



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

MSDS Date: 07-01-08
Product Name: Quick Set 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:
Epoxy Curing Agent

Product Use:
Corrosion control, Sealant, Coating and Patching

Chemical Name or Synonym:
NA

Molecular Formula:
NA

II. Chemical Composition

Component	CAS#	%Composition
Reaction products mixture	32610-77-8	50
Phenol	108-95-2	30
Triethylenetetramine	112-24-3	20

III. Hazards Identification

A. Emergency Overview:

Physical Appearance and Odor:
Viscous liquid with phenolic odor



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

B. Potential Health Effects:

Acute Eye:

Contact with eyes causes severe irritation and pain.

Acute Skin:

Contact with skin causes irritation, redness and discomfort which is transient. Product is readily absorbed through the skin and may cause nausea, headache and general discomfort.

Acute Inhalation:

Inhalation of mists may cause irritation in the respiratory tract. Coughing and chest pain may result. Risk of exposure to hazardous concentrations of vapor under normal working conditions in a well ventilated space is minimal. However, conditions such as spraying, or sudden release of hot liquid, which generate an aerosol, mists or fog should be avoided.

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:

Repeated and/or prolonged exposure may cause allergic reaction/sensitization. Repeated and/or prolonged exposures may result in: liver disorders (such as jaundice or liver enlargement), kidney disorders (such as edema, or proteinuria), adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as rash, irritation or corrosion).

Medical Conditions Aggravated by Exposure:

Eye disease, Kidney disorders, Liver disorders, 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. Destroy contaminated leather apparel. Seek medical advice. Launder contaminated clothing prior to reuse.



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

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:

If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

Notes to Physician:

None

V. Fire Fighting Measures

Fire Hazard Data:

Flash Point: 135.56°C (276.01°F)

Method Used: Pensky Marten 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 (CO₂), dry chemical, dry sand or limestone.

Special Fire Fighting Procedures:

Firefighters should wear butyl rubber boots, gloves, and body suit and a self-contained breathing apparatus.

Unusual Fire and Explosion Hazards:

May generate toxic or irritating combustion products. 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. Personnel in vicinity and downwind should be evacuated.

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. Nitrosamines, aldehydes, and the oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic.



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

VI. Accidental Release Measures

Cleanup and Disposal of Spill:

Stop the leak, if possible. Reduce vapor spreading with a water spray. Shut off or remove all ignition sources. Construct a dike to prevent spreading (includes molten liquids until they freeze). 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. 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 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
Reaction products mixture	ND	ND	ND
Phenol	19 mg/m ³ (skin)	ND	19 mg/m ³ (skin)
Triethylenetetramine	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.



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

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: Yellow to amber viscous liquid

Odor: phenolic

Boiling Point: >230°C (>446°F)

pH: Alkaline

Specific Gravity: 1

Water Solubility: 5.0

Melting Point Range: NA

Vapor Pressure: <1 mm Hg @ 70°F

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:

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. CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds. Nitrites, nitrosating agents. 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 splattering of hot material.



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

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. Nitrosamines, aldehydes, and the oxides of nitrogen gases (except nitrous oxide) emitted on decomposition are highly toxic.

Hazardous Polymerization:

Will not occur.

XI. Toxicological Information

Acute Effects:

Oral-rat LD50: 2200 mg/kg

Inhalation-rat LC50: >10 mg/L/ 1 hr

Acute Eye Irritation:

Contact with eyes causes severe irritation and pain.

Acute Skin Irritation:

Contact with skin causes irritation, redness and discomfort which is transient. Product is readily absorbed through the skin and may cause nausea, headache and general discomfort.

Acute Dermal Toxicity:

Not Determined

Acute Respiratory Irritation:

Inhalation of mists may cause irritation in the respiratory tract. Coughing and chest pain may result. Risk of exposure to hazardous concentrations of vapor under normal working conditions in a well ventilated space is minimal. However, conditions such as spraying, or sudden release of hot liquid, which generate an aerosol, mists or fog should be avoided.

Acute Ingestion Toxicity:

No hazard in normal industrial use.

Acute Inhalation Toxicity:

Not Determined

Acute Oral Toxicity:

Not Determined

Chronic Toxicity:

Not Determined

Mutagenicity:

Results from a battery of short term genotoxicity tests on this material or its components indicate mutagenic activity. Adsorption of phenolic solutions through the skin may be very rapid and can cause



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

death. Lesser exposures can cause damage to the kidneys, liver, pancreas, and spleen, and edema of the lungs. Chronic exposures can cause death from liver and kidney damage.

XII. Ecological Information

Ecotoxicological Information:
Not Determined

Chemical Fate Information:
108-95-2 PHENOL; Biodegradability = 99.5% at 7 days

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
Acute Health Hazard:	YES
Chronic Health Hazard:	YES

Other Federal Regulations:



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

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 products mixture						
Phenol						
Triethylenetetramine						

California Prop. 65: None.

Canada Regulations:

All components of this product are listed on Canada's DSL and Ingredient Disclosure Lists.

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: 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.



Material Safety Data Sheet

Product: Quick Set Epoxy Catalyst

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 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.