



# Safety Data Sheet

RF 2485 B

## Section 1. Identification

|                            |   |                            |                |
|----------------------------|---|----------------------------|----------------|
| Product Identifier         | RF 2485 B   |                            |                |
| Synonyms                   | N/A   |                            |                |
| Manufacturer Stock Numbers | N/A   |                            |                |
| Recommended use            | Epoxy Curing Agent  |                            |                |
| Uses advised against       | Avoid high temperatures, flames and contact with strong oxidizing agents. |                            |                |
| Manufacturer Contact       |   |                            |                |
| Address                    | Resin Formulators<br>18027 Bishop Avenue<br>Carson, CA, 90746<br>USA      |                            |                |
|                            | Phone   | Emergency Phone            | Fax            |
|                            | (310) 204-6159  | (800) 424-9300<br>CHEMTREC | (310) 202-7247 |
|                            | Email   | Website                    |                |
|                            | sales@evroberts.com   | http://www.evroberts.com   |                |

## Section 2. Hazards Identification

|                |  |
|----------------|--|
| Classification | ACUTE TOXICITY - INHALATION - Category 5<br>ACUTE TOXICITY - ORAL - Category 5<br>SKIN CORROSION/IRRITATION - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 1<br>SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 3<br>TOXIC TO REPRODUCTION - Category 2 |
| Signal Word    | Danger   |

Pictogram



Hazard Statements

Causes damage to organs (or state all organs affected if known) (state route of exposure if no other routes of exposure cause the hazard)  
May be harmful if inhaled  
May be harmful if swallowed  
May cause respiratory irritation; or May cause drowsiness or dizziness  
Moderately irritating to skin  
Suspected of damaging fertility or the unborn child. (state specific effect if known) (state route of exposure if no other routes of exposure cause the hazard)

Precautionary Statements

Response

Call a poison center/doctor/ ... /if you feel unwell.  
If exposed or concerned: Get medical advice/attention.  
If exposed: Call a poison center/doctor/...  
IF INHALED: Call a POISON CENTER or doctor/... if you feel unwell  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Specific treatment (see ... on this label)

Prevention

Avoid breathing dust/fume/gas/mist/ vapors/spray.  
Do not breathe dust/fume/gas/mist/ vapors/spray.  
Do not eat, drink or smoke when using this product.  
Do not handle until all safety precautions have been read and understood.  
Obtain special instructions before use.  
Use only outdoors or in a well-ventilated area.  
Wash ...thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.

Storage

Store in a cool, dry area. Keep at a temperature below 77 Degrees F  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

Disposal

Refer to manufacturer/Supplier for information on recovery/recycling

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Health Hazards

Severe Skin & Eye Irritant or burns.  
May cause irritation and/or sensitization through repeated contact.  
May be harmful is swallowed.  
Can cause burns to mouth and throat.  
Respiratory irritant  
May cause sensitization by inhalation.

Appearance

Amber Liquid

Odor

Amine/Ammoniacal

MSDS

Read the entire MSDS for a more thorough evaluation of the hazards.

## Section 3. Ingredients

| CAS        | Ingredient Name   | Weight % |
|------------|---|----------|
| 68410-23-1 | Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines | 90-100 % |
| 112-24-3   | 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-                                      | 7-10 %   |

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

## Section 4. First-Aid Measures

|                           |   |
|---------------------------|---|
| <b>TARGET ORGANS</b>      | Skin, Eyes and Respiratory System   |
| <b>General</b>            | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).   |
| <b>Inhalation</b>         | <p>Irritant:</p> <p>Remove patient from exposure, keep warm and at rest. Vapors may be mildly to severely irritating to respiratory tract. Repeated exposure can cause irritation. May cause Central Nervous System (CNS). Depression: Obtain medical attention IMMEDIATELY. Treatment is Symptomatic for primary irritation or bronchospasm. If breathing is labored, qualified personnel should administer oxygen. Apply artificial respiration if breathing has ceased or show signs of failing.</p> |
| <b>Skin Contact</b>       | <p>Skin Irritant: LD50: 3.0 (scale 0-8), species, Rabbit</p> <p>May cause skin irritation and sensitization. Wash affected areas thoroughly with soap and water. Obtain medical attention IMMEDIATELY. Contaminated clothing should be thoroughly cleaned before reuse. Cannot decontaminate leather articles. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.</p>  |
| <b>Eye Contact</b>        | Severe Eye Irritant. 75.6 (Scale 0-110), species Rabbit. Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. Obtain medical attention IMMEDIATELY.  |
| <b>Ingestion</b>          | <p>Severe Irritant LD50: &gt;8.0g/kg, species, Rat</p> <p>Do NOT induce vomiting. May cause gastrointestinal irritation or ulceration. May cause irritation and burns to mouth, throat, and stomach. May be moderately toxic if swallowed. May cause CNS depression. Give large amounts of water followed by milk if available. Obtain medical attention IMMEDIATELY.</p>   |
| <b>Signs and Symptoms</b> | Irritation as noted above. Lung damage (scarring, bronchitis, emphysema) may be evidenced by shortness of breath, especially on exertion, and may be accompanied by evidenced by rashes, especially hives and may be evidenced by giddiness, headache, dizziness and nausea; in extreme cases, unconsciousness, respiratory depression and death may occur.   |

## Section 5. Fire Fighting Measures

|                                     |   |
|-------------------------------------|---|
| <b>Suitable Extinguishing Media</b> | <p>Containers may burst under intense heat.</p> <p>Extinguishing media:</p> <p>Carbon dioxide, dry chemical or appropriate foam. If water is used, very large quantities are required. Reaction between water and hot isocyanate may be vigorous. Contain runoff water with temporary barriers.</p> |
|                                     | <p>Protective Equipment:</p> <p>Use self-contained breathing apparatus and full protective clothing (Bunker</p>   |

Gear).

Flash Point:  
>500°F (260°C)

Flammable Limits (Lower):  
Not Available

Flammable Limits (Upper):  
Not Available

Rate of Burning:  
Not Available

Explosive Power:  
None

Sensitivity to Mechanical Impact:  
None

Sensitivity to Static Discharge:  
None

Combustion Products:  
CO, CO<sub>2</sub>, NO<sub>x</sub> and some HCN

Unsuitable Extinguishing Media N/A

## Section 6. Accidental Release Measures

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

**Spills, Leaks or Releases** Clean up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. Evacuate the area. Prevent further leakage, spillage or entry into drains. Contain and absorb large spillages onto an inert, non-flammable absorbent carrier (such as earth or sand), Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spillage area clean with liquid decontaminant. Notify applicable government authorities if release is reportable.

## Section 7. Handling and Storage

**Handling** 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.

**Storage Requirements** Keep containers properly sealed and stored indoors, in a cool, dry, well ventilated area. DO NOT STORE NEAR ACIDS. Do not store in reactive containers. Keep contents away from open flames and high temperatures. Do

not pressurize drum containers to empty them. Heating this curing agent in the presence of air may cause thermal and oxidative decomposition. With some epoxy resins, it may produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. DO NOT BREATHE FUMES. Use a NIOSH-approved respirator as required to prevent over exposure. In accordance with 29 CFR 1910-134. Use a full face, atmosphere-supplying respirator or an air purifying respirator for organic vapors.

**CAUTION**

SEVERE EYE IRRITANT, skin and respiratory tract. May cause skin sensitization. May cause CNS depression. Do not get into eyes, on skin or on clothing. Do not breathe vapors or mists.

Containers, even those that have been empties, can cause hazardous product residues. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather cannot be decontaminated and should be destroyed to prevent reuse.

**Storage Temperature**

Ideal storage temperature is 16-38°C (60-100°F) Store closed in cool dry, and well ventilated place.

**Shelf Life**

12 Months @ 77°F (25°C)

**Section 8. Exposure Controls/Personal Protection**

| Occupational Exposure Limits | Ingredient Name   | ACGIH TLV | OSHA PEL                                | STEL |
|------------------------------|---|-----------|---|------|
|                              | Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines | N/A       | N/A                                     | N/A  |
|                              | 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-                                      | N/A       | 1 ppm, skin, TWA<BR>6 mg/m3, inhalation | N/A  |

**Personal Protective Equipment**

Goggles, Gloves, CHEMICAL GOGGLES, VENTILATION

**Preventive Measures**

Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

**Engineering Controls**

Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. Follow guidelines in the ACGIH publication "Industrial Ventilation".

**Personal Protective Equipment**

**Eye Protection**

Chemical safety goggles. 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**

Use a NIOSH/MSHA approved positive pressure air-supplied respirator equipped with a full facepiece, or an air-supplied hood, if airborne concentrations exceed or are expected to exceed the TLV.

**Exposure Guidelines**

Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with this product. Once a person is diagnosed as sensitized, no further exposure to any sensitizer should be permitted.

|  |
|--|
| <b>Section 9. Physical and Chemical Properties</b> |
|--|

|                                       |               |
|---------------------------------------|---------------|
| Physical State                        | Liquid        |
| Color                                 | Reddish-Brown |
| Odor                                  | Amoniacal     |
| Odor Threshold                        | N/A           |
| Solubility                            | N/A           |
| Partition coefficient Water/n-octanol | N/A           |
| VOC%                                  | N/A           |
| Viscosity                             | N/A           |
| Specific Gravity                      | 0.97          |
| Density lbs/Gal                       | N/A           |
| Pounds per Cubic Foot                 | N/A           |
| Flash Point                           | N/A           |
| FP Method                             | N/A           |
| pH                                    | 0             |
| Melting Point                         | N/A           |
| Boiling Point                         | N/A           |
| 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                        | N/A           |
| Vapor Density                         | N/A           |

|   |
|---|
| <b>Section 10. Stability and Reactivity</b> |
|---|

**Hazardous Decomposition** Highly unlikely under normal industrial use. See section 5.

**Products**

**Chemical Stability** Stable at room temperature

**Conditions to Avoid** Avoid high temperatures. Avoid flames and contact with strong oxidizing agents.

**Hazardous Polymerization** Nitrogen oxides, carbon monoxide and unidentified organic compounds may be formed during combustion.

|  |
|--|
| <b>Section 11. Toxicological Information</b> |
|--|

No Data Available

## Section 12. Ecological Information

Environmental Fate and Distribution      It is unlikely that significant environmental exposure in the air or water will arise, based on consideration of the production and use of the substance.

## Section 13. Disposal

Disclaimer Part 1      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 OPP 247. Small quantities should be treated with a liquid decontaminate. The treated waste is not a hazardous material under RCRA 40 CFR 247. 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.

## 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

Regulatory      This product is listed on the EPA/TSCA inventory of chemical substances.  
Sara 311/312 Hazards      Acute Health Hazard  
SARA 302 Extremely Hazardous Substances      None  
CERCLA Hazardous Chemicals      None  
Additional Information      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      4/23/2018  
HMIS Rating (Not      The HMIS Rating for this product is:

Regulated)

Health: 2 Flammability: 1 Reactivity: 0

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

Disclaimer

NOTICE: While the descriptions, designs data, and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. It is provided independently of any sale of the product for purpose of hazard communication as part of E.V. Roberts' product safety program. Many factors may affect processing or application/use. We recommend you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties or merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sales. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by E.V. Roberts hereunder are given gratis and E.V. Roberts assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk.

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.