Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:
Railseat Repair Epoxy B

Manufacturer:
Encore Rail Systems
2350 W Midway Blvd
Broomfield, CO 80020
1-866-712-7622

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Benzyl Alcohol	100-51-6	<50%
Isophoronediamine	2855-13-2	<20%
4-Aminopropylmorpholine	123-00-2	<20%
Tetraethylenepentamine	112-57-2	<1%

3. HAZARDS IDENTIFICATION

Yellow viscous liquid with a slight epoxy odor.

EMERGENCY OVERVIEW:

DANGER! Corrosive. May cause severe eye and skin irritation and burns. Inhalation of vapors or mists may cause sever upper respiratory irritation with possible scarring. Severe overexposure may cause lung damage. Swallowing may cause burns to the mouth, throat and stomach, nausea, vomiting, diarrhea and collapse. Aspiration during swallowing or vomiting may cause severe lung injury. Can be absorbed through the skin. May cause allergic skin reaction (sensitization).

Refer to Section 11 for detailed health information.

4. FIRST AID MEASURES

EYE: Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing immediately. Immediately flush all affected and exposed areas with water for 15 minutes. Cover with sterile dressing and transport for medical care. Do not apply greases or ointment. Discard or launder contaminated clothing before reuse. Destroy contaminated leather apparel.

INGESTION: Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital. Give one to two 8-ounce glasses of water or milk. **Do not induce vomiting.** Never give anything by mouth to a person who is unconscious or drowsy.

INHALATION: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, have a qualified individual administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: 203∞F (95∞C) (estimated)

FLAMMABLE LIMITS:

LOWER FLAMMABLE LIMIT: Not determined

UPPER FLAMMABLE LIMIT: Not determined

AUTOIGNITION TEMPERATURE: Not determined

NFPA CLASSIFICATION: IIIB

EXTINGUISHING MEDIA: Use water spray or alcohol foam for large fires. For small fires use carbon dioxide or dry chemical. Cool fire exposed containers with water.

UNUSUAL FIRE OR EXPLOSION HAZARDS: Decomposition products may be irritating and toxic. Sudden reaction and fire may occur if product is mixed with an oxidizing agent.

FIRE-FIGHTING INSTRUCTIONS: Firefighters should use self-contained breathing apparatus and protective clothing. Fight fire from upwind to avoid hazardous decomposition products.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, nitrogen oxide, ammonia and aldehydes.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. Ventilate area. Evacuate all unprotected personnel. Wear appropriate personal protective equipment (see section 8). Prevent contact with eyes, skin or clothing. Contain spilled liquid and collect with inert absorbent for disposal. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required.

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapors or mists. Use with adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep containers tightly closed when not in use.

Storage: Store in a cool, dry, well-ventilated areas away from acids and oxidizers. Keep containers closed when not in use. Do not store in reactive metal containers.

Nitrosamines, many of which are potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.
Empty containers retain product residues and may be dangerous. Never cut, weld, drill, grind, etc. on or near containers, even empty containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	Exposure Limit.	Source
Benzyl Alcohol	None Established	ACGIH/OSHA
Isophoronediamine	None Established	ACGIH/OSHA
4-Aminopropylmorpholine	None Established	ACGIH/OSHA
Tetraethylenepentamine	None Established	ACGIH/OSHA

ENGINEERING CONTROLS: Use adequate general or mechanical ventilation such as local exhaust to minimize airborne exposure levels.
RESPIRATORY PROTECTION: For operations where vapors or mists are generated and are not adequately controlled by engineering controls or while engineering controls are being installed, a NIOSH or local authority approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
SKIN PROTECTION: Impervious gloves such as butyl rubber or neoprene recommended to prevent skin contact.
EYE PROTECTION: Chemical safety goggles with full faceshield recommended to prevent eye contact.
OTHER: Impervious protective clothing as needed to prevent skin contact. A safety shower and eye wash facility must be available in the immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Amber liquid with an ammoniacal odor.
BOILING POINT: Greater than 392∞F (>200∞C)
FREEZING POINT: Not available
SPECIFIC GRAVITY: 0.97-1.01
VAPOR PRESSURE: 1.29 mmHg @ 20∞C
VAPOR DENSITY: Not determined
SOLUBILITY IN WATER: Insoluble
pH: Not available
OCTANOL/WATER COEFFICIENT: Not available
VOC CONTENT: Not determined

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal storage and handling conditions.
CONDITIONS TO AVOID: Avoid moisture and exposure to light and air.
INCOMPATIBILITY: Avoid contact with oxidizing agents, acids, reactive metals, peroxides, and materials reactive with hydroxyl compounds. When mixed with acids, the product may boil causing splattering of hot material. Nitrosamines, many of which are potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, nitrogen oxides, ammonia and aldehydes.
HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS
INGESTION: Swallowing product may cause severe irritation and burns to the mouth, throat and gastrointestinal system with abdominal pain, nausea, vomiting, diarrhea and collapse. Aspiration during swallowing or vomiting may cause lung damage.
INHALATION: Vapors and mists may cause severe irritation to the eyes, mucous membranes and upper respiratory system, nasal discharge and coughing. Severe overexposure may damage tissues and cause scaring.
EYE: Vapors may cause excessive tearing, conjunctivitis and corneal edema. Direct contact may cause severe irritation, pains, burns and permanent injury such as blindness.
SKIN: May cause severe irritation, pain and necrosis. May be absorbed through the skin causing headache, nausea, or general discomfort.
CHRONIC EFFECTS: Prolonged or repeated skin contact may cause allergic reaction or sensitization. Prolonged inhalation of vapors may cause dryness of the nose and throat, damage to mucous membranes and scaring of the tissues.
CARCINOGENICITY: None of the components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP or OSHA.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: This material may aggravate persons with preexisting eye, skin and respiratory disorders.
Acute Toxicity Values

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Benzyl Alcohol: Oral rat LD50 1,660 mg/kg
Skin rabbit LD50 2,000 mg/kg
Inhalation rat LC50 >500 mg/m3
Isophoronediamine: No data available
4-Aminopropylmorpholine Oral rat LD50 3,560 mg/kg
Skin rabbit LD50 >1,230 mg/kg
Tetraethylenepentamine Oral rat LD50 3,990 mg/kg
Skin rabbit LD50 660 uL/kg

12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with current local, state and federal regulations.

14. TRANSPORT INFORMATION

TRANSPORTATION AND HAZARDOUS MATERIALS DESCRIPTION:
DOT Shipping Name: Amines, liquid, corrosive, n.o.s. (Amidoamine, Isophoronediamine)
DOT Hazard: Class: 8, PG II
UN Number: UN2735
DOT Labels Required: (49CFR172.101): Corossive
Hazardous Substance: (49CFR172.101): None
Reportable Quantity: Not applicable
IATA Shipping Name: Amines, liquid, corrosive, n.o.s. (Amidoamine, Isophoronediamine)
IATA Hazard Class: 8, PG II
UN Number: UN2735
IATA Hazard Labels Required: Corrosive

15. REGULATORY INFORMATION

U.S. Federal Regulations

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA release reporting requirements. Many states have more stringent reporting requirements. Report spills and other releases as required under federal, state and local regulations.

SARA TITLE III:

Hazard Category for Section 311/312: Acute Health, Chronic Health

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None.
US Toxic Substances Control Act: All of the components of this product are listed on the EPA TSCA Inventory.

State Regulations:

California Proposition 65: This product may contain the following chemicals regulated under California Proposition 65: None known

International Regulations
European Inventory Of Commercial Chemical Substances: All of the components of this product are listed on the EINECS Inventory.

16. OTHER INFORMATION

NFPA RATING: Health = 3 Fire = 1 Reactivity = 1
HMIS RATING: Health = 3* Fire = 1 Reactivity = 1