

Material Safety Data Sheet

Revision Date: 08/12
Version 2.0

Print Date: 08/21/12
MSDS Identification: 3400FS - Part B

Epoxy Curing Agent

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : 3400FS - Part B

Product Use Description : Epoxy Curing Agent

Company : Protective Floorings and Linings
A Division of Milamar Coatings, LLC
311 N.W. 122nd St, Suite 100
Oklahoma City, OK 73114

Telephone : 405-755-8448

Emergency Telephone Number: ChemTel 800-255-3924 or 813-248-0585 (International)

2. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Diethylenetriamine (DETA)	111-40-0	< 70%
Phenol, 4,4'-(1-methylethylidene)bis-	80-05-7	> 30%

Chemical Family: Aliphatic Amines

3. HAZARDS INFORMATION

Emergency Overview

Harmful if swallowed.
Harmful in contact with skin.
Corrosive.
Keep away from heat and sources of ignition.
Severe skin irritant.
Severe eye irritant.
May cause sensitization by inhalation.
May cause sensitization by skin contact.

Potential Health Effects

Inhalation : Inhalation of aerosol may cause irritation to the upper respiratory tract. Can cause severe eye, skin and respiratory tract burns.

Eye Contact : Causes eye burns. May cause blindness. Severe eye irritation.

Skin Contact : Harmful in contact with skin. Causes skin burns. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Material Safety Data Sheet

Revision Date: 08/12
Version 2.0

Print Date: 08/21/12
MSDS Identification: 3400FS - Part B

Epoxy Curing Agent

Ingestion	:	Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Chronic Health Hazard	:	This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. Repeated or prolonged contact causes sensitization, asthma and eczemas.
Exposure Guidelines Target Organs	:	Skin. Eyes. Respiratory system.
Aggravated Medical Condition	:	Eye disease, skin disorders and allergies. Adverse skin effects (such as rash, irritation or corrosion). Adverse eye effects (such as conjunctivitis or corneal damage). Asthma. Adverse respiratory effects (such as cough, tightness of chest or shortness of breath).

4. FIRST AID MEASURES

General Advice	:	Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be initiated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
Eye Contact	:	Rinse immediately with plenty of water also under the eyelids for at least 20 minutes. Remove contact lenses.
Skin Contact	:	Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Wash off immediately with plenty of water for at least 20 minutes. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.
Ingestion	:	Prevent aspiration of vomit. Turn victim's head to the side.
Inhalation	:	Move to fresh air.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	:	Alcohol-resistant foam. Carbon Dioxide (CO2). Dry Chemical. Dry Sand. Limestone Powder.
Specific Hazards	:	May generate ammonia gas. May generate toxic nitrogen oxide gases. Incomplete combustion may form carbon monoxide. Downwind personnel must be evacuated. Burning produces obnoxious and toxic fumes.
Special Protective Equipment For Fire Fighters	:	Avoid contact with the skin. A face shield should be worn. Use personal

Material Safety Data Sheet

Revision Date: 08/12
Version 2.0

Print Date: 08/21/12
MSDS Identification: 3400FS - Part B

Epoxy Curing Agent

protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

Further information : Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions : Use self-contained breathing apparatus and chemically protective clothing. Wear suitable protective clothing, gloves and eye / face protection. Evacuate personnel to safe areas.

Environmental Precautions : Construct a dike to prevent spreading.

Methods For Clean-Up : Contact Protective Floorings and Linings for advice. Place in appropriate chemical waste container.

Additional Advice : If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling : Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid contact with eyes. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage : Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

Technical Measures / Precautions : Do not store in reactive metal containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures : Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal Protective Equipment

Respiratory Protection : Not required for properly ventilated areas.

Hand Protection : Neoprene gloves.
Butyl-rubber gloves.
Nitrile Rubber.
Impervious Gloves.
The breakthrough time of the selected glove(s) must be greater than the intended use period.

Material Safety Data Sheet

Revision Date: 08/12
Version 2.0

Print Date: 08/21/12
MSDS Identification: 3400FS - Part B

Epoxy Curing Agent

Eye Protection : Full face shield with goggles underneath.
Chemical resistant goggles must be worn.

Skin And Body Protection : Slicker Suit
Impervious Clothing
Full Rubber Suit (rain gear).
Rubber or Plastic Boots.
Long sleeve shirts and trousers without cuffs.

Environmental Exposure Controls : Construct a dike to prevent spreading.

Special Instructions For Protection And Hygiene : Discard contaminated leather articles. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Provide readily accessible eye wash stations and safety showers. Wash at the end of each work shift and before eating, smoking or using the toilet.

Exposure Limit(s)

Diethylenetriamine (DETA)	Time Weighted Average (TWA): ACGIH	1 ppm	--
Diethylenetriamine (DETA)	Recommended Exposure Limit (PEL): NIOSH	1 ppm	4 mg/m3
Diethylenetriamine (DETA)	Time Weighted Average (TWA): OSHA Z1A	1 ppm	4 mg/m3

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid.

Color : Amber.

Odor : Ammoniacal.

Relative Density : 1.03 (water = 1).

Density : 64.301 lb/ft3 (1.03 g/cm3) at 70 degrees F (21 degrees C)

pH : Alkaline.

Boiling Point / Range : > 392 degrees F (.200 degrees C)

Flash Point : 230 degrees F (110 degrees C)

Water Solubility : 0.14 g/l.

10. STABILITY AND REACTIVITY

Stability : Stable under normal conditions.

Materials To Avoid : Organic acids (i.e. acetic acid, citric acid etc.).
Mineral Acids.
Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
Caution! N-Nitrosamines, may of which are known to be potent carcinogens, may be

Material Safety Data Sheet

Revision Date: 08/12
Version 2.0

Print Date: 08/21/12
MSDS Identification: 3400FS - Part B

Epoxy Curing Agent

		formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents. Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Oxidizing agents.
Hazardous Decomposition Products	:	Nitric Acid. Ammonia. Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon Monoxide (CO). Carbon Dioxide (CO2) Aldehydes. Nitrosamine.

11. TOXICOLOGICAL INFORMATION

Acute Health Hazard

Ingestion	:	LD 50 : >1,080 mg/kg Species: Rat
Inhalation	:	No data is available on the product itself.
Skin	:	LD50 : 1,090 mg/kg Species : Rabbit.
Eye Irritation / Corrosion	:	Severe eye irritation.
Acute Dermal Irritation / Corrosion	:	Severe skin irritation.
Sensitization	:	Component has caused skin and respiratory sensitization in humans.

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Aquatic Toxicity	:	No data is available on the product itself.
Toxicity to other organisms	:	No data available.

Persistence And Degradability

Mobility	:	No data available.
Bioaccumulation	:	No data available on the product itself.

13. DISPOSAL CONSIDERATIONS

Material Safety Data Sheet

Revision Date:08/12
Version 2.0

Print Date:08/21/12
MSDS Identification:3400FS - Part B

Epoxy Curing Agent

Waste from residues / unused products : Contact supplier if guidance is required.

Contaminated Packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

CFR

Proper Shipping Name : Amines, liquid, corrosive, n.o.s. (Diethylenetriamine(ETA))
Class : 8
UN / ID No. : UN2735
Packing Group : III

IATA

Proper Shipping Name : Amines, liquid, corrosive, n.o.s. (Diethylenetriamine(ETA))
Class : 8
UN / ID No. : UN2735
Packing Group : III

IMDG

Proper Shipping Name : AMINES, LIQUID, CORROSIVE, N.O.S. (Diethylenetriamine(ETA))
Class : 8
UN / ID No. : UN2735
Packing Group : III

CTC

Proper Shipping Name : AMINES, LIQUID, CORROSIVE, N.O.S. (Diethylenetriamine(ETA))
Class : 8
UN / ID No. : UN2735
Packing Group : III

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard : Corrosive. Sensitizer.
(29 CFR 1910.1200) Hazard Class(es)

Country	Regulatory List	Notification
USA	TSCA	Included on Inventory
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Communication: Acute Health Hazard

Material Safety Data Sheet

Revision Date:08/12
Version 2.0

Print Date:08/21/12
MSDS Identification:3400FS - Part B

Epoxy Curing Agent

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level: Phenol, 4,4'-(1-methylethylidene)bis-

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65):
This product does not contain any chemical known to the State of California to cause cancer, birth defects or any other harm.

WHMIS Hazard Classification: Toxic Material Causing Other Toxic Effects, Corrosive Material.

16. OTHER INFORMATION

HMIS Rating

Health

Flammability

Physical Hazard

:

:

:

3

1

0

Prepared By

:

Protective Floorings and Linings. EH&S Product Safety Department