwell. Rinse mouth. Specific treatment (see ... on this label) Take off immediately all contaminated clothing and wash it before reuse.
Prevention	Avoid breathing dust/fume/gas/mist/ vapors/spray. Do not eat, drink or smoke when using this product. Keep only in original container. Use only outdoors or in a well-ventilated area. Wash ...thoroughly after handling. Wear eye protection/face protection. Wear protective Butyl Gloves, Face Shield, Eye Bath and Safety Shower.
Storage	Store in corrosive resistant/... container with a resistant inner liner.
Disposal	Dispose of contents/container to ...
Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	
Emergency Overview	Corrosive. Severe eye irritant. Harmful if swallowed.
Potential Health Effects	
Inhalation	Harmful if inhaled and may cause delayed lung injury. Can cause severe eye, skin and respiratory tract burns. Risk of serious damage to the lungs (by inhalation). May cause nose, throat, and lung irritation. Inhalation of aerosol may cause irritation to the upper respiratory tract.
Eye contact	Causes eye burns. May cause blindness. Severe eye irritation.
Skin contact	Causes skin burns.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Harmful if swallowed.

Chronic Health Hazard

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. May cause allergic respiratory reaction. May cause allergic skin reaction.

Aggravated Medical Condition

Asthma. Eye disease. Skin disorders and Allergies, Asthma.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
7631-86-9	Fumed Silica	1-5 %
8021-99-6	Charcoal Black	1-5 %
1761-71-3	Methylenebiscyclohexanamine, 4, 4	30-60 %
Proprietary	Mixed Cycloaliphatic	40-70 %

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

Section 4. First-Aid Measures

General

Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

Eye Contact

Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.

Skin Contact

Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing.

Ingestion

If a person vomits when lying on his back, place him in the recovery position. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Prevent aspiration of Vomit. Turn victim's head to the side.

Inhalation

If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media

Extinguishing media:
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Dry sand
Limestone powder.

Specific hazards:
Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.

Special Protective Equipment for Fire-Fighters
Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

Further Information:
Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Unsuitable Extinguishing Media

N/A

Section 6. Accidental Release Measures

Personal precautions

Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.

Environmental Precautions Methods for cleaning up

Construct a dike to prevent spreading
Contact Air Products Emergency Response Center for advice. Place in appropriate chemical waste container.

Additional advice

Open enclosed spaces to outside atmosphere. If possible, stop flow of product.

Section 7. Handling and Storage

Handling

Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid contact with eyes. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Do not store near acids. Keep containers tightly closed in a dry, cool and well ventilated place.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Fumed Silica	N/A	10 mg/m ³ , TLV-TWA, Inhalation	N/A
	Charcoal Black	N/A	N/A	N/A
	Methylenebis(cyclohexanamine), 4, 4	N/A	N/A	N/A
	Mixed Cycloaliphatic	0.5 mg (Sb)/m ³ (TWA) for handling and use.	0.5 mg (Sb) m ³ (TWA)	N/A
Personal Protective Equipment Engineering Measures	Goggles, Gloves, Face Shield, CHEMICAL GOGGLES, PROTECTIVE CLOTHING, EYE WASH AND SAFETY SHOWER Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.			
Personal Protective Equipment Respiratory Protection Hand protection	Wear appropriate respirator when ventilation is inadequate. 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.			
Eye protection	Full face shield with goggles underneath. Chemical resistant goggles must be worn.			
Skin and Body Protection	Slicker Suit. Impervious clothing. Full rubber suit (rain gear). Rubber or plastic boots. Long sleeve shirt and trousers without cuffs.			
Environmental exposure controls	Construct a dike to prevent spreading.			
Special Instructions for protection and hygiene	Discard contaminated leather articles. Provide readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet.			

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Black
Odor	Ammoniacal
Odor Threshold	N/A
Solubility	Insoluble
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	1
Density lbs/Gal	0.98
Pounds per Cubic Foot	N/A
Flash Point	> 100°C
FP Method	N/A
Ph	11.6
Melting Point	N/A
Boiling Point	>420°F (>215.56°C)
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	<5.17 mmHg at 21°C
Vapor Density	N/A

Density 61.179 lb/ft³ (0.98 g/cm³) at 70°F (21°C)

Section 10. Stability and Reactivity

Chemical Stability	Stable under normal conditions.
Materials to Avoid	CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents Oxidizing agents (i.e. acetic acid, citric acid, etc.). Mineral acids. Sodium hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents.
Hazardous Decomposition Products	Nitric Acid Ammonia Nitrogen Oxides (NOx) Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon Monoxide Carbon Dioxide (CO2) Nitrosamine

Section 11. Toxicological Information

Acute Health Hazard	Ingestion: LD50: >1,200 mg/kg Species: Rat Method: Estimated Inhalation: No data is available on the product itself. Skin: LD50: >2,000 mg/kg Species: Rabbit Method: Estimated Eye irritation/corrosion: Severe eye irritation Skin irritation/corrosion: Corrosive in an in vitro test Sensitization: May cause sensitization of susceptible persons by skin contact
Chronic Health Hazard	Mixed polycycloaliphatic amines were tested in rats for systemic effects in a subchronic (28-day) oral study at doses ranging from 15 to 300 mg/kg/day. Effects seen at 300 mg/kg/day included decreased survival, decreased body weight gain, increased liver, kidney, and adrenal weights and histological changes in the liver, kidney, adrenals and spleen. The No-Observed-Adverse-Effect-Level (NOAEL) was 15 mg/kg/day.

Section 12. Ecological Information

Ecotoxicity Effects

Aquatic Toxicity

No data is available on the product itself.

Toxicity to fish Components

Methylenebiscyclohexanamine, 4, 4'-
LC50 (96 h) : 46 - 100 mg/l
Species: Golden orfe (*Leuciscus idus*).

Toxicity to daphnia Components

Methylenebiscyclohexanamine, 4, 4'-
EC50 (48 h) : 6.84 mg/l
Species: magna

Toxicity to algae Components

Methylenebiscyclohexanamine, 4, 4'-
EC50 (72 h) : 140 - 200 mg/l
Species: Algae

Toxicity to other organisms

No data available.

Persistence and degradability

Mobility: No data available

Bioaccumulation: No data is available on the product itself.

Bioaccumulation - Components

Mixed Cycloaliphatic amines Does not bioaccumulate.

Section 13. Disposal

Waste from residues / unused products

Contact supplier if guidance is required.

Contaminated packaging

Dispose of container and unused contents in accordance with federal, state, and local requirements.

Section 14. Transport Information

UN Number

2735

UN Proper Shipping Name

Amines, liquid, corrosive, n.o.s. (Cycloaliphic amine)

DOT Classification

8

Packing Group

III

Section 15. Regulatory Information

OSHA Hazard Communication Standard	OSHA Hazard Communication Standard (29 CFR 1910.1200) Hazard Class (es) Corrosive
Regulatory Information	USA (TSCA) Included on inventory EU (EINECS) Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer Canadian (DSL) Included on Inventory. Australia (AICS) Included on Inventory. Japan (ENCS) Included on Inventory. South Korea (ECL) Included on Inventory. China (SEPA) Included on Inventory. Philippines (PICCS) Included on Inventory. 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 CALIFORNIA PROPOSITION 65 WARNING: This product does not contain any chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm. WHMIS Hazard Classification: Toxic material causing other toxic effects, Corrosive Material WHMIS Trade Secret Registry Number(s): 7682 Filing Date 6/16/2009

Section 16. Other Information

Revision Date	9/8/2015
HMIS Rating (Not Regulated)	The HMIS Rating for this product is: Health: 3 Flammability: 1 Reactivity: 0 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe 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.