

DISTRIBUTED BY FREEMAN MFG &amp; SUPPLY CO.

800-321-8511

24-Hour Emergency Phone: 1-888-354-3323

Effective Date: 12/8/04

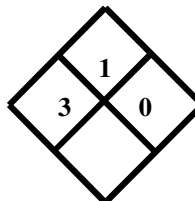
## Material Safety Data Sheet

MSDS No: 31791

**1. PRODUCT IDENTIFICATION**

Trade Name: Ren 8236 Fast

Chemical Family: Amine



NFPA RATING

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

HMIS RATING

**Synonyms:**

RP 8236 Fast Hardener

**Intended Use or Product Type:** High-temp aluminum filled casting hardener**2. COMPOSITION / INFORMATION ON INGREDIENTS**

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	112-24-3	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-Triethylenetetramine Common Name:	NE	NE	NE	NE	NE	NR	NR	NR
*	1477-55-0	1,3-Benzenedimethanamine Common Name: m-Xylenediamine	NE	0.1 mg/m3	NE	NE	NE	NR	NR	NR
*	616-47-7	1H-Imidazole, 1-Methyl- Common Name: 1-Methylimidazole	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 Common Name: MXDA/TMD/DGEBA adduct	NE	NE	NE	NE	NE	NR	NR	NR

\* = OSHA Hazardous Ingredient

**3. HAZARDS IDENTIFICATION**

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

Effective Date: 12/8/04

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

**Acute Exposure:** Corrosive. Causes skin and eye burns.

**Chronic:** Possible mutagen.

#### **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. 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**

<b>Flash Point:</b>	> 230°F (> 110 °C)
<b>Flash Point Method Used:</b>	PMCC
<b>Flammable Limits in Air (Lower - % by volume):</b>	Not established
<b>Flammable Limits in Air (Upper - % by volume):</b>	Not established

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

**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. Avoid contact.

#### **7. HANDLING AND STORAGE**

**Signal Word:** Danger!

Effective Date: 12/8/04

**Precautions:** Corrosive - causes skin and eye burns. 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! Possible mutagen.

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

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Skin Protection:** Impermeable gloves and protective clothing.

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

**Eye Protection:** Full face shield.

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

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Amber Liquid
<b>Color:</b>	Straw Colored
<b>Physical State:</b>	Liquid
<b>Solubility in Water:</b>	Moderate
<b>Vapor Pressure:</b>	0.0009 mm Hg at 20°C (68 °F)
<b>Specific Gravity:</b>	1.04 (water = 1)
<b>Boiling Point:</b>	> 400°F (> 204 °C)
<b>Evaporation Rate:</b>	Not Determined
<b>Vapor Density:</b>	Not Determined
<b>VOC:</b>	52 g/L
<b>pH:</b>	Not Determined

**Percent Volatile:** < 1%

## **10. STABILITY AND REACTIVITY**

**Conditions to Avoid:** Excessive heat for prolonged periods of time.

**Stability:** Stable.

**Incompatibility:** Strong oxidizing agents, acids, metal-organic compounds.

**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).

Triethylenetetramine= 2500 - 4340 mg/kg (rat)

---

**Effective Date:** 12/8/04

---

**Acute Dermal Toxicity (LD50):** Component(s) are toxic, 200 - 1000 mg/kg (rabbit).  
Triethylenetetramine= 550 - 800 mg/kg (rabbit)

**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**

<b>Proper Shipping Name:</b>	Polyamines, liquid, corrosive, N.O.S.
<b>Technical Shipping Name (If n.o.s.):</b>	Triethylene tetramine, Metaxylenediamine
<b>Hazard Class:</b>	8
<b>ID Number:</b>	UN 2735
<b>Packing Group:</b>	PG III
<b>Label:</b>	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 does not contain any chemicals for routine annual toxic chemical release reporting under Section 313 (40 CFR 372).

**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.

Effective Date: 12/8/04

**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: 1,3-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: 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:** 31791  
**Approved By:** Dianne Blessing  
**Title:** EH&S Specialist

**Disclaimer:** The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

The information and recommendations contained herein are not intended to constitute performance information concerning the product, which is available in separate technical data sheets available from Huntsman upon request. Users are urged, and are urged to urge others who may come in contact with the product, to obtain and consult data sheets prior to purchase, use, transportation or storage of the product.

HUNTSMAN MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED TO REIMBURSEMENT OF BUYER'S PURCHASE PRICE, OR IN HUNTSMAN'S DISCRETION REPLACEMENT, OF THE PRODUCT IN RESPECT OF WHICH SUCH CLAIM IS MADE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED BY LEGAL NOTICES IN TECHNICAL DATA SHEETS, PRODUCT LITERATURE AND/OR SALE

Effective Date: 12/8/04

DOCUMENTS. The foregoing DISCLAIMERS and LIMITATION OF LIABILITY supercede inconsistent or contradictory provisions in Buyer's documents.

USER SHOULD CONSULT A LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENTAL AGENCY TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT. HUNTSMAN DOES NOT UNDERTAKE TO FURNISH ADVICE ON SUCH MATTERS.