



Safety Data Sheet

RF 2114 Mod 1 Part A

Section 1. Identification

Product Identifier RF 2114 Mod 1 Part A
Synonyms N/A
Manufacturer Stock
Numbers N/A

Recommended use Epoxy Resin
Uses advised against N/A

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 EYE DAMAGE/IRRITATION - Category 2A
 SENSITIZATION - SKIN - Category 1
 SKIN CORROSION/IRRITATION - Category 2

Signal Word Warning

Pictogram



Hazard Statements

Can cause severe irritation or burns on the skin
Causes serious eye irritation
May cause an allergic skin reaction

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 on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
If on skin: Wash with plenty of water/ ...
If skin irritation or rash occurs: Get medical advice/attention.
Remove victim to fresh air and keep at rest in a position comfortable for breathing
Specific treatment (see ... on this label)
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.
In case of inadequate ventilation wear respiratory protection.
Wash ...thoroughly after handling.
Wear eye protection/face protection.
Wear protective Butyl Gloves, Face Shield, Eye Bath and Safety Shower.
Wear protective gloves.

Storage

N/A

Disposal

Dispose of contents/container to ...

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

No Data Available

Section 3. Ingredients

CAS	Ingredient Name	Weight %
25068-38-6	bisphenol-A-(epichlorhydrin) epoxy resin	60% - 100%
Proprietary - Filler	Filler	1% - 5%
Proprietary - Glass	Glass	1% - 5%
Proprietary - Cataly	Catalyst	0.1% - 1%
Proprietary - Epoxy	Epoxy Resin	0.1% - 1%

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

Section 4. First-Aid Measures

First Aid Measures

General advice

Most important symptoms/effects - acute and delayed
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 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. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

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.

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.

Inhalation

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease. Skin disorders and Allergies. Asthma.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media

General advice

Most important symptoms/effects - acute and delayed
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

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Ingestion

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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.

Inhalation

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease. Skin disorders and Allergies. Asthma.

Unsuitable Extinguishing Media N/A

Section 6. Accidental Release Measures

Clean-up	Clean up spills immediately, observing precautions in Protective Equipment section.
Minor Spills	Contain the spilled material and then cover with a loose, absorbent material such as oildry, vermiculite, sawdust, or fuller's earth. Shovel waste material into proper waste containers. Do not make pressure tight. Transport to a well-ventilated area and treat with a neutralizing solution consisting of a mixture of water and concentrated ammonium Hydroxide or 5-10% sodium carbonate. Add about 10 parts of neutralizer per part of Isocyanate with mixing. Allow to stand 48 hours letting evolved CO2 escape.

Section 7. Handling and Storage

Handling	Avoid contact with skin and eyes. Wash thoroughly after handling.
Storage	Keep away from food and drinking water.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	bisphenol-A-(epichlorhydrin) epoxy resin	N/A	N/A	N/A
	Filler	N/A	N/A	N/A
	Glass	N/A	N/A	N/A
	Catalyst	N/A	N/A	N/A
	Epoxy Resin	N/A	N/A	N/A

Personal Protective Equipment

N/A

Personal Protection

Engineering controls: Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.

Respiratory protection: When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Cream
Odor	Mild Solvent
Odor Threshold	N/A
Solubility	N/A
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A
Specific Gravity	1
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	N/A
FP Method	N/A
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

Other Hazards	Reacts with considerable heat release with some curing agents. Heating this substance above 300 deg. F in the presence of air may cause slow oxidative decomposition; above 500 deg. F polymerization may occur. Some combinations of resins and curing agents can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants, fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity.
Additional Information	Conditions to avoid: Excessive heat. Store away from incompatible materials. Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

Section 11. Toxicological Information

Additional Information	Potential Health Effects/Symptoms
	Inhalation: May cause respiratory tract irritation. Skin contact: Causes skin irritation. May cause allergic skin reaction. Eye contact: Causes serious eye irritation. Ingestion: Not expected under normal conditions of use

Section 12. Ecological Information

Not Available

Section 13. Disposal

WASTE DISPOSAL METHOD:	Dispose of in accord with local, state and federal regulations
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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
Additional Information	International Air Transportation (ICAO/IATA) Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin) Hazard class or division: 9 Identification number: UN 3082 Packing group: III
	Water Transportation (IMO/IMDG) Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)

Hazard class or division: 9 Identification number: UN 3082 Packing group: III
Marine pollutant: Bisphenol-A Epichlorhydrin resin

Section 15. Regulatory Information

Additional Information

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory. TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health CERCLA/SARA Section 313: None above reporting de minimis

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List

Section 16. Other Information

Revision Date

3/25/2018

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 2114 Mod 1 Part B

Section 1. Identification

Product Identifier RF 2114 Mod 1 Part B
Synonyms N/A
Manufacturer Stock
Numbers N/A

Recommended use Hardner
Uses advised against N/A

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 EYE DAMAGE/IRRITATION - Category 2A
 SENSITIZATION - SKIN - Category 1
 SKIN CORROSION/IRRITATION - Category 1A
 SKIN CORROSION/IRRITATION - Category 1B
 SKIN CORROSION/IRRITATION - Category 2
Signal Word Danger

Pictogram



Hazard Statements

Can cause severe irritation or burns on the skin
Causes serious eye irritation
Causes severe skin burns and eye damage
Causes severe skin burns and eye damage
May cause an allergic skin reaction

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: Remove person to fresh air and keep comfortable for breathing.
If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
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: Rinse mouth. Do NOT induce vomiting.
Immediately call a poison center/doctor/ ...
Remove victim to fresh air and keep at rest in a position comfortable for breathing
Specific treatment (see ... on this label)
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.
In case of inadequate ventilation wear respiratory protection.
Wash ...thoroughly after handling.
Wear eye protection/face protection.
Wear protective Butyl Gloves, Face Shield, Eye Bath and Safety Shower.
Wear protective gloves.
Wear protective gloves/protective clothing/eye protection/face protection.

Storage

Store locked up.

Disposal

Dispose of contents/container to ...

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

No Data Available

Section 3. Ingredients

CAS	Ingredient Name	Weight %
112945-52-5	Silica Fumes	5-10 %
112-57-2	1,2-Ethanediamine, N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-	30-60 %
21645-51-2	Aluminum hydroxide (Al(OH) ₃)	10-30 %
Proprietary - Pipera	Substituted piperazine	10-30 %
Proprietary	Polyamine	1-5 %
13463-67-7	Titanium oxide (TiO ₂)	.1-1 %
112-24-3	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-	.1-1 %
Proprietary	Amine Adduct	.1-1 %

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

Section 4. First-Aid Measures

First Aid Measures

General advice

Most important symptoms/effects - acute and delayed
 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 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. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

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.

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.

Inhalation

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease. Skin disorders and Allergies. Asthma.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media

General advice

Most important symptoms/effects - acute and delayed
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 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. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

Ingestion

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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.

Inhalation

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease. Skin disorders and Allergies. Asthma.

Unsuitable Extinguishing Media

N/A

Section 6. Accidental Release Measures

Clean-up

Clean up spills immediately, observing precautions in Protective Equipment section.

Minor Spills

Contain the spilled material and then cover with a loose, absorbent material such as oildry, vermiculite, sawdust, or fuller's earth. Shovel waste material into proper waste containers. Do not make pressure tight. Transport to a well-ventilated area and treat with a neutralizing solution consisting of a mixture of water and concentrated ammonium Hydroxide or 5-10% sodium carbonate.

Add about 10 parts of neutralizer per part of Isocyanate with mixing. Allow to stand 48 hours letting evolved CO2 escape.

Section 7. Handling and Storage

Handling Avoid contact with skin and eyes. Wash thoroughly after handling.
Storage Keep away from food and drinking water.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Silica Fumes	N/A	N/A	N/A
	1,2-Ethanediamine, N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-	N/A	N/A	N/A
	Aluminum hydroxide (Al(OH) ₃)	N/A	N/A	N/A
	Substituted piperazine	N/A	N/A	N/A
	Polyamine	N/A	N/A	N/A
	Titanium oxide (TiO ₂)	N/A	N/A	N/A
	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-	N/A	1 ppm, skin, TWA 6 mg/m ³ , inhalation	N/A
	Amine Adduct	N/A	N/A	N/A

Personal Protective Equipment N/A

Personal Protection Engineering controls: Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.

Respiratory protection: When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.
 Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Clear
Odor	Strong, ammoniacal
Odor Threshold	N/A
Solubility	N/A
Partition coefficient Water/n-octanol	N/A
VOC%	N/A
Viscosity	N/A

Specific Gravity	1
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	N/A
FP Method	N/A
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

Other Hazards

Reacts with considerable heat release with some curing agents. Heating this substance above 300 deg. F in the presence of air may cause slow oxidative decomposition; above 500 deg. F polymerization may occur. Some combinations of resins and curing agents can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants, fumes and vapors from the thermal and chemical decompositions vary widely in composition and toxicity.

Additional Information

Conditions to avoid: Excessive heat. Store away from incompatible materials. Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

Section 11. Toxicological Information

Additional Information

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing.

Hazardous decomposition products:

Oxides of carbon. Oxides of nitrogen. Ammonia. Amines. Phenolics. Toxic fumes. Irritating vapors.

Incompatible materials: Oxidizing agents. Acids. Acrylates. Alcohols. Aldehydes. Ketones. Nitrites. Nitrous acid and other nitrosating agents. 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. Peroxides. Sodium

hypochlorite. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Reactivity: Not available.

Conditions to avoid: Keep away from heat, ignition sources and incompatible materials. The exotherm has the potential for release of toxic gasses. Avoid temperatures above 294°C (561°F). Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

Section 12. Ecological Information

Not Available

Section 13. Disposal

WASTE DISPOSAL
METHOD:

Dispose of in accord with local, state and federal regulations

Section 14. Transport Information

UN Number 2735

UN Proper Shipping Name Amines, liquid, corrosive, n.o.s. (Tetraethylene pentamine, Polyethylenepolyamine)

DOT Classification 8

Packing Group II

Additional Information International Air Transportation (ICAO/IATA) Proper shipping name: Amines, liquid, corrosive, n.o.s. (Tetraethylene pentamine, Polyethylenepolyamine)
Hazard class or division: 8 Identification number: UN 2735 Packing group: II

Water Transportation (IMO/IMDG) Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Tetraethylene pentamine, Polyethylenepolyamine) Hazard class or division: 8 Identification number: UN 2735 Packing group: II Marine pollutant: Tetraethylene pentamine, Polyethylenepolyamine

Section 15. Regulatory Information

Additional Information

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory. TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health CERCLA/SARA Section 313: None above reporting de minimis

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List

Section 16. Other Information

Revision Date

3/25/2018

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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.