

MATERIAL SAFETY DATA SHEET

Product Name: Marinepoxy Fast Hardener
E_har_fast

Effective Date: 04-01-02

Product Code:

I. INGREDIENTS:

Modified Cycloaliphatic Amine Reaction Products CAS#: Proprietary
This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200) in addition, other substances not hazardous per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: > 400°F
VAP PRESSURE: <1 mmHg@ 20°C, 68°F
VAP DENSITY: >1
SOL. IN WATER: Moderately soluble
SF. GRAVITY: 0.96
APPEARANCE: Pale straw colored liquid
ODOR: Amine odor

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 200°F, 93°C
METHOD USED: PMCC
FLAMMABLE LIMITS
LFL: Not determined
UFL: Not determined
EXTINGUISHING MEDIA: Water fog, alcohol foam, CO2, dry chemical.
FIRE & EXPLOSION HAZARDS: Use full protective clothing (see Section 8)
FIRE-FIGHTING EQUIPMENT: Use a positive pressure, self-contained breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Can react strongly with epoxy resins at elevated temperatures.
INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Epoxy resins under uncontrolled conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides when burned.
HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Large spill: dike up and pump into appropriate containers.
Small spill: use non-combustible absorbent material/sand and shovel into suitable containers.
DISPOSAL METHOD: Large quantities should be recovered. Collect small quantities in waste metal drums for removal to an approved landfill, or incinerate in accordance with local, state, and federal regulations.

6. HEALTH HAZARD DATA:

EYE: May cause severe corneal injury, which may result in permanent impairment of vision, even blindness. Vapors may irritate eyes.
SKIN CONTACT: May cause severe injury to skin following prolonged or repeated contact, and may cause skin sensitization or other allergic reactions.
SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. The LD50 for skin absorption in rabbits is 880 mg/kg.
INGESTION: Single dose oral toxicity is low. The oral LD50 for female rats is >1000mg/kg. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat.
INHALATION: May cause respiratory sensitization or asthma in susceptible individuals. Excessive exposure may cause irritation to respiratory tract.
SYSTEMIC AND OTHER EFFECTS: Results of in vitro ("test tube") mutagenicity test have been negative.

7. FIRST AID:

EYES: Irrigation of the eye immediately with water for at least 30 minutes is required. Promptly seek medical attention.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing, preferably under a safety shower. Seek medical attention immediately. Avoid prolonged or repeated contact to skin. Wash thoroughly after handling.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

INHALATION: Remove to fresh air if effects occur. Consult medical personnel.

NOTE TO PHYSICIAN: Corrosive. May cause stricture. If lavage is performed, suggest endotracheal and/or esophagoscopy control. If burn is present, treat as any thermal burn after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

7. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE: None established.

VENTILATION: Control airborne concentration below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and clothing before reuse. Contaminate leather items, such as shoes, belts and watchbands, should be removed and destroyed.

EYE PROTECTION: Use chemical goggles. If vapor causes eye irritation, use full-face respirator. Eye wash fountain should be located in immediate work area.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Ground all transfer equipment. Hold bulk storage under a nitrogen blanket. This product should not come in contact with copper or copper-bearing alloys. Good general housekeeping procedure should be followed.

10. NFPA HAZARD RATING:

(4 = EXTREME 3 = HIGH 2 = MODERATE 1 = SLIGHT 0 = INSIGNIFICANT)

HEALTH-2

FIRE-1

REACTIVITY-0

SPECIFIC-0

11. REGULATORY INFORMATION:

STATUS ON SUBSTANCE LISTS:

The concentrations shown in this document are maximum or ceiling levels (expressed in weight %, unless otherwise specified) to be used for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA):

Requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ's) in 40 CFR 302.4. Components present in this product at level, which could require reporting under the statute are:

Chemical Name	CAS Number	%ByWeight	RQ
NONE			

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SAR) TITLE III:

Section 301-304 require emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQS) in 40 CFR 355. Components present in this product at level, which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>%ByWeight</u>
NONE		

Sections 311-312 require products to be reviewed and applicable EPA Hazard Definitions are identified.

EPA HAZARD CLASSIFICATIONS:

<u>Acute</u>	<u>Chronic</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactive</u>
<u>Hazard</u>	<u>Hazard</u>	<u>Hazard</u>	<u>Hazard</u>	<u>Hazard</u>
Yes	Yes	No	No	No

Section 313 requires submission of annual reports of releases of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSD's that are copied and distributed for this material. Components present in this product at level, which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>% By Weight</u>
NONE		

If you are unsure if you must report more information, call the EPA Emergency Planning and Right to Know Hot line: 800-535-0202 or 202-4792449.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The components of this product are contained on the chemical substance inventory list.

OTHER REGULATORY INFORMATION:

D.O.T. Shipping Name: Not Regulated

The information herein is given in good faith, but no warranty expressed or implied is made.

MATERIAL SAFETY DATA SHEET

Product Name: Marinepoxy Slow Hardener
E_har_slow

Effective Date:04-01-02

Product Code:

1. **INGREDIENTS:**

Polyamine	CAS# 140-31-8	<50%
Alkylphenol	CAS# 25154-52-3	<50%

The balance of ingredients is trade secrets

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(29 CFR 1910.1200) in addition, other substances not hazardous per this OSHA Standard may be listed.

Where proprietary ingredient shows, the identity may be made available as provided in this standard

2. **PHYSICAL DATA:**

BOILING POINT: 430°F, 221°C

VAP PRESSURE: <1 mmHg@ 20°C, 68°F

VAP DENSITY: >1

SOL. IN WATER: Moderately soluble

SP. GRAVITY: 0.96-0.97

APPEARANCE: Pale straw colored liquid

ODOR: Moderate amine odor.

3. **FIRE AND EXPLOSION HAZARD DATA:**

FLASH POINT: 200°F, 93°C

METHOD USED: PMCC

FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

EXTINGUISHING MEDIA: Alcohol foam, CO2, dry chemical.

FIRE & EXPLOSION HAZARDS: Use full protective clothing (see Section 8)

FIRE-FIGHTING EQUIPMENT: Use a positive pressure, self-contained breathing apparatus.

4. **REACTIVITY DATA:**

STABILITY: (CONDITIONS TO AVOID) Can react strongly with epoxy resins at elevated temperatures.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Epoxy resins under uncontrolled conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides when burned.

HAZARDOUS POLYMERIZATION: Will not occur.

5. **ENVIRONMENTAL AND DISPOSAL INFORMATION:**

ACTION TO TAKE FOR SPILLS/LEAKS: Large spill: dike up and pump into appropriate containers.

Small spill: use non-combustible absorbent material/sand and shovel into suitable containers.

DISPOSAL METHOD: Large quantities should be recovered. Collect small quantities in waste metal drums for removal to an approved landfill, or incinerate in accordance with local, state, and federal regulations.

6. **HEALTH HAZARD DATA:**

EYE: May cause severe corneal injury, which may result in permanent impairment of vision, even blindness. Vapors may irritate eyes.

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INGESTION: Single dose oral toxicity is low. The oral LD50 for female rats is >1000 mg/kg. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat.

INHALATION: May cause respiratory sensitization or asthma in susceptible individuals. Excessive exposure may cause irritation, to respiratory tract.

SYSTEMIC AND OTHER EFFECTS: Results of in vitro ("test tube") mutagenicity test have been negative and positive.

7. FIRST AID:

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INHALATION: Remove to fresh air if effects occur. Consult medical personnel.

NOTE TO PHYSICIAN: Corrosive. May cause stricture. If lavage is performed, suggest endotracheal and/or esophagoscopy control. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

7. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE: None established.

VENTILATION: Control airborne concentration below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator.

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EYE PROTECTION: Use chemical goggles. If vapor causes eye irritation, use full-face respirator. Eye wash fountain should be located in immediate work area.

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Chemical Name CAS Number

NONE

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EPA HAZARD CLASSIFICATIONS:

Acute	Chronic	Fire	Pressure	Reactive
<u>Hazard</u>	<u>Hazard</u>	<u>Hazard</u>	<u>Hazard</u>	<u>Hazard</u>
Yes	Yes	No	No	No

Section 313 requires submission of annual reports of releases of toxic chemicals that appear in 40 CFR 372 (for SARA 313), This information must be included in all MSD's that are copied and distributed for this material. Components present in this product at level, which could require reporting under the statute are:

Chemical Name CAS Number % By Weight

NONE

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