



## Material Safety Data Sheet

**Product: Quick Set Epoxy Resin**

**MSDS Date:** 01-15-07  
**Product Name:** Quick Set Epoxy Resin  
**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
Reaction product of epichlorohydrin and bisphenol A	None	100

### III. Hazards Identification

#### A. Emergency Overview:

**Physical Appearance and Odor:**  
Viscous liquid with epoxy odor



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

**Acute Eye:**

May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

**Acute Skin:**

Prolonged exposure not likely to cause significant skin irritation. Repeated exposure may cause skin irritation. Has caused allergic skin reaction in humans. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

**Acute Inhalation:**

Vapors are unlikely due to physical properties.

**Acute ingestion:**

Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

**Chronic effects:**

Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects. Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic. Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen.

**Medical Conditions Aggravated by Exposure:**

Not Determined

### **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.



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### **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.

### **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:** 252°C (485°F)

**Method Used:** Pensky Marten Closed Cup

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

### **Extinguishing Media:**

Water fog or fine spray, carbon dioxide, dry chemical, foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Water fog, applied gently may be used as a blanket for fire extinguishment.

### **Special Fire Fighting Procedures:**

Keep people away. Isolate fire area and deny unnecessary entry. Do not use direct water stream. May spread fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Move container from fire area if this is possible without hazard. Fight fire from protected location or safe distance. Consider use of unmanned hose holder or monitor nozzles. Immediately withdraw all personnel from area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained may cause environmental damage.

### **Unusual Fire and Explosion Hazards:**

None

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

Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide and water.



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### VI. Accidental Release Measures

**Cleanup and Disposal of Spill:**

Absorb with material such as sand, or polypropylene or polyethylene fiber products. Collect in suitable and properly labeled containers. Remove residual using hot soapy water. Residual can be removed with solvent. Solvents are not recommended for cleanup unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent MSDS for handling information.

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

### VII. Handling and Storage

**Handling:**

Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire. Application of a direct flame to a container of liquid epoxy resin can also cause explosion and/or fire.

**Storage:**

Recommended pumping and storage temperature is 60C (140F).

### VIII. Exposure Controls / Personal Protection

**Exposure Guidelines:**

Component	Exposure limits		
	ACGIH	NIOSH	OSHA-PELs
Reaction product of epichlorohydrin and bisphenol A	ND	ND	ND

**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**

**Physical Appearance:** Viscous liquid

**Odor:** faint epoxy

**Boiling Point:** >260°C

**pH:** ND

**Specific Gravity:** ND

**Water Solubility:** Slight

**Melting Point Range:** NA

**Vapor Pressure:** .03 mbar @ 77°C

**Percent Volatiles by Volume:** Negligible

**X. Stability and Reactivity**

**Chemical Stability:**

Stable under standard use and storage conditions.

**Conditions to Avoid:**

Potentially violent decomposition can occur above 350C (662F). Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

**Materials / Chemicals to be Avoided:**

Avoid contact with oxidizing materials, acids and bases. Avoid unintended contact with amines.

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



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### **Hazardous Polymerization:**

Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide and water.

## **XI. Toxicological Information**

### **Acute Effects:**

Oral-rat LD50: >5000 mg/kg

Dermal-rabbit LD50: 20,000 mg/kg

### **Acute Eye Irritation:**

May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

### **Acute Skin Irritation:**

Prolonged exposure not likely to cause significant skin irritation. Repeated exposure may cause skin irritation. Has caused allergic skin reaction in humans. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

### **Acute Dermal Toxicity:**

Not Determined

### **Acute Respiratory Irritation:**

Vapors are unlikely due to physical properties.

### **Acute Ingestion Toxicity:**

No hazard in normal industrial use.

### **Acute Inhalation Toxicity:**

Not Determined

### **Acute Oral Toxicity:**

Not Determined

### **Chronic Toxicity:**

Not Determined

### **Mutagenicity:**

Animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some in some cases and positive in others.



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### **XII. Ecological Information**

**Ecotoxicological Information:**

**MOVEMENT & PARTITIONING:** Bioconcentration potential is moderate. (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000). Measured log octanol/water partition coefficient (log Pow) is 3.7-3.9. Soil organic carbon/water partition coefficient (Koc) is estimated to be 1800-4400. Henry's Law Constant (H) is estimated to be <6.94E- 09 atm-m<sup>3</sup>/mole. Log octanol/water partition coefficient (log Pow) is estimated, using a structural fragment method, to be 3.84.

**DEGRADATION & PERSISTENCE:** Theoretical oxygen demand (ThOD) is calculated to be 2.35 p/p. In the atmospheric environment, material is estimated to have a tropospheric half-life of 1.92 hr. Biodegradation reached in Modified Zahn-Wellens/EMPA Test (OECD Test No. 302B) after 28 days: 12%. 20-Day biochemical oxygen demand (BOD20) is <2.5%.

**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>	Not Regulated
	<b>Hazard Class</b>	Not Regulated
	<b>ID Number</b>	Not Regulated
	<b>Packaging Group</b>	Not Regulated
	<b>Label Statement</b>	Not Regulated

### **XV. Regulatory Information**

**Federal Regulations:**

**SARA Title III Hazard Classes:**



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Fire Hazard: NO  
Reactive Hazard: NO  
Release of Pressure: NO  
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
Reaction product of epichlorohydrin and bisphenol A						

California Prop. 65: None.

### Canada Regulations:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## XVI. Other Information

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

Health Hazard: 1  
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



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The information contained herein is based on the data available to us and is believed to be correct. However Neptune Research, Inc. makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.