
I. PRODUCT AND COMPANY IDENTIFICATION

Company: Epoxy Systems, Inc.
Address: 20774 W. Pennsylvania Ave.
Dunnellon, FL 34431
Product Name: **A Component: Product #646**
Product Description: High Temp Epoxy Resin Coating
Emergency Contact No.: 1-800-633-8253 (PERS)
Date Prepared or Revised: June 2013
For most current MSDS, please visit our website at www.epoxy.com

II. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Names	CAS Numbers
Epoxy Phenol Novolac Resin	028064-14-4
1,4-Butanediol diglycidyl ether	2425-79-8

The remaining ingredients are designated as "trade secret".

III. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Non-corrosive.
May cause eye and skin irritation.
May cause skin sensitization.

POTENTIAL HEALTH EFFECTS

ACUTE

Eye Contact: May cause eye irritation, swelling, tearing, redness or cornea damage.
Skin Contact: Moderate irritation. May cause skin sensitization, evidenced by rashes and hives.
Inhalation: Moderate irritation to the nose and respiratory tract. May cause Central Nervous System depression, evidenced by headache, dizziness, and nausea.
Ingestion: May cause irritation to the gastrointestinal tract. May cause Central Nervous System depression or other systemic effects.
Systemic Effects: Lungs, eyes, and skin.

IV. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. If redness, burning, blurred vision, or swelling persists, **CONSULT A PHYSICIAN.**

Skin Contact: Remove product and immediately wash affected area with soap and water. Do not apply greases or ointments. Remove contaminated clothing. Wash clothing with soap and water before reuse. If redness, burning, or swelling persists, **CONSULT A PHYSICIAN.**

Ingestion: **DO NOT INDUCE VOMITING.** Never administer anything by mouth to an unconscious person. Rinse out mouth with water, then drink sips of water to remove taste from mouth. **CONSULT A PHYSICIAN** if vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Inhalation: Remove patient to fresh air. If patient continues to experience difficulty breathing, **CONSULT A PHYSICIAN.**

V. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, carbon dioxide or dry chemical, aqueous foam.
Fire And Explosion Hazard: Hazardous decomposition products may occur when materials polymerize at temperatures above 500°F. Do not allow run-off from fire fighting to enter drains or water courses.
Fire Fighting Equipment and Procedures: Wear full protective clothing and self-contained breathing apparatus for fire fighting. Isolate fuel supply from fire. Clear fire area of all non-emergency personnel. Use water spray to cool fire-exposed surfaces and containers.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use cautious judgment when cleaning up spill. Shut off leaks, if possible without personal risk. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.

Environmental Precautions: Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

Clean-up Methods: **Small spills:** Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal. **Large spills:** Approach suspected leak areas with caution. Create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.

Additional Information: Notify authorities if any exposures to the general public or environment occur or are likely to occur. Dispose in accordance with federal, state, and local regulations.

VII. STORAGE AND HANDLING

Storage: Keep away from: acids, oxidizers, heat, or flames. Keep in cool, dry, well-ventilated area in closed containers. Protect containers from physical damage.

Handling: To prevent skin and eye contact under the foreseeable conditions of use, wear appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Avoid breathing fumes. Handle in a well-ventilated work area.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Measure: Wear appropriate personal protective equipment.

Eye Protection: Avoid contact with eyes. Wear chemical splash goggles or safety glasses with side shield.

Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.

Skin and Body Protection: Wear chemical-resistant gloves and other clothing as required to minimize contact.

Respirator Protection: Not required for properly ventilated areas.

Exposure Limits:

COMPONENT	ACGIH (TLV)	OSHA (PEL)
Epoxy Phenol Novolac Resin	N/E	N/E

IX. PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid **Freezing Point:** N/E

Color: Clear Yellowish **Flash Point:** 230°F (Closed Cup)

Odor: Sweet **Specific Gravity:** 1.13 @ 75°F

Vapor Pressure: Not Volatile **Solubility In Water:** Insoluble

Boiling Point: >500°F (> 260°C)

X. REACTIVITY DATA

Stability: Stable under normal storage conditions.

Conditions To Avoid: Incompatible chemicals, high heat and open flame.

Materials To Avoid: Oxidizing agents, acids, organic bases, and amines.

Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide, aldehydes, acids and other organic substances.

Hazardous Polymerization: Will not occur.

XI. TOXICOLOGICAL PROPERTIES

Acute Oral (LD₅₀, Rat): N/E

Acute Dermal (LD₅₀, Rabbit): N/E

Acute Inhalation (LC₅₀, Rat): N/E

Chronic Health Hazard: The Diglycidyl Ether of Bisphenol A has shown weak carcinogenicity in 2-year mice bioassays. This material has shown activity in-vitro microbial mutagenicity screening and has produced chromosomal aberrations in cultured rat liver cells. No activity when tested by vivo mutagenicity assays.

XII. DISPOSAL CONSIDERATIONS

**Waste From Residues /
Unused Products:**

This material is not a hazardous waste by RCRA criteria (40 CFR 261). Dispose of container and unused contents in accordance with federal, state, and local requirements.

XIII. TRANSPORTATION

DOT: Not Regulated For Transport

ICAO/IATA:

Basic Shipping Requirements:

UN Number: UN3082

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, n.o.s. (Bisphenol-A Epichlorohydrin resin)

Hazard Class: 9

Packing Group: III

IMO:

Basic Shipping Requirements:

UN Number: UN3082

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, n.o.s. (Bisphenol-A Epichlorohydrin resin), Marine Pollutant

Hazard Class: 9

Packing Group: III

XIV. REGULATORY INFORMATION

Country	Regulatory List
USA	TSCA

EPA SARA Title III Section 312 (40 CFR 370) Hazardous Classification: Acute/Chronic Health Hazard.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level: None.

US. California "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65): This product contains small traces of the following chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other hazards

None Known

XV. OTHER INFORMATION

HMIS RATING

Health	Flammability	Physical Hazard
2	1	0

N/E – Not Established

This Material Safety Data Sheet (MSDS) is prepared by Epoxy Systems, Inc. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this MSDS. This MSDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

I. PRODUCT AND COMPANY IDENTIFICATION

Company: Epoxy Systems, Inc.
Address: 20774 W. Pennsylvania Ave.
Dunnellon, FL 34431
Product Name: **B Component: Product #646**
Product Description: High Temp Epoxy Resin Coating
Emergency Contact No.: 1-800-633-8253 (PERS)
Date Prepared or Revised: June 2013
For most current MSDS, please visit our website at www.epoxy.com

II. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Names	CAS Numbers
Tris-2,4,6-(dimethylaminomethyl)phenol	90-72-2
Methylenebis(cyclohexyl)amine, 4,4'-	1761-71-3

The remaining ingredients are designated as "trade secret"

III. HAZARD IDENTIFICATION
EMERGENCY OVERVIEW

Corrosive.
Moderate respiratory irritant
Severe irritation to eyes and skin. Harmful if swallowed
May cause skin sensitization.

POTENTIAL HEALTH EFFECTS

ACUTE

Eye Contact: Severe irritation, swelling, tearing, redness or cornea damage. May cause burns and tissue damage.
Skin Contact: Severe irritation. May cause burns and tissue damage. May cause skin sensitization evidenced by rashes and hives.
Inhalation: Moderate irritation to the nose and respiratory tract. May cause Central Nervous System depression, evidenced by giddiness, headache, dizziness, and nausea.
Ingestion: May cause irritation to the gastrointestinal tract. May cause headache nausea. May cause Central Nervous System depression or other systemic effects.
Systemic Effects: Lungs, eyes, and skin.

IV. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. If redness, burning, blurred vision, or swelling persists, **CONSULT A PHYSICIAN.**
Skin Contact: Remove product and immediately wash affected area with soap and water. Do not apply greases or ointments. Remove contaminated clothing. Wash clothing with soap and water before reuse. If redness, burning, or swelling persists, **CONSULT A PHYSICIAN.**
Ingestion: **DO NOT INDUCE VOMITING.** Never administer anything by mouth to an unconscious person. Rinse out mouth with water, then drink sips of water to remove taste from mouth. **CONSULT A PHYSICIAN** if vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Inhalation: Remove patient to fresh air. If patient continues to experience difficulty breathing, **CONSULT A PHYSICIAN.**

V. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, fog or foam, carbon dioxide, dry chemical, limestone powder.

MATERIAL SAFETY DATA SHEETS**Fire And Explosion Hazard:**

Irritating and toxic fumes may be produced at high temperature. In a fire, may produce carbon monoxide, toxic nitrogen oxide, ammonia, and carbon dioxide. Use of water may result in the formation of very toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Fire Fighting Equipment and Procedures:

Wear full protective clothing and self-contained breathing apparatus for fire fighting. Isolate fuel supply from fire. Clear fire area of all non-emergency personnel.

VI. ACCIDENTAL RELEASE MEASURES**Personal Precautions:**

Use cautious judgment when cleaning up spill. Shut off leaks, if possible without personal risk. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.

Environmental Precautions:

Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

Clean-up Methods:

Small spills: Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.

Large spills: Approach suspected leak areas with caution. Create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.

Additional Information:

Notify authorities if any exposures to the general public or environment occur or are likely to occur. Dispose in accordance with federal, state, and local regulations.

VII. STORAGE AND HANDLING**Storage:**

Keep away from: acids, oxidizers, heat, or flames. Keep in cool, dry, well-ventilated area in closed containers. Protect containers from physical damage.

Handling:

To prevent skin and eye contact under the foreseeable conditions of use, wear appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Avoid breathing fumes. Handle in a well ventilated work area.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION**Protective Measure:**

Wear appropriate personal protective equipment.

Eye Protection:

Avoid contact with eyes. Wear chemical splash goggles or safety glasses with side shield.

Hand Protection:

Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.

Skin and Body Protection:

Wear chemical-resistant gloves and other clothing as required to minimize contact.

Respirator Protection:

Not required for properly ventilated areas.

Exposure Limits:

Chemical Names	ACGIH (TLV)	OSHA (PEL)
Tris-2,4,6-(dimethylaminomethyl)phenol		
Methylenebiscyclohexanamine, 4,4'-		

IX. PHYSICAL PROPERTIES**Form:**

Liquid

Freezing Point:

N/E

Color:

Dark Amber

Vapor Pressure:

N/E

Odor:

Ammonia

Flash Point:

262°F (128°C)

Boiling Point:

N/E

Specific Gravity:

.95 @ 72°F

Solubility In Water:

Slight

X. REACTIVITY DATA**Stability:**

Stable under normal storage conditions.

Conditions To Avoid:

Incompatible chemicals, high heat, and open flame.

Materials To Avoid:

Oxidizing agents and acids.

Hazardous Decomposition Products:

Combustion may produce carbon monoxide, carbon dioxide, and nitrogen oxide, and other organic substances.

Hazardous Polymerization:

Will not occur.

XI. TOXICOLOGICAL PROPERTIES**Acute Oral (LD₅₀, Rat):**

2,000 mg/kg

Acute Dermal (LD₅₀, Rabbit):

2100 mg/ kg

MATERIAL SAFETY DATA SHEETS

Acute Inhalation (LC₅₀, Rat):

N/E

Chronic Health Hazard:

Components of this product are not listed as carcinogens in concentrations of 0.1% or greater. Repeated or prolonged exposure may cause allergic reaction and/or limited sensitization.

XII. DISPOSAL CONSIDERATIONS

Waste From Residues /

Unused Products:

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

XIII. TRANSPORTATION

US DOT: Single Packaging:

UN2735, Amines, Liquid, Corrosive, n.o.s. (4,4'-Methylenebiscyclohexanamine), 8, II

IATA:

UN2735, Amines, Liquid, Corrosive, n.o.s. (4,4'-Methylenebiscyclohexanamine)8, II

IMO:

UN2735, Amines, Liquid, Corrosive, n.o.s. (4,4'-Methylenebiscyclohexanamine), 8, II

XIV. REGULATORY INFORMATION

Country	Regulatory List
USA	TSCA

EPA SARA Title III Section 312 (40 CFR 370) Hazardous Classification: Acute/Chronic Health Hazard.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:

US. California "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65): This product does not contains chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other harm.

XV. OTHER INFORMATION

HMIS RATING

Health	Flammability	Physical Hazard
3	1	0

N/E – Not Established

This Material Safety Data Sheet (MSDS) is prepared by Epoxy Systems, Inc. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this MSDS. This MSDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.