



## Material Safety Data Sheet

**Product: Syntho Sub-Sea Epoxy (Catalyst)**

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

### I. Product and Company Description

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
Complex Aliphatic Amine Mixture	None	>1
Microcrystalline Silica Quartz	14808-60-7	>1

### III. Hazards Identification

#### A. Emergency Overview:

**Physical Appearance and Odor:**  
Viscous paste with amine odor



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### **B. Potential Health Effects:**

#### **Acute Eye:**

Product vapor in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye through the atmosphere. Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. The effect is transient and has no known residual effect. Burns of the eye may cause blindness.

#### **Acute Skin:**

Contact with the skin may cause dryness (defatting), itching and/or rash. Contact of undiluted product with eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury. Product is absorbed through the skin and may cause nausea, headache and general discomfort.

#### **Acute Inhalation:**

Inhalation of vapors may severely damage contacted tissue and produce scarring. Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring.

#### **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:**

Asthma, chronic respiratory disease (e.g. Bronchitis, Emphysema), Eye disease, Skin disorders, and Allergies.

### **IV. First Aid Measures**

#### **First Aid Measures for Accidental:**

##### **Eye Exposure:**

Hold lids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

##### **Skin Exposure:**

Remove contaminated clothing and shoes. Remove product and immediately flush affected area with water for at least 15 minutes. Cover the affected area with a sterile dressing or clean sheeting and transport for medical care. Do not apply greases or ointments. Control shock, if present.

##### **Inhalation:**

Move patient to fresh air. If breathing has stopped or is labored give assisted respiration ( e.g. mouth to-mouth). Supplemental oxygen may be indicated. Seek medical advice. Prevent aspiration of vomit. Turn victim's head to the side.



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**Ingestion:**

In the event of ingestion, administer 3-4 glasses of milk or water. Do not induce vomiting. Seek medical advice.

**Notes to Physician:**

None

### V. Fire Fighting Measures

**Fire Hazard Data:**

**Flash Point:** 107.78°C (226°F)

**Method Used:** Closed Cup

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

**Extinguishing Media:**

Ignition will give rise to a Class B fire. In case of large fire use: water spray, alcohol foam. In case of small fire use: carbon dioxide (CO<sub>2</sub>), dry chemical, dry sand or limestone.

**Special Fire Fighting Procedures:**

A face shield should be worn. Firefighters should wear butyl rubber boots, gloves, and body suit and a self contained breathing apparatus. Retain expended liquids from fire fighting for later disposal.

**Unusual Fire and Explosion Hazards:**

May generate toxic or irritating combustion products. Contact of liquid with skin must be prevented. Sudden reaction and fire may result if product is mixed with an oxidizing agent. May generate carbon monoxide gas. May generate toxic nitrogen oxide gases. May generate ammonia gas.

**Hazardous Decomposition Materials (Under Fire Conditions):**

Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic.

### VI. Accidental Release Measures

**Cleanup and Disposal of Spill:**

Stop the leak, if possible. Ventilate the space involved. Reduce vapor spreading with a water spray. (Removal of ignition Shut off or remove all ignition sources. Construct a dike to prevent spreading (includes molten liquids sources, diking etc.) until they freeze).



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If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Flush area with water spray. Clean-up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

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

**VII. Handling and Storage**

**Handling:**

Avoid contact with skin or eyes. Avoid breathing of vapors. Handle in well ventilated work space. When handling, do not eat, drink, or smoke. Avoid using in any spray application without strict conformance to all applicable electrical codes and the OSHA limit for maximum allowable airborne concentrations.

**Storage:**

Keep away from: acids, oxidizers. Keep in a cool, dry, ventilated storage and in closed containers. Do not store in reactive metal containers.

**VIII. Exposure Controls / Personal Protection**

**Exposure Guidelines:**

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
Complex Aliphatic Amine Mixture	ND	ND	ND
Silica	0.05 mg/m3, respirable	ND	10%/SiO <sub>2</sub> +2 mg/m <sup>3</sup> (respirable dust) 30%/SiO <sub>2</sub> +2 mg/m <sup>3</sup> (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.



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### 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.

## IX. Physical and Chemical Properties

<b>Physical Appearance:</b>	Blue viscous paste
<b>Odor:</b>	amine
<b>Boiling Point:</b>	>200.00°C (>392.00°F)
<b>pH:</b>	ND
<b>Specific Gravity:</b>	ND
<b>Water Solubility:</b>	Slight
<b>Melting Point Range:</b>	NA
<b>Vapor Pressure:</b>	15.59 mm Hg
<b>Percent Volatiles by Volume:</b>	Negligible

## X. Stability and Reactivity

### Chemical Stability:

Stable under standard use and storage conditions.

### Conditions to Avoid:

None

### Materials / Chemicals to be Avoided:

Mineral acids (i.e. sulfuric, phosphoric, etc.). Organic acids (i.e. acetic acid, citric acid etc.). Oxidizing Agents (i.e. perchlorates, nitrates etc.). Reactive metals (i.e. sodium, calcium, zinc etc.). Sodium or Calcium Hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Dehydrating Agents. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds. A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or spattering of hot material.

### Hazardous Decomposition Products:

Nitrogen oxide can react with water vapors to form corrosive nitric acid (TLV=2 ppm). Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic



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fumes at elevated temperatures. Nitric acid in a fire. Aldehydes. The oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic.

#### **Hazardous Polymerization:**

May occur in uncontrolled conditions when mixed in large masses with epoxy resins.

### XI. Toxicological Information

#### **Acute Effects:**

Oral-rat LD50: >2000.00mg/kg (no deaths)

Dermal-rabbit LD50: >2000.00mg/kg (no deaths)

#### **Acute Eye Irritation:**

Product vapor in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye through the atmosphere. Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. The effect is transient and has no known residual effect. Burns of the eye may cause blindness.

#### **Acute Skin Irritation:**

Contact with the skin may cause dryness (defatting), itching and/or rash. Contact of undiluted product with eyes or skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury. Product is absorbed through the skin and may cause nausea, headache and general discomfort.

#### **Acute Dermal Toxicity:**

Not Determined

#### **Acute Respiratory Irritation:**

Inhalation of vapors may severely damage contacted tissue and produce scarring. Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring.

#### **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



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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

**XII. Ecological Information**

**Ecotoxicological Information:**

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

**Chemical Fate Information:**

Waste from this product may present long term environmental hazards, thus landfill disposal must be considered less acceptable than incineration.

**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:**

<b>US Department of Transportation</b>	<b>Proper Shipping Name</b>	Corrosive Liquid, N.O.S. (polyamine mixture)
	<b>Hazard Class</b>	8
	<b>ID Number</b>	UN 1760
	<b>Packaging Group</b>	III
	<b>Label Statement</b>	None

**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: NO

### 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
Complex Aliphatic Amine Mixture						
Silica	X	X		X		

California Prop. 65: Silica is listed.

### XVI. Other Information

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

Health Hazard: 3  
 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.