

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Encore Rail Systems, Inc. 12000LV Hardener Part B
 IDENTIFICATION NUMBER: 50096
 PRODUCT USE/CLASS : Epoxy hardener

SUPPLIER:

Encore Rail Systems, Inc.
 2350 W. Midway Blvd.
 Broomfield, CO 80020
 EMERGENCY: 800-424-9300 CHEMTREC
 INFORMATION: 1-866-712-7622

PREPARER: Cathy Griffith, PHONE: 303-333-1876, PREPARE DATE: 06/18/10

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	Aliphatic amine	TRADE SECRET	10.0-30.0
02	Substituted phenol blend	TRADE SECRET	5.0-10.0
03	Benzyl Alcohol	100-51-6	10.0-30.0
04	Cycloaliphatic amine	TRADE SECRET	5.0-10.0
05	Polyamidoamine resin	TRADE SECRET	10.0-30.0
06	Triethylenetetramine	112-24-3	1.0-5.0

ITEM	EXPOSURE LIMITS				COMPANY TLV-TWA	SKIN
	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING		
01	N.E.	N.E.	N.E.	N/E	N.E.	NO
02	N.E.	N.E.	N.E.	N/E	N.E.	NO
03	N.E.	N.E.	N.E.	N/E	N.E.	NO
04	N.E.	N.E.	N.E.	N/E	N.E.	NO
05	N.E.	N.E.	N.E.	N/E	N.E.	NO
06	N.E.	N.E.	N.E.	N.E.	N.E.	NO

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful to aquatic organisms. Harmful if absorbed through skin. Harmful if swallowed. May cause target organ or system damage. Refer to chronic health effects section. Causes eye burns. Causes skin burns. Vapors irritating to eyes and respiratory tract. May cause allergic skin reaction.

ACUTE EFFECTS - EYE CONTACT: CORROSIVE to the eyes and may cause severe damage including blindness.

ACUTE EFFECTS - SKIN CONTACT: May be absorbed through the skin in harmful amounts. May cause allergic skin reaction. Strong skin sensitizer. CORROSIVE. Contact may cause chemical burns and blistering.

ACUTE EFFECTS - INHALATION: Liquid aspirated into lungs may cause serious injury or death. Vapors and/or aerosols formed at elevated temperatures can be irritating. Can cause severe respiratory irritation.

ACUTE EFFECTS - INGESTION: Moderately toxic. May cause irritation or burns of mouth, throat, and stomach, with nausea, abdominal pain, and possible collapse. Ingestion may cause fatigue, muscular weakness, labored breathing.

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SECTION 3 - HAZARDS IDENTIFICATION

CHRONIC OVEREXPOSURE EFFECTS: *Triethylenetetramine (TETA) caused embryofetal toxicity and fetal malformations when fed to pregnant rats. Similar effects were not seen in studies in which this material was applied to the skin of rabbits, a more relevant route of industrial exposure. These effects are believed to be secondary to copper deficiency, resulting from the chelating activity of the amine. *Preexisting pulmonary and dermatological disorders may be aggravated by exposure to hazardous components. *Studies suggest that chronic overexposure and/or systemic toxicity effects are targeted at the liver and kidneys. *Pregnant rats fed high doses of material during pregnancy showed evidence of fetal injury. *Component(s) in this product showed adverse reproductive effects in animal feeding studies.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT, SKIN ABSORPTION, INHALATION, INGESTION, EYE CONTACT,

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

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

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: Treat symptomatically. If swallowed, gastric lavage is indicated.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 200 F
(PENSKY-MARTENS C.C.)
AUTOIGNITION TEMPERATURE: No data

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

EXTINGUISHING MEDIA:ALCOHOL FOAM,CO2, DRY CHEMICAL,FOAM,WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture or explode (due to pressure build-up) when exposed to extreme heat. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Use NIOSH-approved self-contained breathing apparatus and full protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of flame.

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Reclaim clean material. Dike or contain spill away from drains, soil, and waterways if safe to do so. Wear appropriate protective equipment during cleanup. Absorb with inert material, such as clay. Sweep or shovel into loosely-covered waste container and remove to appropriate waste area. Dispose of in accordance with federal, state, and local regulations. Harmful to aquatic organisms. Prevent entry into drains and/or waterways.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. FOR INDUSTRIAL USE ONLY. Empty containers may retain product residue and can be dangerous. Observe all labeled precautions even after container is emptied.

STORAGE: Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust as needed to control vapor or dust levels to below lowest component TLV.

RESPIRATORY PROTECTION: None normally required under general ventilation. If TLV/PEL is exceeded, if use is performed in a poorly-ventilated space, or if inhalation effects occur, use NIOSH-approved vapor cartridge respirator in accordance with applicable health and safety regulations and manufacturer's recommendations.

SKIN PROTECTION: Clean clothing to cover skin. Butyl rubber gloves. Neoprene gloves. Nitrile gloves. Teflon gloves. Viton gloves. Supported PVA gloves. Synthetic apron. Aniline and aniline-based derivative gloves.
EYE PROTECTION: Chemical splash goggles. Face shield.
OTHER PROTECTIVE EQUIPMENT: Accessible eye wash and safety shower.

HYGIENIC PRACTICES: Follow good general industrial safety practices during use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES
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BOILING RANGE	: 278 - 432 F	VAPOR DENSITY	: Is heavier than air
ODOR	: Mild acrid	ODOR THRESHOLD	: No data
APPEARANCE	: Amber	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H2O	: Slight	SPECIFIC GRAVITY:	0.9813
FREEZE POINT	: No data	pH @ 100.0 %	: N/A
VAPOR PRESSURE	: No data low	VISCOSITY	: Low
PHYSICAL STATE	: Liquid		
COEFFICIENT OF WATER/OIL DISTRIBUTION: No data			

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Prolonged exposure to heat. Exposure to moisture.
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SECTION 10 - STABILITY AND REACTIVITY

INCOMPATIBILITY: Strong Lewis or mineral acids. Strong bases or oxidants. Chlorinated rubber. Reaction with epoxy resins and isocyanates in large amounts or under uncontrolled conditions releases considerable heat and may release acrid fumes. Aldehydes, ketones, acrylates, and organic halides. Reaction with some nitrates or nitrites can cause the formation of cancer-causing nitrosoamines. Epoxides. Sulfuric acid, Hbr + iron when it heats above 100 degrees C.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon. Oxides of nitrogen, ammonia. Formaldehyde. Various hydrocarbons. Irritating aldehydes and ketones. Combustion under oxygen-starved conditions may produce numerous toxic products including nitriles, cyanic acid, isocyanates, amides, cyanogens, amides, carbamates.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

COMPONENT TOXICOLOGICAL INFORMATION:

----- CHEMICAL NAME -----	----- LD50 -----	----- LC50 -----
Aliphatic amine	Derm-rbt=880mg/kg	No information
Substituted phenol blend	derm(rat)1280mg/kg	Not Applicable
Benzyl Alcohol	oral(rat)1230mg/kg	Not Applicable
Cycloaliphatic amine	no data	no data
Polyamidoamine resin	oral(rat)8g/kg	Not Applicable
Triethylenetetramine	derm(rbt)805mg/kg	No information

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL TEST DATA: No information

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Review all current federal, state, and local regulations regarding health and disposal for appropriate disposal procedures. For small amounts, mix resin and hardener according to product directions and allow to harden. When cured, product is non-hazardous, and may be placed in industrial or municipal landfill if local regulations permit. Contact manufacturer for information on disposal. DO NOT landfill free liquid. Fuels blending or incineration of free liquid recommended if permitted.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Polyamines, liquid, corrosive, nos
DOT TECHNICAL NAME: (Aminoethylpiperazine, Nonyl phenol)
DOT HAZARD CLASS: 8 HAZARD SUBCLASS: NONE
DOT UN/NA NUMBER: UN2735 PACKING GROUP: III RESP. GUIDE PAGE: 153

INTERNATIONAL SHIPPING NAME: Polyamines, Liquid, Corrosive, nos
(Aminoethylpiperazine, Nonyl phenol)

INTERNATIONAL ID NUMBER: UN2735

IMDG CLASS (1°, 2°): 8, none

IMDG PAGE NUMBER: III

IMDG EMS: N/D

IATA CLASS (1°, 2°): 8, NONE

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SECTION 15 - REGULATORY INFORMATION

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA - SARA HAZARD CATEGORY:

This product has been reviewed, and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 and 40 CFR part 372: none

TOXIC SUBSTANCES CONTROL ACT:

The chemical substances in this product are on the TSCA Section 8 Inventory.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States: none

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: D2B, E

COMPONENT RCRA CLASSIFICATIONS: Not regulated

COMPONENT RCRA CODES: Not Applicable.

CERCLA RQ VALUE (MINIMUM): None known

REACH SUBSTANCE(S) OF VERY HIGH CONCERN: none

PRODUCT VOC (CALCULATED): 0 grams/ltr

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 3 FLAMMABILITY: 1 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 06/18/10

REASON FOR REVISION: new product

VOLATILE ORGANIC COMPOUNDS (VOCS): 0 grams/ltr

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

ABBREVIATIONS: ACGIH = American Conference of Governmental Industrial Hygienists; OSHA = US Occupational Health and Safety Administration; UK = United Kingdom; TLV-TWA = Threshold Limit Value-Time Weighted Average (8 hrs); STEL = Short-Term Exposure Limit (15 min); C = Ceiling Value; PEL = Permissible Exposure Limit

DISCLAIMER: To the best of our knowledge, the information contained in this MSDS is accurate or is obtained from sources believed to be accurate. However, no liability, expressed or implied, is assumed for the accuracy or completeness of the information contained herein. Buyer assumes liability in its use of the material.

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