



Material Safety Data Sheet

Product: Syntho Sub-Sea Epoxy (Resin)

MSDS Date: 07-01-08
Product Name: Syntho Sub-Sea Epoxy (Resin)
Manufacturer: Neptune Research, Inc.

I. Product and Company Description

NRI, Neptune Research, Inc.
1683 Latham Rd.
West Palm Beach, FL 33409

Emergency Phone Number:
800-535-5053

For Product Information:
(561) 683-6992

Product Description:
Resin

Product Use:
Corrosion control, Sealant, Coating and Patching

Chemical Name or Synonym:
NA

Molecular Formula:
NA

II. Chemical Composition

Component	CAS#	%Composition
Epoxy Resin	None	>3
Microcrystalline Silica Quartz	14808-60-7	>1

III. Hazards Identification

A. Emergency Overview:

Physical Appearance and Odor:
Yellow paste with mild odor



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B. Potential Health Effects:

Acute Eye:

Eye contact may cause moderate irritation. Contact with hot product may cause thermal burns.

Acute Skin:

Skin contact may cause moderate irritation. Contact with similar products has been associated with skin sensitization. Sensitization may result in rashes and hives. Contact with hot product may cause thermal burns.

Acute Inhalation:

None expected under normal conditions of use. Product is considered to have a low volatility and is unlikely to be an inhalation hazard.

Acute ingestion:

Ingestion is unlikely. This product is considered to have a low toxicity based on laboratory tests.

Chronic effects:

Not Determined

Medical Conditions Aggravated by Exposure:

Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Preexisting skin or lung allergies may increase the chance of developing increased allergy symptoms from exposure.

IV. First Aid Measures

First Aid Measures for Accidental:

Eye Exposure:

In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately if irritation develops and persists. If contact with hot product occurs, immediately flush with cool water for 15 minutes. Get immediate medical attention.

Skin Exposure:

Remove contaminated clothing and shoes. Wipe excess product from skin. Wash affected skin with soap and plenty of water. Get prompt medical attention if irritation occurs. Do not reuse contaminated clothing until cleaned. If contact with hot product occurs, immediately flush with cool water for 15 minutes. Carefully remove clothing. If clothing is stuck to burn area, do not pull off, but cut around it. Cover burn area with clean material. Get immediate medical attention.

Inhalation:

If fumes or vapors are inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Get medical attention immediately.



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Ingestion:

Call a physician or poison control center immediately. If swallowed do not induce vomiting unless directed to do so by medical personnel. In general, no treatment is necessary unless large quantities of product have been ingested. Get medical advice.

Notes to Physician:

In general, emesis induction is unnecessary with high viscosity, low volatility products.

V. Fire Fighting Measures

Fire Hazard Data:

Flash Point: 480°F

Method Used: Pensky-Martens Closed Cup

Flammability Limits (vol/vol%): Lower: ND Upper: ND

Extinguishing Media:

Carbon Dioxide, foam, dry chemical. Water spray for large fires.

Special Fire Fighting Procedures:

Use self-contained breathing apparatus and full protective gear. Water can be used to cool and protect exposed material and keep containers from rupturing.

Unusual Fire and Explosion Hazards:

Product may burn at high temperatures, although it is not readily ignitable. Fumes and vapors from thermal and chemical decomposition vary widely in composition and toxicity. Do not breathe fumes and vapors.

Hazardous Decomposition Materials (Under Fire Conditions):

Carbon monoxide, aldehydes, acids and other organic substances may be formed during combustion or elevated temperature degradation. Heating resin above 300° F in the presence of air may cause slow oxidative decomposition. Above 500°F polymerization may occur.

VI. Accidental Release Measures

Cleanup and Disposal of Spill:

Wear respirator and personal protective equipment as appropriate to prevent skin and eye contact. Shut off the source of leak if safe to do so. Dike and contain. Remove with vacuum pumps or truck to salvage vessel. Soak up residue with absorbent clay, sand or other suitable material. Dispose of properly. Flush area with water to remove trace residue.

Dispose of materials according to the applicable Federal, State, or local regulations.



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VII. Handling and Storage

Handling:

May cause irritation. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather articles, such as shoes, cannot be decontaminated and should be destroyed to prevent use.

Storage:

Keep away from open flames and high temperatures. Melted material may cause thermal burns. Store in a cool, dry, well-ventilated area. Store away from direct sunlight and other sources of ultraviolet light. Containers, even those that have been emptied, can contain hazardous product residues. Handle in accordance with the hazard potential of curing agents used. If the resin is handled, shipped, or stored in bulk, the recommended pumping temperature is 180°F max.

VIII. Exposure Controls / Personal Protection

Exposure Guidelines:

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
Epoxy Resin	ND	ND	ND
Silica	0.05 mg/m ³ , respirable	ND	10/%SiO ₂ +2 mg/m ³ (respirable dust) 30/%SiO ₂ +2 mg/m ³ (total dust)

Engineering Controls:

Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS.

Respiratory Protection:

None normally required. In case of inadequate ventilation use NIOSH-approved respirator.

Eye / Face Protection:

Wear appropriate safety glasses with side shields or chemical goggles as described by OSHA's eye and face protection regulations in 29CFR 1910.133 or European Standard EN166.

Skin Protection:

Permeation resistant gloves (butyl rubber, nitrile, and polyvinyl alcohol). However, please note that polyvinyl alcohol degrades in water. Cover as much of the exposed area as possible, with protective clothing. If skin creams are used, keep the area covered by the cream to a minimum.



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IX. Physical and Chemical Properties

Physical Appearance: Yellow Paste

Odor: Mild

pH: ND

Specific Gravity: ND

Water Solubility: Negligible

Melting Point Range: NA

Vapor Pressure: 0.03 mm Hg

Percent Volatiles by Volume: Negligible

X. Stability and Reactivity

Chemical Stability:

Stable under standard use and storage conditions.

Conditions to Avoid:

None

Materials / Chemicals to be Avoided:

Can react vigorously with strong oxidizing agents, strong Lewis or mineral acids and strong mineral, organic bases, especially primary and secondary aliphatic amines. Reactions with some curing agents may produce considerable heat. Runaway reactions may char and decompose the resin system, generating unidentified fumes and vapors that could be toxic.

Hazardous Decomposition Products:

Carbon monoxide, aldehydes, acids and other organic substances may be formed during combustion or elevated temperature degradation. Heating resin above 300° F in the presence of air may cause slow oxidative decomposition. Above 500°F polymerization may occur.

Hazardous Polymerization:

May occur with catalyst or hardeners in uncontrolled conditions.



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XI. Toxicological Information

Acute Effects:

Oral-rat LD50: 11.4 g/kg

Oral-mouse LD50: 15.6 g/kg

Dermal-rabbit LD50: >20 ml/kg

Acute inhalation: No deaths occurred in saturated air in 8 hours. This inhalation test may not be relevant due to low volatility of the resin

Acute Eye Irritation:

Eye contact may cause moderate irritation. Contact with hot product may cause thermal burns.

Acute Skin Irritation:

Skin contact may cause moderate irritation. Contact with similar products has been associated with skin sensitization. Sensitization may result in rashes and hives. Contact with hot product may cause thermal burns.

Acute Dermal Toxicity:

Not Determined

Acute Respiratory Irritation:

None expected under normal conditions of use. Product is considered to have a low volatility and is unlikely to be an inhalation hazard.

Acute Ingestion Toxicity:

No hazard in normal industrial use.

Acute Inhalation Toxicity:

Not Determined

Acute Oral Toxicity:

Not Determined

Chronic Toxicity:

Silica, Quartz is listed as potentially carcinogenic by the National Toxicology Program (NTP) and the International Agency for the Research on Cancer (IARC).

Recent 2-year bioassays on mice exposed by the dermal route to Diglycidyl Ether of Bisphenol-A resin (DGEBA), or two other commercial resins which are composed predominantly of DGEBA, have yielded very little evidence of weak carcinogenicity. The authors of this work concluded that the renal tumor evidence with this resin "was of not biological significance" and that the resin "is not a systemic carcinogen when applied to the dorsal skin of CF1 mice." Based upon this and all other available information, IARC concluded (1988) that DGEBA was not classified as a carcinogen (IARC Group 3) based on the following: Human evidence - Inadequate; Animal evidence - Inadequate



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Mutagenicity (Genetic Effects):

DGEBPA (a component of this product) has proved to be inactive when tested by in vivo mutagenicity assays. It has shown activity by in vitro microbial mutagenicity screening and has produced chromosomal aberrations in cultured rat liver cells. The significance of this information to man is unknown.

XII. Ecological Information

Ecotoxicological Information:

Degradation: Not Determined
Accumulation: Not Determined
Fish-Toxicity: Not Determined

Chemical Fate Information:

Keep out of surface waters, sewers and waterways entering or leading to surface waters. Notify authorities if any exposure to the general public or environment occurs or is likely to occur.

XIII. Disposal Considerations

Waste Disposal Method:

Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations.

Container Handling and Disposal:

Dispose of container and unused contents in accordance with federal, state, and local regulations.

XIV. Transportation Information

US Department of Transportation Shipping Name:

US Department of Transportation	Proper Shipping Name	Not Regulated
	Hazard Class	Not Regulated
	ID Number	Not Regulated
	Packaging Group	Not Regulated
	Label Statement	Not Regulated

XV. Regulatory Information

Federal Regulations:

SARA Title III Hazard Classes:

Fire Hazard: NO
Reactive Hazard: NO
Release of Pressure: NO



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Acute Health Hazard: YES
 Chronic Health Hazard: YES

Other Federal Regulations:

State Regulations:

The components identified with an X are present on the respective state's Right To Know lists:

Component	MA	PA	MI	NJ	RI	FL
Epoxy Resin						
Silica	X	X		X		

California Prop. 65: Silica is listed.

XVI. Other Information

National Fire Protection Association Hazard Ratings – NFPA(R):

Health Hazard: 2
 Flammability: 1
 Reactivity: 0

Key Legend Information:

- N/A – Not Applicable
- ND – Not Determined
- ACGIH – American Conference of Governmental Industrial Hygienists
- OSHA – Occupational Safety and Health Administration
- TLV – Threshold Limit Value
- PEL – Permissible Exposure Limit
- TWA – Time Weighted Average
- STEL – Short Term Exposure Limit
- NTP – National Toxicology Program
- IARC – International Agency for Research on Cancer

The information contained herein is based on the data available to us and is believed to be accurate. The data is offered in good faith as typical values and not as product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. Neptune Research Inc. makes no warranty either expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. The recommended industrial hygiene and safe handling procedures are believed to be genuinely applicable. However, each user should review these recommendations in the specific context of



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the intended use and determine whether they are appropriate. Neptune Research Inc. assumes no responsibility for injury from the use of the product described herein. The information is intended only to assist in the safe handling of this material.