Safety Data Sheet

RF 9

Section 1. Identification

Product Identifier	RF 9
Synonyms	Epoxy Curing Agent
Manufacturer Stock Numbers	10004
Recommended use	Epoxy Curing Agent
Uses advised against	Avoid high temperatures, flames and contact with strong oxidizing agents.

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
info@resinformulators.com	http://www.resinformulators.com

Section 2. Hazards Identification

Classification

ACUTE TOXICITY - DERMAL - Category 4
ACUTE TOXICITY - INHALATION - Category 4
ACUTE TOXICITY - ORAL - Category 4
CORROSIVE TO METALS - Category 1
SKIN CORROSION/IRRITATION - Category 2

Signal Word: Warning

Pictogram

Hazard Statements	Harmful if inhaled Harmful if swallowed Harmful in contact with skin May be corrosive to metals Moderately irritating to skin
Precautionary Statements	
Response	Absorb spillage to prevent material damage. Call a poison center/doctor/ ... /if you feel unwell. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin: Wash with plenty of water/ ... If swallowed: Call a poison center/doctor/ ... / if you feel unwell. Rinse mouth. Specific treatment (see ... on this label) Take off immediately all contaminated clothing and wash it before reuse.
Prevention	Avoid breathing dust/fume/gas/mist/ vapors/spray. Do not eat, drink or smoke when using this product. Keep only in original container. Use only outdoors or in a well-ventilated area. Wash ...thoroughly after handling. Wear protective Butyl Gloves, Face Shield, Eye Bath and Safety Shower.
Storage	Store in a cool, dry area. Keep at a temperature below 77 Degrees F Store in corrosive resistant/... container with a resistant inner liner.
Disposal	Dispose of contents/container... see section 13
Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	
EMERGENCY OVERVIEW	
Health Hazards	Harmful in contact with skin, severe skin irritant, may cause sensitization by skin contact. Harmful if swallowed Corrosive Severe 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 %
111-40-0	Diethylenetriamine (DETA)	<45 %
68410-23-1	Ppolyamide Resin	>55 %

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

Section 4. First-Aid Measures

General	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation	Severe Irritant – components Diethylenetriamine (DETA): LC50 (4h): < 0.07 - < 0.3 mg/l, Species: Rat Remove patient from exposure, keep warm and at rest. Vapors may be corrosive to severely irritating to respiratory tract. Repeated exposure can cause lung damage. 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 shows signs of failing.
Skin Contact	Skin Irritant: LD50: < 1,090 mg/kg, species, Rabbit May cause skin 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 PHYSISIANS: Application of corticosteroid cream has been effective in treating skin irritation.
Eye Contact	Severe irritant to the eyes. Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. Obtain medical attention IMMEDIATELY.
Ingestion	Severe Irritant: LD50 : <1,080 mg/kg, species, Rat Do NOT Induce Vomiting. May cause irritation to the mouth, throat, and stomach. May be moderately toxic if swallowed. May cause CNS depression. Turn victims head to the side.
Signs and Symptoms	Irritation as noted above. Lung damage (scarring, brochitis, emphysema) may be evidenced by shortness of breath, especially on exertion, and may be accopanied 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

Suitable Extinguishing Media	Containers may burst under intense heat. Extinguishing media: 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. Protective Equipment: Use self-contained breathing apparatus and full protective clothing (Bunker Gear). Flash Point: >212°F (>100°C) Flammable Limits (Lower): Not Available Flammable Limits (Upper): Not Available Explosive Power: None Sensitivity to Mechanical Impact: None Sensitivity to Static Discharge: None Combustion Products: CO, CO2, NOx 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
	Diethylenetriamine (DETA)	1ppm, 4mg/m3 Time Weighted Average (TWA)	N/A	N/A
	Ppolyamide Resin	N/A	N/A	N/A

Personal Protective Equipment	Goggles, Gloves, Face Shield, Respirator, CHEMICAL GOGGLES, PROTECTIVE CLOTHING, 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.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Amber
Odor	Amoniacal
Odor Threshold	N/A
Solubility	Complete
Partition coefficient Water/n-octanol	N/A
VOC%	<1
Viscosity	N/A
Specific Gravity	1
Density lbs/Gal	1.03
Pounds per Cubic Foot	N/A
Flash Point	>212°F (>100°C)
FP Method	N/A
Ph	Alkaline
Melting Point	-31°F (-35°C)
Boiling Point	428°F (220° C)
Boiling Range	N/A
LEL	N/A
UEL	N/A
Evaporation Rate	0.001
Flammability	N/A
Decomposition Temperature	N/A
Auto-ignition Temperature	N/A
Vapor Pressure	<1.0 mmHg at 70°F (21°C)
Vapor Density	64.301 Lb/ft3 (1.03 g/cm3)

Section 10. Stability and Reactivity

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

Section 11. Toxicological Information

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 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	2735
UN Proper Shipping Name	AMINES, LIQUID, CORROSIVE, N.O.S. (Diethylenetramine (DETA)
DOT Classification	8
Packing Group	III

Section 15. Regulatory Information

Regulatory	This product is listed on the EPA/TSCA inventory of chemical substances. Protection of stratospheric ozone (pursuant to Section 611 of the Clean Air Act Ammendment of 1990); Per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any Class I or Class II ozone depelting substances. In accordance with SARA Title III, Section 313.

Section 16. Other Information

Revision Date	6/9/2015
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
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