



Safety Data Sheet

RF 1120 Part A

Section 1. Identification

Product Identifier	RF 1120 Part A		
Synonyms	Epoxy Resin		
Manufacturer Stock Numbers	11865		
Recommended use	Epoxy Resin		
Uses advised against	Can react vigorously with strong oxidizing agents, strong Lewis or mineral acids. In reactions with many curing agents, considerable heat is released.		
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 5 EYE DAMAGE/IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 3
Signal Word	Warning

Pictogram



Hazard Statements

Causes eye irritation
May be harmful in contact with skin
May cause respiratory irritation

Precautionary Statements

Response

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.

Prevention

Avoid breathing dust/fume/gas/mist/ vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash ...thoroughly after handling.

Storage

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

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 Acute Health Effects

Inhalation - Slightly irritating to respiratory system.

Ingestion - Not expected to be harmful under normal conditions of use.

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

Eyes - Irritating to the eyes. Heated material can cause thermal burns.

Potential Chronic Health Effects

Chronic effects: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Over-Exposure
Signs/Symptoms

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.

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.

Additional Hazards

See section 11 for more detailed information on health effects and symptoms.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	>60 %
37244-96-5	Nephenline Syenite	<50 %
7631-86-9	Fumed Silica	<10 %

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

Section 4. First-Aid Measures

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

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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention. Never give anything by mouth if the victim is unconscious or rapidly losing consciousness or is convulsing.
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.
More details	See section 11 for more detailed information on health effects and symptoms.

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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 should not be handled, shipped or stored at elevated temperature 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
Nephenline Syenite	N/A	N/A	N/A
Fumed Silica	N/A	10 mg/m3, TLV-TWA, Inhalation	N/A

Personal Protective Equipment

Goggles, Gloves, Apron, Face Shield, Respirator, SAFETY GLASSES, VENTILATION

Section 9. Physical and Chemical Properties

Physical State	Liquid
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Color	N/A
Odor	N/A
Odor Threshold	N/A
Solubility	Negligible
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	1.5
Density lbs/Gal	12.5
Pounds per Cubic Foot	N/A
Flash Point	N/A
FP Method	N/A
pH	N/A
Melting Point	Below 77°F (25°C)
Boiling Point	>400°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	N/A
Vapor Density	N/A

Section 10. Stability and Reactivity

Hazardous Polymerization Conditions to Avoid	Hazardous Polymerization may occur under certain conditions of storage or use. Avoid strong oxidizing agents, caustic soda (sodium hydroxide) can induce vigorous polymerization at temperatures around 200 degrees C.
Materials to Avoid	Reactive or incompatible with the following materials: strong oxidizing agents, sodium hydroxide.
Other Hazards	Reacts with considerable heat release with some curing agents. Polymerizes exothermically with amines, mercaptans and Lewis acids at ambient temperature and above.
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
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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

Disclaimer The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

All Regulatory Classification This product is not regulated by CFR, TDG, IMO, IMDG or IATA

Section 15. Regulatory Information

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	<p>Massachusetts RTK Substances - None required</p> <p>New Jersey RTK Hazardous Substances - None required</p> <p>Pennsylvania RTK Hazardous Substances - None required</p> <p>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</p>
Regulatory for Canada	<p>WHMIS (Canada)</p> <p>Class D-2B: Material causing other toxic effects (Toxic)</p> <p>Canadian Lists: Canadian NPRI: None required.</p>
International Regulations	<p>Chemical Inventories:</p> <p>Europe inventory: All components are listed or exempted.</p> <p>Australia inventory (AICS): All components are listed or exempted</p> <p>China inventory (IECSC): All components are listed or exempted</p> <p>Japan inventory (ENCS): All components are listed or exempted</p> <p>Japan inventory (ISHL): Not determined.</p> <p>Korea inventory (KECI): All components are listed or exempted</p> <p>New Zealand Inventory of Chemicals (NZIoC): Not determined</p> <p>Philippines inventory (PICCS): All components are listed or exempted.</p> <p>Canada inventory: All components are listed or exempted</p> <p>United States inventory (TSCA 8b): All components are listed or exempted</p>

Section 16. Other Information

Revision Date	5/31/2018
HMIS Rating (Not Regulated)	<p>The HMIS Rating for this product is: Health: 2 Flammability: 1 Reactivity: 0</p> <p>0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe</p>
Disclaimer	<p>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.</p> <p>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.</p>



Safety Data Sheet

RF 1120 Part B

Section 1. Identification

Product Identifier	RF 1120 Part B		
Synonyms	N/A		
Manufacturer Stock Numbers	N/A		
Recommended use	Curing Agent		
Uses advised against	Avoid strong acids, strong bases, strong oxidizers, amines, mercaptans		
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 2A SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 3
Signal Word	Warning

Pictogram



Hazard Statements

Causes gastrointestinal irritation
Causes serious eye irritation
May cause respiratory irritation
Moderately irritating to skin

Precautionary Statements

Response

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.

Prevention

Avoid breathing dust/fume/gas/mist/ vapors/spray.
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 locked up.

Disposal

Refer to manufacturer/Supplier for information on recovery/recycling

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Emergency Overview

Warning:
Causes skin and eye irritation. May cause allergic skin reaction. May cause respiratory tract irritation. Heated material can cause thermal burns.

Routes of Entry

Skin Contact, Eye Contact, Inhalation, Ingestion

Potential Health Effects

Inhalation

Can cause severe respiratory irritation.

Skin

Causes skin irritation. Allergic reactions are possible.

Eye

Substance causes substantial eye irritation.

Ingestion

Considered practically non-toxic.

Chronic Health Effects

None known

Section 3. Ingredients

CAS	Ingredient Name	Weight %
68410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	90-95 %
112-24-3	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-	5-10 %

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

Section 4. First-Aid Measures

Inhalation	Move person to fresh air.
Skin	Wash with soap and water. Get medical attention if irritation develops or persists.
Eye Contact	Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. Flushing within one minute is essential to achieve effectiveness. Obtain medical attention IMMEDIATELY.
Ingestion	Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	<p>Extinguishing media: Use alcohol foam, carbon dioxide, dry chemical or water spray when fighting fires involving this material.</p> <p>Flash Point: >365 Degrees F ASTM D 92-97; QP1363.2; Flash and Fire Points by Cleveland Open</p> <p>Flammable or Explosive Limits: Lower Limits : Not determined. Upper Limits : Not determined.</p> <p>Special Protective Equipment for Fire Fighters: Fire-fighters must be equipped to prevent breathing of vapors or products of combustion. Wear an approved self-contained breathing apparatus and protective clothing.</p> <p>Unusual Fire and Explosion Hazards: Not Applicable</p> <p>Hazardous Combustion Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, low molecular weight hydrocarbons and unknown organics.</p>
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	Prevent further leakage or spillage.
Spill and Leak Procedures	Spill response procedures: Caution. Combustible. – Large spills – Eliminate potential sources of ignition. Wear appropriate respirator and other protective clothing. Shut off source of leak only if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with

an absorbent such as clay, sand, or other suitable material; place in non-leaking containers and seal tightly for proper disposal. Flush area with water to remove trace residue; dispose of flush solution as above. – Small spills – Take up with an absorbent material and place in non-leaking containers for proper disposal.

Section 7. Handling and Storage

Storage Store in a cool place in original container and protect from sunlight.

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 6 mg/m3, inhalation	N/A
Personal Protective Equipment	Goggles, Gloves, Face Shield, Respirator			

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Amber
Odor	Amoniacal
Odor Threshold	N/A
Solubility	Moderate - (1 to 10%)
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	N/A
Density lbs/Gal	0.97
Pounds per Cubic Foot	N/A
Flash Point	>365°F
FP Method	Cleveland Open
pH	N/A
Melting Point	N/A
Boiling Point	N/A
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	N/A
Flammability	N/A
Decomposition Temperature	N/A
Auto-ignition Temperature	N/A

Vapor Pressure	N/A
Vapor Density	N/A

Section 10. Stability and Reactivity

Conditions to Avoid	None listed
Hazardous Decomposition Products	None reasonably foreseeable
Decomposition advices	No decomposition if used according to specifications
Reactivity	Materials to avoid: Oxidizers, Strong Acids
Hazardous Polymerization	Will not occur

Section 11. Toxicological Information

Acute Oral Toxicity	LD50>5000 mg/kg body weight
Acute Dermal Toxicity	LD50>5000 mg/kg body weight
Skin Irritation	Slightly irritating
Eye Contact	Severely irritating

Section 12. Ecological Information

Ecological Information	No data available.
Environmental effects	No known significant effects or critical hazards.

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 CFR 261. Small quantities should be treated with a liquid decontaminate. The treated waste is not a hazardous material under RCRA 40 CFR 261. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.
Disclaimer Part 3	Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.

Section 14. Transport Information

UN Number	3082
UN Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s. (dimer fatty acid(C18)poly amido amine resin)
DOT Classification	9
Packing Group	III

Section 15. Regulatory Information

TSCA Inventory Status	This product and/or all of its components are either included on or exempt from the TSCA Inventory of Chemical Substances
SARA 311/312 Hazard Categories	Immediate Health
TSCA 12(b) Components	None
SARA 313 Toxic Chemicals	None
SARA 302 Extremely Hazardous Substances	None
CERCLA Hazardous Chemicals	None
California Proposition 65	No California Proposition 65 listed chemicals are known to be present.

Section 16. Other Information

Revision Date 5/31/2018

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.