



Safety Data Sheet

RF 1378A Red (Part A)

Section 1. Identification

Product Identifier	RF 1378A Red (Part A)		
Synonyms	29674A; Isocyanate Prepolymer with Red Pigment Added		
Manufacturer Stock Numbers	29674A		
Recommended use	Isocyanate Prepolymer with Red Pigment Added		
Uses advised against	Incompatible with water, strong bases, alcohols, strong oxidizing agents and carboxylic acids. Avoid contact with water, alcohols, strong bases and metal compounds.		
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/evr_resin_formulators.php	

Section 2. Hazards Identification

Classification	ACUTE TOXICITY - INHALATION - Category 3 ACUTE TOXICITY - ORAL - Category 4 EYE DAMAGE/IRRITATION - Category 2B SENSITIZATION - RESPIRATORY - Category 1 SENSITIZATION - SKIN - Category 1 SPECIFIC TARGET ORGAN TOXICITY (Repeated) - Category 1
Signal Word	Danger

Pictogram



Hazard Statements

Harmful if swallowed
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Moderately irritating to eyes
Overexposure causes severe irritation of the respiratory tract and mucous membrane, tightness of the chest, shortness of breath, coughing and headaches. Bronchitis and pulmonary adema may develop.
Toxic if inhaled

Precautionary Statements

Response

Call a poison center or doctor immediately if you feel unwell.
Call a poison center/doctor/...
Get medical advice/attention if you feel unwell.
If experiencing respiratory symptoms: Call a poison center or doctor immediately.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If on skin: Wash with plenty of soap and water for a minimum of 15 minutes. If irritation persists, contact a physician.
If skin irritation or rash occurs: Get medical advice/attention.
If swallowed: Call a poison center or doctor immediately if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Rinse mouth.
Wash contaminated clothing before reuse.

Prevention

Contaminated work clothing must not be allowed out of the workplace.
Do not breathe dust/fume/gas/mist/ vapors/spray.
Do not eat, drink or smoke when using this product.
In case of inadequate ventilation wear respiratory protection.
Use only outdoors or in a well-ventilated area.
Wash affected areas thoroughly after handling.
Wear protective gloves.
Wear protective gloves/protective clothing/eye protection/face protection.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container to landfill or proper equipment for incineration.

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Emergency Overview

Warning: Contains organic isocyanate. Causes severe eye and skin irritation and possible eye burns. Vapor or mist harmful if inhaled. Can cause allergic respiratory and skin reaction. Harmful if swallowed.

Primary Routes of Entry

Dermal and Inhalation

Potential Acute Health Effects

Inhalation - Toxic by inhalation. Irritating to respiratory system. May cause sensitization by inhalation.

Ingestion - Low oral toxicity. Ingestion may cause irritation of the gastrointestinal tract.

Skin - Irritating to the skin. May cause sensitization by skin contact.

Eyes - Irritating to the eyes.

Potential Chronic Health Effects

General: Contains material that can cause target organ damage. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Target Organs: Contains material which causes damage to the following organs: Upper Respiratory Tract

Mutagenicity: No substantial evidence of mutagenic potential

Teratogenicity: No substantial evidence of teratogenic or fetotoxic potential

Developmental Effects: No known significant effects or critical hazards

Fertility Effects: No known significant effects or critical hazards

Carcinogenicity

This product and its components are not listed by NTP, IARC or regulated as a carcinogen by OSHA.

Chronic

Prolonged or repeated exposure may cause allergic reaction to skin and respiratory tract.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
68609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	<1 %
78-40-0	Phosphoric acid, triethyl ester	<10 %
39310-05-9	Benzene, 1,1'-methylenebis[isocyanato-, homopolymer	<10 %
26447-40-5	Benzene, 1,1'-methylenebis[isocyanato-	<10 %
25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	<2 %
101-68-8	Benzene, 1,1'-methylenebis[4-isocyanato-	60-90 %

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

Section 4. First-Aid Measures

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.
Skin	Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Eye	CORROSIVE to the eyes, may cause blindness. Immediately flush eyes with running water for a minimum of 15 minutes. Hold eyelids open during flushing. Obtain medical attention IMMEDIATELY.
Notes To Physician	Allergic dermatitis or respiratory response in susceptible individuals may be delayed. It may appear after weeks or even months of frequent and prolonged contact.
Medical Conditions Aggravated by Exposure	Allergy, skin, eye condition or chronic respiratory diseases

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Use alcohol foam, carbon dioxide, dry chemical or water spray when fighting fires involving this material.
Unsuitable Extinguishing Media	Do not use water jet
Flash Point	351 Degrees F (177°C)
Flash Point Method Used	PMCC
Auto Ignition Temperature	Not Available
Protective Equipment	Use self-contained breathing apparatus and full protective clothing (Bunker Gear) due to toxic vapors and combustion products which can cause serious respiratory problems. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residues.
Fire and Explosion Hazards	Do not use a solid stream of water. A solid stream of water can spread fire.
Hazardous Combustion Products	Decomposition and combustion products may be toxic.

Section 6. Accidental Release Measures

Accidental Release Measures	Evacuate the spill area. Wear full protective equipment. Dike and absorb spill with inert material (sand, earth, etc.). Transfer to containers suitable for disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Thoroughly launder clothing before reuse. Keep spills and runoffs out of municipal sewers and open bodies of water. If spilled on a porous surface, ground contamination must be considered.
Neutralization Chemicals	Neutralize the spill with: 8% ammonia hydroxide, 2% detergent, and 90% water. Use adequate ventilation when cleaning.

Section 7. Handling and Storage

Signal Word	ISOCYANATE
Precautions	Do not get in eyes, on skin, or on clothing. Wear splash goggles and impervious gloves when handling. Wash skin and clothing thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.
Other Handling Information	In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid contact with eyes and prolonged or repeated skin contact. Do not inhale mists. Use with adequate ventilation. For industrial use only.
Storage Temperature (Min/Max)	Maximum Storage Temperature: 68 Degrees F (21 Degrees C). Store indoors in a cool, dry area with adequate ventilation. Use inert gas blanketing for bulk storage.
Additional Information	PLEASE READ TECHNICAL DATA SHEET BEFORE HANDLING THE PRODUCT. KEEP OUT OF THE REACH OF CHILDREN. FOR INDUSTRIAL USE ONLY.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	N/A	N/A	N/A
	Phosphoric acid, triethyl ester	N/A	N/A	N/A
	Benzene, 1,1'-methylenebis[isocyanato-, homopolymer	N/A	N/A	N/A
	Benzene, 1,1'-methylenebis[isocyanato-	N/A	N/A	N/A
	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	N/A	N/A	N/A
	Benzene, 1,1'-methylenebis[4-isocyanato-	0.005 PPM TWA	N/A	N/A
Personal Protective Equipment	Goggles, Gloves, Apron, Face Shield, Respirator, PROTECTIVE CLOTHING, RUBBER BOOTS, VENTILATION, CHEMICAL GOGGLES, EYE WASH AND SAFETY SHOWER			
Eye Wash Stations and Safety Showers	Need readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.			
Engineering controls	Good general ventilation and local exhaust are required to meet the recommended TWA.			
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. Air purifying (cartridge type) respirators are not approved for protection against Diisocyanate.			
Eye/Face Protection	Face shield and safety glasses with side shields. If there is a potential for splashing or spraying of product, use full face protection and have safety showers and eye wash stations available. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).			
VENTILATION	Have proper ventilation			
GLOVES	Neoprene, Nitrile-Butadiene rubber, butyl rubber. Thin disposable gloves should be avoided for repeated or long term use.			
RUBBER_BOOTS	Please wear rubber boots at all times			
PROTECTIVE CLOTHING	Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.			

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Red
Odor	Fruity
Odor Threshold	N/A
Solubility	Reacts with water
Partition coefficient Water/n-octanol	N/A
VOC%	14 g/L (estimated)
Viscosity	~50 cps at 77°F (25°C)
Specific Gravity	1.2
Density lbs/Gal	N/A
Pounds per Cubic Foot	1.2
Flash Point	351°F (177°C)
FP Method	PMCC
Ph	N/A
Melting Point	N/A
Boiling Point	597°F (314°C) (Decomposition)
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	<1 (Butyl Acetate=1)
Flammability	1
Decomposition Temperature	597°F (314°C)
Auto-ignition Temperature	N/A
Vapor Pressure	0.0003 mmHG at 20°C (68°F)
Vapor Density	N/A

Section 10. Stability and Reactivity

Conditions to Avoid	Avoid high temperatures. Avoid freezing
Chemical Stability	Stable under recommended storage conditions
Incompatibilities	Water, strong bases, alcohols, strong oxidizing agents and carboxylic acids. Avoid contact with water, alcohols, strong bases and metal compounds.
Hazardous Decomposition Products	Nitrogen Oxides, Carbon Monoxide, Carbon Dioxide and traces of HCN.
Hazardous Polymerization	Hazardous Polymerization may occur under certain conditions of storage or use.

Section 11. Toxicological Information

Acute Oral Effects (LD50)	>2000 mg/Kg (rats)
Acute Dermal Toxicity (LD50)	>2000 mg/Kg (rabbit)
Sensitization	Potential skin and respiratory sensitizer
Skin Irritation	Severe skin irritant
Eye Irritation	Severe eye irritant

Section 12. Ecological Information

Biodegradability	No information available
Ecotoxicological Information	None Listed

Section 13. Disposal

Disposal Incinerate liquid in approved equipment. Landfill or incinerate contaminated material in accordance with local, state and federal regulations.

DECONTAMINANT LIQUID 90% Water, 8% Ammonium hydroxide, 2% Detergent

Section 14. Transport Information

UN Number	N/A
UN Proper Shipping Name	N/A
DOT Classification	NOT REGULATED
Packing Group	N/A
DOT NOT REGULATED	This section is provided for general information only. The shipping description below may not represent requirements for all modes of transportation, packaging, shipping methods or locations outside of the United States.

FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE SHIPMENT OF THIS PRODUCT.

DOT CLASSIFICATION - Not Regulated

The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

Section 15. Regulatory Information

U.S. Federal Regulations	<p>OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) This Safety Data Sheet (SDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.</p> <p>RESOURCE CONSERVATION AND RECOVERY ACT (RCRA): This product is not considered to be a P or U listed hazardous waste under RCRA (40 CFR 261).</p> <p>101-68-8 Methylene bis (phenylisocyanate) (MDI)</p> <p>SARA TITLE III: Section 302 - Extremely Hazardous Substances (EHS): This product contains no chemicals regulated under Section 302 as extremely hazardous substances.</p> <p>SARA TITLE III: Section 304 - CERCLA: This product contains no chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List).</p> <p>SARA TITLE III: Section 311/312 Hazard Communication Standard (HCS): Immediate health hazard. Delayed health hazard. Reactive hazard.</p> <p>SARA TITLE III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical for routine annual Toxic Chemical Release Reporting under Sec. 313 (40 CFR 372). This information must be included in all SDS's copied or distributed for this material.</p> <p>Chemical Name: BENZENE, 1,1'-METHYLENEBIS (4-ISOCYANATO) Percent in Composition: 60-90% by weight.</p> <p>TSCA SECTION 8 (b): - Inventory Status: All chemical(s) comprising this product are listed on the TSCA inventory.</p> <p>TSCA SECTION 12 (b) - Expert Notification: This product does not contain any chemicals subject to Section 12(b) export notification.</p>
International Regulations	<p>Australia Inventory Status (AICS): This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.</p> <p>Canadian Inventory Status: This product contains only chemicals that are currently listed on the Canadian Domestic Substance List.</p> <p>Japanese Inventory Status This product contains only chemicals currently listed on the Japanese Ministry of International Trade and Industry List of Existing and New Chemical Substances.</p>
California Proposition 65 Regulatory	<p>No California Proposition 65 listed chemicals are known to be present. This product does not contain chemicals known to the State of California to cause Cancer.</p>
Pennsylvania Right to Know Components	<p>The following is required composition information:</p> <p>Chemical Name: BENZENE, 1,1'-METHYLENEBIS (4-ISOCYANATO-) CAS Number: 101-68-8 Comment: Environmental Hazardous Substance</p> <p>Chemical Name: DIPHENYLMETHANE DILSOCYANATE (HOMOPOLYMER)</p>

CAS Number: 39310-05-0
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: BENZENE, 1,1'-METHYLENEBIS(ISOCYANATO-)
CAS Number: 26447-40-5
Comment: Not on Pennsylvania Hazardous Substance List

Section 16. Other Information

Revision Date 4/7/2015

HMIS Rating (Not Regulated) The HMIS Rating for this product is:
Health: 3 Flammability: 1 Reactivity: 1

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.



Safety Data Sheet

RF 1378B Red (Part B)

Section 1. Identification

Product Identifier	RF 1378B Red (Part B)		
Synonyms	Hydroxy Terminated Polyols; 29674B		
Manufacturer Stock Numbers	29674B		
Recommended use	Component used for the manufacture of electrical insulation parts. Hydroxy Terminated Polyols		
Uses advised against	N/A		
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/evr_resin_formulators.php	

Section 2. Hazards Identification

Classification	ACUTE TOXICITY - INHALATION - Category 4 ACUTE TOXICITY - ORAL - Category 4 EYE DAMAGE/IRRITATION - Category 1 SENSITIZATION - SKIN - Category 1A SKIN CORROSION/IRRITATION - Category 3
Signal Word	Danger

Pictogram



Hazard Statements

Causes mild skin irritation
Causes serious eye damage
Harmful if inhaled
Harmful if swallowed
May cause an allergic skin reaction

Precautionary Statements

Response

Call a poison center or doctor immediately if you feel unwell.
Get medical advice/attention if you feel unwell.
If experiencing respiratory symptoms: Call a poison center or doctor immediately.
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: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If swallowed: Call a poison center or doctor immediately if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Rinse mouth.
Wash contaminated clothing before reuse.

Prevention

Contaminated work clothing must not be allowed out of the workplace.
Do not breathe dust/fume/gas/mist/ vapors/spray.
Do not eat, drink or smoke when using this product.
In case of inadequate ventilation wear respiratory protection.
Use only outdoors or in a well-ventilated area.
Wash affected areas thoroughly after handling.
Wear eye protection/face protection.
Wear protective gloves.
Wear protective gloves/protective clothing/eye protection/face protection.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container to landfill or proper equipment for incineration.

Ingredients of unknown toxicity

0%

Hazards not Otherwise Classified

Emergency Overview

CAUTION! May cause eye irritation. Prolonged or repeated skin contact may cause irritation, and may cause allergic skin reaction. Harmful if inhaled. Harmful if swallowed.

Primary Routes of Entry

Dermal and Inhalation

Potential Acute Health Effects

Inhalation - May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system

Ingestion - May cause burns to mouth, throat and stomach

Skin - Slightly irritating to the skin.

Eyes - Corrosive to eyes. Causes burns.

Potential Health Effects

Vapor or mist may possibly be harmful if inhaled. Substance may cause moderate irritation to eyes. Substance may cause slight irritation to skin. Substance may possibly be harmful if ingested.

Carcinogenicity

This product and its components are not listed by NTP, IARC or regulated as a carcinogen by OSHA.

Chronic

Prolonged or repeated exposure may cause allergic reaction to skin and respiratory tract.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
2530-83-8	Silane, trimethoxy[3-(oxiranylmethoxy)propyl]-	<1 %
2530-83-8	Silane, trimethoxy[3-(oxiranylmethoxy)propyl]-	<1 %
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica	<1 %
112926-00-8	Precipitated silica	<1 %
69102-90-5	1,3-Butadiene, homopolymer, hydroxy-terminated	<1 %
3077-13-2	2-Propanol, 1,1'-(phenylimino)bis-	<1 %
65997-17-3	Glass, oxide, chemicals	<2 %
7631-86-9	Silica	Unknown

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

Section 4. First-Aid Measures

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.

Skin

Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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.

Notes To Physician

Symptomatic and supportive therapy may be needed following severe exposure. In such cases, medical follow-up should be maintained for at least 48 hours. Allergic dermatitis or respiratory response in susceptible individuals may be delayed. It may appear after weeks or even months of frequent and prolonged contact.

Medical Conditions
Aggravated by Exposure

Allergy, eczema, eye or respiratory conditions.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Use alcohol foam, carbon dioxide, dry chemical or water spray when fighting fires involving this material.
Unsuitable Extinguishing Media	Do not use water jet
Flash Point	450 Degrees F (232 Degrees C)
Flash Point Method Used	Closed Cup
Auto Ignition Temperature	Not Available
Protective Equipment	Use self-contained breathing apparatus and full protective clothing (Bunker Gear) due to toxic vapors and combustion products which can cause serious respiratory problems. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residues.
Fire and Explosion Hazards	Do not use a solid stream of water. A solid stream of water can spread fire.
Hazardous Combustion Products	Decomposition and combustion products may be toxic.

Section 6. Accidental Release Measures

Accidental Release Measures	Evacuate the spill area. Wear full protective equipment. Dike and absorb spill with inert material (sand, earth, etc.). Transfer to containers suitable for disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Thoroughly launder clothing before reuse. Keep spills and runoffs out of municipal sewers and open bodies of water. If spilled on a porous surface, ground contamination must be considered.
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Section 7. Handling and Storage

Signal Word	CAUTION!
Precautions	Do not get in eyes, on skin, or on clothing. Wear splash goggles and impervious gloves when handling. Wash skin and clothing thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.
Other Handling Information	In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid contact with eyes and prolonged or repeated skin contact. Do not inhale mists. Use with adequate ventilation. For industrial use only.
Storage Temperature (Min/Max)	RF 1378B Red (Part B Only) - Maximum Storage Temperature: 95 Degrees F (35 Degrees C). Store indoors in a cool, dry area with adequate ventilation. RF 1378A Red (Part A Only) - Maximum Storage Temperature is 68 Degrees F When both products are combined, the recommended storage temperature for the A&B Mixture is 75 Degrees F

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Silane, trimethoxy[3-(oxiranylmethoxy)propyl]-	N/A	N/A	N/A
	Silane, trimethoxy[3-(oxiranylmethoxy)propyl]-	N/A	N/A	N/A
	Siloxanes and Silicones, di-Me, reaction products with silica	N/A	N/A	N/A
	Precipitated silica	N/A	N/A	N/A
	1,3-Butadiene, homopolymer, hydroxy-terminated	N/A	N/A	N/A
	2-Propanol, 1,1'-(phenylimino)bis-	N/A	N/A	N/A
	Glass, oxide, chemicals	N/A	N/A	N/A
	Silica	N/A	N/A	N/A
Personal Protective Equipment	Goggles, Gloves, Apron, Face Shield, Respirator, PROTECTIVE CLOTHING, RUBBER BOOTS, VENTILATION, CHEMICAL GOGGLES, EYE WASH AND SAFETY SHOWER			
Eye Wash Stations and Safety Showers	Need readily accessible eye wash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.			
Engineering controls	Good general ventilation and local exhaust are required to meet the recommended TWA.			
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. Air purifying (cartridge type) respirators are not approved for protection against Diisocyanate.			
Eye/Face Protection	Face shield and safety glasses with side shields. If there is a potential for splashing or spraying of product, use full face protection and have safety showers and eye wash stations available. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).			
VENTILATION	Have proper ventilation			
GLOVES	Neoprene, Nitrile-Butadiene rubber, butyl rubber. Thin disposable gloves should be avoided for repeated or long term use.			
RUBBER_BOOTS	Please wear rubber boots at all times			
PROTECTIVE CLOTHING	Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.			

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Faint Amber
Odor	Hydrocarbon
Odor Threshold	N/A
Solubility	Moderate
Partition coefficient Water/n-octanol	N/A
VOC%	10 g/L (estimated)
Viscosity	~8500 cps
Specific Gravity	1.05
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	450°F (232° C)
FP Method	Closed Cup
Ph	N/A
Melting Point	N/A
Boiling Point	N/A
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	<1 (Butyl Acetate=1)
Flammability	1
Decomposition Temperature	N/A
Auto-ignition Temperature	N/A
Vapor Pressure	<1 mmHg at 68°F (20°C)
Vapor Density	>1 (Air=1)

Section 10. Stability and Reactivity

Conditions to Avoid	Avoid high temperatures. Avoid freezing
Chemical Stability	Stable under recommended storage conditions
Incompatibilities	Strong oxidizing materials
Hazardous Decomposition Products	Hydrocarbons, Carbon Monoxide, Carbon Dioxide and Aniline
Hazardous Polymerization	Will not occur

Section 11. Toxicological Information

Toxicology Information

Component Toxicology Information:

Glycidoxypropyltrimethoxysilane (GPTMS) was weakly mutagenic in the Ames test, mouse lymphoma assay, and in invitro sister chromatid exchange test; however results of in vivo geotoxicity studies have shown mixed results. Repeated exposure of rats or rabbits to this material did not result in an increase in sister chromatid exchange, while single exposures of mice to hydrolyzate of this material resulted in significant increase in micronucleated polychromatic erythrocytes. The potential relevance to humans is not known; however, it is unlikely that this material presents a significant genotoxic hazard, in that it lacks any local tumorigenic response to the chronic recurrent application to mouse skin.

Special Hazard Information on Components:

Mutagens

CAS Number: 2530-83-8

Weight %: <60.0%

Component Name: Glycidoxypropyl trimethoxysilane Genetically active in IN VITRO and IN VIVO assay(s).

Acute Toxicity:

Oral (LD50): Not available

Dermal (LD50): Not available

Inhalation Toxicity (LD50): Not available

Sensitization: May cause sensitization

Skin Irritation: Slight irritation

Eye Irritation: Moderate irritant

Section 12. Ecological Information

Biodegradability

No information available

Ecotoxicological Information

None Listed

Section 13. Disposal

Disposal

Incinerate liquid in approved equipment. Landfill or incinerate contaminated material in accordance with local, state and federal regulations.

Section 14. Transport Information

UN Number	N/A
UN Proper Shipping Name	N/A
DOT Classification	NOT REGULATED
Packing Group	N/A
DOT NOT REGULATED	This section is provided for general information only. The shipping description below may not represent requirements for all modes of transportation, packaging, shipping methods or locations outside of the United States.

FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE SHIPMENT OF THIS PRODUCT.

DOT CLASSIFICATION - Not Regulated

The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

Section 15. Regulatory Information

U.S. Federal Regulations

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)

This Safety Data Sheet (SDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA):

This product is not a hazardous waste under RCRA (40 CFR 261).

SARA TITLE III: Section 304 - CERCLA: This product contains the following chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification ("CERCLA" List).

Chemical Name: Benzene, dimethyl-

CASRN: 1330-20-7

Percent in Composition: 0.10 - 100% by weight

Component RQ: 100

SARA TITLE III: Section 311/312 Hazard Communication Standard (HCS):

Immediate (acute) health hazard.

SARA TITLE III: Section 313 Toxic Chemical List (TCL):

This product does not contain a toxic chemical for routine annual Toxic Chemical Release Reporting under Sec. 313 (40 CFR 372).

TSCA SECTION 8 (b): - Inventory Status:

All chemical(s) comprising this product are listed on the TSCA inventory.

TSCA SECTION 12 (b) - Expert Notification:

This product does not contain any chemicals subject to Section 12(b) export notification.

California Prop. 65 Components

This product contains chemicals known to the State of California to cause cancer, birth defects, and/or reproductive harm.

Chemical Name: 1,3-BUTADIENE

CASRN: 106-99-0

Percent in Composition: 0.0005

Comment: Warning! This chemical is known to the State of California to cause Cancer.

Pennsylvania Right-to-Know: The following is required composition information:

Chemical Name: POLYBUTADIENE POLYOL

CASRN: 3077-13-2

Comment: Not on Pennsylvania Hazardous Substance List

Section 16. Other Information

Revision Date

4/7/2015

HMIS Rating (Not Regulated) The HMIS Rating for this product is:
Health: 2 Flammability: 1 Reactivity: 1

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.