



Material Safety Data Sheet

Issuing Date 01-May-2012

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Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name HPS-3 Epoxy Catalyst

Product Code(s) 464-119

UN-Number UN2735

Recommended Use Traffic paint

Product Technology Epoxy

Manufacturer Address

Ennis-Flint
5910 North Central Expressway
Suite 1050
Dallas TX 75206
T: 800.331.8118
800.331.8118 (For Technical Inquiries)

Chemical Emergency Phone Number Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Corrosive

The product causes burns of eyes, skin and mucous membranes

Harmful in contact with skin and if swallowed

May cause sensitization by inhalation and skin contact

The material can accumulate static charge and can therefore cause electrical ignition

Contains a known or suspected reproductive toxin

Appearance Light amber

Physical State Liquid.

Odor Amine

Potential Health Effects

Principle Routes of Exposure Inhalation. Skin contact. Eye contact.

Acute Toxicity

Eyes

Causes burns. Risk of serious damage to eyes.

Skin

Causes burns. Harmful in contact with skin.

Inhalation

Irritating to respiratory system.

Ingestion

Causes burns. Harmful if swallowed.

Chronic Effects

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Repeated contact may cause allergic reactions in very susceptible persons. Contains a known or suspected reproductive toxin.

Aggravated Medical Conditions Skin disorders. Respiratory disorders. Pre-existing eye disorders.

Environmental Hazard Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
4-Nonylphenol, branched	84852-15-3	15-40
Diethylene triamine	111-40-0	10-30
Bisphenol A	80-05-7	1-5

4. FIRST AID MEASURES

General Advice Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Call a physician immediately.

Inhalation Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Call a physician immediately.

Ingestion Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

Notes to Physician Treat symptomatically.

Protection of First-aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

5. FIRE-FIGHTING MEASURES

Flammable Properties The material can accumulate static charge and can therefore cause electrical ignition

Flash Point > 200 °F / 93.3 °C

Suitable Extinguishing Media Use: Water spray. Carbon dioxide (CO₂). Foam. Dry powder.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO₂). Phenols. Nitrogen oxides (NO_x).

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None The material can accumulate static charge and can therefore cause electrical ignition

Specific Hazards Arising from the Chemical The material can accumulate static charge and can therefore cause electrical ignition. Containers may explode when heated. Use water spray to cool unopened containers. Thermal decomposition can lead to release of irritating gases and vapors.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

NFPA	Health Hazard 3	Flammability 1	Instability 1	Physical and Chemical Hazards -
HMIS	Health Hazard 3*	Flammability 1	Physical Hazard 1	Personal Protection X

*Indicates a chronic health hazard.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Do not get in eyes, on skin, or on clothing.
Environmental Precautions	Should not be released into the environment. Do not allow material to contaminate ground water system. Prevent entry into waterways, sewers, basements or confined areas.
Methods for Containment	Dike far ahead of liquid spill for later disposal.
Methods for Cleaning Up	Dam up. Use personal protective equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically and collect in suitable container for disposal.

7. HANDLING AND STORAGE

Handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid breathing vapors or mists. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.
Storage	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Diethylene triamine 111-40-0	TWA: 1 ppm S*	(vacated) TWA: 1 ppm (vacated) TWA: 4 mg/m ³	TWA: 1 ppm TWA: 4 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection Face-shield. Tightly fitting safety goggles.

Skin and Body Protection Appropriate protective and chemical resistant gloves, clothing and splash protection, or fully encapsulating vapor protective clothing to prevent exposure. For materials of construction consult protective clothing manufacturer's specifications.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light amber.	Odor	Amine.
Odor Threshold	Not applicable	Physical State	Liquid
pH	Not applicable	Autoignition Temperature	Not applicable
Flash Point	> 200 °F / 93.3 °C	Boiling Point/Boiling Range	Not applicable
Decomposition Temperature	Not applicable	Flammability Limits in Air	Not applicable
Melting Point/Range	Not applicable	Solubility	Not applicable
Specific Gravity	0.9-1.1	Vapor Pressure	Not applicable
Evaporation Rate	<1 (BuAc = 1)		
Vapor Density	>1 (air = 1)		

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible Products Strong oxidizing agents. Acids. Aldehydes. Copper. Copper alloys. Halogenated compounds. Alcohols. Nitrites. Brass. bronze Acrylates.

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition. Extremes of temperature and direct sunlight.

Hazardous Decomposition Products Carbon oxides. Nitrogen oxides (NOx). Hydrocarbons. Ammonia.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION**Acute Toxicity**

Product Information No acute toxicity information is available for this product.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
4-Nonylphenol, branched	= 580 mg/kg (Rat)	= 2031 mg/kg (Rabbit)	
Diethylene triamine	= 819 mg/kg (Rat)	= 672 mg/kg (Rabbit)	
Bisphenol A	= 3200 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	

Chronic Toxicity

Chronic Toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Repeated contact may cause allergic reactions in very susceptible persons. Contains a known or suspected reproductive toxin.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Sensitization Repeated or prolonged contact may cause allergic reactions in very susceptible persons

Target Organ Effects Respiratory system.

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a marine pollutant according to DOT.

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
4-Nonylphenol, branched	EC50 72 h: 0.16 - 0.72 mg/L static (Pseudokirchneriella subcapitata) EC50 96 h: 0.36 - 0.48 mg/L static (Pseudokirchneriella subcapitata) EC50 72 h: = 1.3 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 0.135 mg/L flow-through (Pimephales promelas) LC50 96 h: = 0.1351 mg/L flow-through (Lepomis macrochirus)		EC50 48 h: = 0.14 mg/L (Daphnia magna)
Diethylene triamine	EC50 72 h: = 1164 mg/L (Pseudokirchneriella subcapitata) EC50 96 h: = 345.6 mg/L (Pseudokirchneriella subcapitata) EC50 96 h: = 592 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 1014 mg/L semi-static (Poecilia reticulata) LC50 96 h: = 248 mg/L static (Poecilia reticulata) LC50 96 h: = 430 mg/L semi-static (Leuciscus idus)	EC50 = 2000 mg/L 1 h EC50 = 96 mg/L 17 h	EC50 48 h: = 16 mg/L (Daphnia magna) EC50 24 h: = 37 mg/L (Daphnia magna)
Bisphenol A	EC50 96 h: = 2.5 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: 3.6-5.4 mg/L flow-through (Pimephales promelas) LC50 96 h: 4.0-5.5 mg/L static (Pimephales promelas) LC50 96 h: = 4 mg/L (Oncorhynchus mykiss) LC50 96 h: = 9.9 mg/L static (Brachydanio rerio)		EC50 48 h: 9.2 - 11.4 mg/L Static (Daphnia magna) EC50 48 h: = 10.2 mg/L (Daphnia magna) EC50 48 h: = 3.9 mg/L (Daphnia magna)
Chemical Name			Log Pow	
Diethylene triamine			-1.3	
Bisphenol A			2.2	

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Do not re-use empty containers.

US EPA Waste Number D002

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Diethylene triamine	Toxic

14. TRANSPORT INFORMATION

DOT

UN-Number	UN2735
Proper shipping name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Subsidiary Class	
Packing Group	II
Marine Pollutant	This product contains a chemical which is listed as a marine pollutant according to DOT.
Description	UN2735, Amines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, , II,Marine Pollutant
Emergency Response Guide Number	153

TDG

UN-Number	UN2735
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
Description	UN2735, AMINES, LIQUID, CORROSIVE, N.O.S.(4-Nonylphenol, branched, Diethylene triamine), 8, II,Marine Pollutant

MEX

UN-Number	UN2735
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
Description	UN2735 Amines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, II

ICAO

UN-Number	UN2735
Proper shipping name	Polyamines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
Description	UN2735, Polyamines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, II

IATA

UN-Number	UN2735
Proper Shipping Name	Polyamines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
ERG Code	8L
Description	UN2735, Polyamines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, II

IMDG/IMO

UN-Number	UN2735
Proper Shipping Name	Amines, liquid, corrosive, n.o.s.
Hazard Class	8
Packing Group	II
EmS No.	F-A, S-B
Marine Pollutant	Product is a marine pollutant according to the criteria set by IMDG/IMO
Description	UN2735, Amines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, II,Marine Pollutant

RID

UN-Number	UN2735
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Proper Shipping Name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
Packing Group II
Classification Code C7
Description UN2735 Amines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, II

ADR

UN-Number UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
Packing Group II
Classification Code C7
Description UN2735 Amines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, II

ADN

UN-No UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
Packing Group II
Classification Code C7
Special Provisions 274
Description UN2735 Amines, liquid, corrosive, n.o.s.(4-Nonylphenol, branched, Diethylene triamine), 8, II
Hazard Labels 8
Limited Quantity LQ22

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Bisphenol A	80-05-7	1-5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard Yes

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Diethylene triamine	X	X	X		X
Bisphenol A	X	X	X		

International Regulations**Mexico - Grade**

Slight risk, Grade 1

Chemical Name	Carcinogen Status	Exposure Limits
Diethylene triamine		Mexico: TWA 1 ppm Mexico: TWA 4.2 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

E Corrosive material
D2A Very toxic materials
D2B Toxic materials

**Canadian National Pollutant Release Inventory (NPRI)**

Component	NPRI
4-Nonylphenol, branched 84852-15-3 (15-40)	X
Bisphenol A 80-05-7 (1-5)	X

Legend

X - Listed

16. OTHER INFORMATION

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

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General Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication and it does not purport to be all inclusive and shall be used only as a guide. We urge each customer or recipient of this MSDS to study it carefully to become aware of and understand the potential hazards associated with the product. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. Any use of the product not in conformance with this MSDS or in combination with any other product or process is the responsibility of the user. Customary precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Remove all soiled and contaminated clothing immediately.

End of Safety Data Sheet