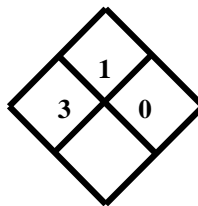


P.O. Box 4980
The Woodlands, TX 77387-4980

8 am to 5 pm Phone: (800) 257-5547
24-Hour Emergency Phone: (800) 328-8501
International Emergency Phone: (409) 727-0831
Asia Pacific Emergency Phone: (65) 6336-6011

Effective Date: 10/2/08**Material Safety Data Sheet**

MSDS No: 5982

1. PRODUCT IDENTIFICATION**Trade Name:** Ren 1118**Chemical Family:** Amine

NFPA RATING

| | |
|-----------------------------|-----------|
| Health: | 3* |
| Flammability: | 1 |
| Reactivity: | 0 |
| Personal Protection: | |

HMIS RATING

Synonyms:

RP 1118 Hardener

Intended Use or Product Type:

Surface coat hardener

2. COMPOSITION / INFORMATION ON INGREDIENTS

| O S H A | CAS No. | CHEMICAL IDENTITY | EXPOSURE LIMITS | | | | MFR. | CARCINOGEN STATUS | | |
|------------------|------------|---|-----------------|--------------------------|------|------|------|-------------------|-----|------|
| | | | ACGIH | | OSHA | | | IARC | NTP | OSHA |
| | | | TWA | STEL | PEL | STEL | | | | |
| * | 111-40-0 | 1,2-Ethanediamine, N-(2-aminoethyl)- Diethylenetriamine Common Name: Concentration 10.00 - 30.00 % by wt | 1 ppm | NE | NE | NE | NE | NR | NR | NR |
| * | 112-24-3 | 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)- Triethylenetetramine Common Name: Concentration 15.00 - 40.00 % by wt | NE | NE | NE | NE | NE | NR | NR | NR |
| * | 1477-55-0 | 1,3-Benzenedimethanamine Common Name: Concentration m-Xylenediamine 5.00 - 10.00 % by wt | NE | 0.1 mg/m ³ | NE | NE | NE | NR | NR | NR |
| * | 616-47-7 | 1H-Imidazole, 1-Methyl- 1-Methylimidazole Common Name: Concentration 1.00 - 5.00 % by wt | NE | NE | NE | NE | NE | NR | NR | NR |
| * | 68738-77-2 | 1,3-Benzenedimethanamine, Polymer with 2,2'-[(1-Methylethylidene)Bis(4,1-Phenyleneoxymethylene)]Bis[Oxirane] and 2,2,4-Trimethyl-1,6-Hexanediamine | NE | NE | NE | NE | NE | NR | NR | NR |

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| | | | | | | | | | | |
|---|-------------------------------|--|----|----|----|----|----------------|----|----|----|
| | Common Name: Concentration | MXDA/TMD/DGEBA adduct 10.00 - 30.00 % by wt | | | | | | | | |
| * | 80-05-7 | Phenol, 4,4'-(1-methylethylidene)bis- | NE | NE | NE | NE | TLV 5 mg/m3 | NR | NR | NR |
| | Common Name: Concentration | Bisphenol A 10.00 - 30.00 % by wt | | | | | | | | |

NE = Not Established NR = Not Reviewed * = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Corrosive - causes skin and eye burns. Causes irritation if inhaled and can cause allergic respiratory reaction and allergic skin reaction. Can be harmful if absorbed through skin and may be harmful if swallowed.

Primary Route(s) of Entry: Dermal; heated product may produce inhalable vapors.

Acute Exposure: Corrosive. Causes skin and eye burns.

Chronic: Overexposure may have effects on developing fetus.

4. FIRST AID MEASURES

Ingestion: If conscious, give 2 - 4 glasses of water to drink. Do not induce vomiting. Call a physician.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

Inhalation: Remove to fresh air. Call a physician.

Eyes: Immediately flush eyes with water for at least 15 minutes. Call a physician.

Overexposure Effects: Corrosive - causes skin and eye burns. Causes irritation if inhaled and can cause allergic respiratory reaction and allergic skin reaction. Can be harmful if absorbed through skin and may be harmful if swallowed.

Medical Conditions Aggravated by Exposure: Skin, eye and pulmonary conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

5. FIRE FIGHTING MEASURES

Flash Point: > 200°F (> 93 °C)
Flash Point Method Used: Estimated
Flammable Limits in Air (Lower - % by volume): Not established
Flammable Limits in Air (Upper - % by volume): Not established

Fire Fighting Extinguishing Media: Carbon dioxide, dry chemical, foam, water.

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Fire Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Remove spillage by absorbing in absorbent material.

7. HANDLING AND STORAGE

Signal Word: Danger!

Precautions: Corrosive - causes skin and eye burns. Causes irritation if inhaled and can cause allergic respiratory reaction and allergic skin reaction. Can be harmful if absorbed through skin and may be harmful if swallowed. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Avoid tasting or swallowing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling. Notice! Overexposure may have effects on developing fetus.

Other Handling Information: Nuisance dust may be generated when sanding or sawing cured material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear impermeable gloves.

Respiratory Protection: Use NIOSH approved organic vapor cartridge respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------------|-------------------------|
| Color: | Blue |
| Physical State: | Liquid |
| Solubility in Water: | Moderate |
| Vapor Pressure: | Not Determined |
| Specific Gravity: | 1.01 - 1.05 (water = 1) |
| Boiling Point: | Not Determined |
| Melting Point: | Not Determined |
| Evaporation Rate: | Not Determined |
| Density: | Not Determined |
| Vapor Density: | Not Determined |
| VOC: | 703.32 g/L |
| pH: | Not Determined |
| Coefficient of water/oil: | Not Determined |

Percent Volatile: Not determined.

10. STABILITY AND REACTIVITY

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Conditions to Avoid: Excessive heat for prolonged periods of time.**Stability:** Stable.**Incompatibility:** Strong oxidizers, acids and bases.**Hazardous Decomposition Products:** Combustion may form toxic materials, such as carbon dioxide, carbon monoxide.**Hazardous Polymerization:** Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral Effects (LD50): Component(s) are slightly toxic, 500 - 5000 mg/kg (rat).

Diethylenetriamine= 1080 - 2330 mg/kg (rat)

Triethylenetetramine= 2500 - 4340 mg/kg (rat)

Acute Dermal Toxicity (LD50): Component(s) are toxic, 200 - 1000 mg/kg (rabbit).

Diethylenetriamine= 672 - 1240 mg/kg (rabbit)

Triethylenetetramine= 550 - 800 mg/kg (rabbit)

Acute Inhalation Exposure Effects: Respiratory irritant.**Sensitization:** May cause allergic skin reaction and respiratory sensitivity in some people.**Skin Irritation:** Corrosive. Causes burns.**Eye Irritation:** Corrosive. Causes burns.

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT: Non-Bulk

Proper Shipping Name:

Polyamines, liquid, corrosive, N.O.S.

Technical Shipping Name (If n.o.s.):

Triethylene tetramine, Diethylene triamine

Hazard Class:

8

ID Number:

UN 2735

Packing Group:

PG II

Label:

Corrosive

IATA: Non-Bulk

Proper Shipping Name:

Polyamines, liquid, corrosive, N.O.S.

Technical Shipping Name (If n.o.s.):

Triethylene tetramine, Diethylene triamine

Hazard Class:

8

ID Number:

UN 2735

Effective Date: 10/2/08

| | |
|---|--|
| Packing Group: | PG II |
| Label: | Corrosive |
| IMDG: Non-Bulk | |
| Proper Shipping Name: | Polyamines, liquid, corrosive, N.O.S. |
| Technical Shipping Name (If n.o.s.): | Triethylene tetramine, Diethylene triamine |
| Hazard Class: | 8 |
| ID Number: | UN 2735 |
| Packing Group: | PG II |
| Label: | Corrosive |
| TDG: Non-Bulk | |
| Proper Shipping Name: | Polyamines, liquid, corrosive, N.O.S. |
| Technical Shipping Name (If n.o.s.): | Triethylene tetramine, Diethylene triamine |
| Hazard Class: | 8 |
| ID Number: | UN 2735 |
| Packing Group: | PG II |
| Label: | Corrosive |

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) 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): Not a hazardous waste under RCRA (40 CFR 261) but handle with care due to corrosive effect on skin and eyes.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-
Common Name: Bisphenol A
Percent in Composition: 10 - 30 % by wt
Comment:

TSCA Section 8(b) - Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

International Regulations:

Canadian Inventory Status: This product contains only chemicals that are currently listed on the Canadian Domestic Substance List.

Canadian WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. D1B D2A D2B E

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State Regulations:

California Proposition 65: This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

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

Chemical Name: 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-
Common Name: Triethylenetetramine
CAS Number: 112-24-3
Comment: Hazardous Substance

Chemical Name: 1,2-Ethanediamine, N-(2-aminoethyl)-
Common Name: Diethylenetriamine
CAS Number: 111-40-0
Comment: Hazardous Substance

Chemical Name: 1,3-Benzenedimethanamine, Polymer with 2,2'-[(1-Methylethylidene)Bis(4,1-Phenyleneoxymethylene)]Bis[Oxirane] and 2,2,4-Trimethyl-1,6-Hexanediamine
Common Name: MXDA/TMD/DGEBA adduct
CAS Number: 68738-77-2
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Phenol, 4,4'-(1-methylethylidene)bis-
Common Name: Bisphenol A
CAS Number: 80-05-7
Comment: Environmental Hazardous Substance

Chemical Name: 1,3-Benzenedimethanamine
Common Name: m-Xylenediamine
CAS Number: 1477-55-0
Comment: Hazardous Substance

Chemical Name: 1H-Imidazole, 1-Methyl-
Common Name: 1-Methylimidazole
CAS Number: 616-47-7
Comment: Not on Pennsylvania Hazardous Substance List

16. OTHER INFORMATION

MSDS No: 5982
Approved By: Dianne Blessing
Title: EH&S Specialist

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