



# Safety Data Sheet

## RF 69 Epoxy Curing Agent

### Section 1. Identification

Product Identifier	RF 69 Epoxy Curing Agent		
Synonyms	N/A		
Manufacturer Stock Numbers	N/A		
Recommended use	Avoid high temperatures. Avoid flames.		
Uses advised against	Avoid strong acids, (ie. acetic acid, citric acid etc.) Mineral acids Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.		
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 - ORAL - Category 4 CORROSIVE TO METALS - Category 1 EYE DAMAGE/IRRITATION - Category 2A SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 3
Signal Word	Warning

Pictogram



Hazard Statements

Causes serious eye irritation  
Harmful if swallowed  
May be corrosive to metals  
May cause respiratory irritation; or May cause drowsiness or dizziness  
Moderately irritating to skin

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 swallowed: Call a poison center/doctor/ ... / if you feel unwell.  
Rinse mouth.

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.

Storage

Store in a well-ventilated place. Keep container tightly closed.  
Store in corrosive resistant/... container with a resistant inner liner.  
Store locked up.

Disposal

Refer to manufacturer/Supplier for information on recovery/recycling

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

EMERGENCY OVERVIEW

Moderate respiratory irritant.  
Corrosive  
Severe eye irritant.  
Severe skin irritant.  
Harmful if swallowed.

Potential Health Effects

Inhalation

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.

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. Prolonged contact may result in chemical burns and permanent damage.
Exposure Guidelines	
Target Organs	Skin, Eyes, Respiratory System
Symptoms	Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat.
Aggravated Medical Condition	Eye disease, Skin disorders and Allergies.

### Section 3. Ingredients

CAS	Ingredient Name	Weight %
1761-71-3	Methylenebis(cyclohexyl)amine, 4, 4	100 %

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	Immediately flush eyes with running water for a minimum of 15 minutes. Hold eyelids open during flushing. If irritation persists repeat flushing and obtain medical attention IMMEDIATELY.
Skin Contact	Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Flush immediately with copious amounts of water. Initiate and maintain 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. Take off contaminated clothing and shoes immediately.
Ingestion	Do not induce vomiting. The victim should drink several glasses of water to dilute the ingested substance. If vomiting occurs naturally, keep airway clear. Get medical attention. Never give anything by mouth if the victim is rapidly losing consciousness, or is unconscious or convulsing.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

### Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Extinguishing media: Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical Dry sand Limestone powder.
	Flash Point: >212°F (>100°C)

Auto Ignition Temperature:  
Not Available

Flammable or Explosive Limits:  
Lower Limits : Not determined.  
Upper Limits : Not determined.

Due to the products low vapor pressure, risk of exposure to hazardous concentrations of vapor under normal working conditions in a well ventilated space is minimized. However, conditions such as spraying, or sudden release of hot liquid, which generate and aerosol, mists or fog should be avoided. Inhalation of aerosol, mist or fog may cause harm if inhaled.

Special Hazards:  
Repeated and/or prolonged exposure at low levels may result in adverse respiratory effects, adverse skin effect or adverse eye effect.

Protective Equipment:  
Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear a NIOSH-approved respirator as required to prevent over-exposure in accordance with 29 CFR 1910-134 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	Construct a dike to prevent spreading
Methods for cleaning up	Contact Air Products Emergency Response Center for advice. Place in appropriate chemical waste container.

## Section 7. Handling and Storage

Eye Protection	Wear safety glasses or goggles as appropriate
Gloves	Wear chemical-resistant gloves and other clothing as required to minimize skin contact
Respiratory Protection	Not ordinarily required. If resin is warmed or heated, vapors or mists may be produced. In such cases, use a NIOSH-approved respirator as required to prevent overexposure. In accord with 29 CFR 1910.134, use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

Other Clothing and Equipment Handling	Avoid prolonged or repeated contact with the skin. Wear chemical-resistant gloves and other clothing as required to minimize skin contact. Avoid personal contact with the product or reaction mixture. Use only with adequate ventilation to ensure that the defined occupational exposure limit is not exceeded. The efficiency of the ventilation must be monitored regularly because of the possibility of blockage. Avoid breathing aerosols, mists and vapors. When the product is sprayed or heated, an approved MSHA/NIOSH positive-pressure, supplied-air respirator may be required.
Hygienic Practices	Laundry contaminated clothes before wearing. Do not smoke or eat where this material is being used. Wash hands before smoking, eating or going to the bathroom
Storage	Product may partially freeze with extended exposure to cold temperatures, resulting in crystallization, haziness or separation. If this occurs, product should be warmed to 100-140F (38-60C) for one hour and stirred until clear. Do not store near acids. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Keep containers tightly closed in a dry, cool and well-ventilated place.

<b>Section 8. Exposure Controls/Personal Protection</b>
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Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Methylenebiscyclohexanamine, 4, 4	N/A	N/A	N/A
Personal Protective Equipment	Goggles, Gloves, Face Shield, Respirator, SUPPLIED AIR, EYE WASH AND SAFETY SHOWER			
Engineering Measures	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	Wear appropriate respirator when ventilation is inadequate.			
Hand protection	Neoprene gloves. PCV disposable gloves. Butyl-rubber. Nitrile rubber. Impervious gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period.			
Eye protection	Full face shield with goggles underneath. Chemical resistant goggles must be worn.			
Skin Protection	Impervious clothing. Gloves Full rubber suit (rain gear). Rubber or plastic boots. Slicker Suit.			
Environmental exposure controls	Construct a dike to prevent spreading.			
Special Instructions	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	Colorless
Odor	Amoniacal
Odor Threshold	N/A
Solubility	Insoluble
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	0.92
Density lbs/Gal	59.931
Pounds per Cubic Foot	N/A
Flash Point	> 100°C
FP Method	N/A
pH	12
Melting Point	15°C
Boiling Point	608°F (320°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	< 0.10 mmHg at 21°C
Vapor Density	7.24

## Section 10. Stability and Reactivity

Hazardous Decomposition Products	Nitric Acid, Ammonia, Nitrogen Oxides (NOx), Carbon Monoxide, Carbon Dioxide, Aldehydes, Flammable hydrocarbon fragments (e.g. acetylene) and unknown organics. Nitrogen oxide can react with water vapors to form corrosive nitric acid
Chemical Stability	Stable under normal conditions.
Hazardous Polymerization	Will not occur
Conditions to Avoid	Exposure to temperatures of around 300°C and above. Avoid bringing into contact with strong oxidizing materials or epoxy resins under uncontrolled conditions.
Materials to Avoid	Organic acids (i.e.: acetic acid, citric acid, etc.). Mineral acids. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Oxidizing agents.
Incompatibilities	Violent reaction and fire may result when the product is mixed with oxidizing agents such as perchlorates, nitrates, permanganates, chromates, nitric acid, halogens, peroxides and some cleaning solutions, such as chromerge (sulfuric acid/dichromate) and aqua regia.

## Section 11. Toxicological Information

Acute Health Hazard	
Ingestion	LD50 : 625 mg/kg Species : Rat.
Inhalation	No data is available on the product itself.
Skin	LD50 : > 2,110 mg/kg Species : Rabbit.
Eye Irritation	Severe eye irritation.
Acute Dermal Irritation/corrosion	Severe skin irritation.
Sensitization	Dermal sensitization to this product or component has been seen in some humans. The results of a test on guinea pigs showed this substance to be a weak skin sensitizer.
Chronic Health Hazard	Not mutagenic in AMES Test.

## Section 12. Ecological Information

Ecotoxicity Effects	Aquatic toxicity: LC50 (96 h) : 46 – 100 mg/l Species : Golden orfe ( <i>Leuciscus idus</i> ). EC50 (48 h) : 6.84 mg/l Species : <i>Daphnia magna</i> . EC50 (72 h) : 140 – 200 mg/l Species : Algae.
Toxicity to other organisms	No data available.
Persistence and degradability	Biodegradability: According to the results of tests of biodegradability this product is not readily biodegradable.  Mobility: No data available  Bioaccumulation: No data is available on the product itself.

## 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. (4,4'-Methylenebis(cyclohexyl)amine)
DOT Classification	8
Packing Group	II

Disclaimer

The transport information provided represents the regulatory transport classification of the product without consideration to packaging, quantity, or modal restrictions and exceptions. It is the user's responsibility to determine the appropriate packaging and modal requirements and/or limitations for the product quantity being shipped.

## Section 15. Regulatory Information

OSHA Hazard  
Communication Standard  
Regulatory Information

OSHA Hazard Communication Standard (29 CFR 1910.1200) Hazard Class(es)  
Corrosive

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

## Section 16. Other Information

Revision Date

4/3/2018

HMIS Rating (Not  
Regulated)

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

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

Disclaimer

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