

Material Safety Data Sheet

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| Revision Date November 9, 2010 | Prepared by Patti Rogers | Technical Information 1-800-201-8822 or support@mgchemicals.com |
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For updates please download from www.mgchemicals.com or fax requests to 1-800-708-9888

Section 1: Product Identification

MSDS Code: 8321C PART A Name: Optically Clear Epoxy

Related Part Numbers: 8321C-320ML; 8321C-4L

Use: For doming and protecting electronics.

Section 2: Hazardous Ingredients

| CAS# | Chemical Name | Percentage by weight | ACGIH TWA | Osha Pel | Osha Stel |
|------------|---|----------------------|-----------|----------|-----------|
| 25068-38-6 | Bisphenol A-(epichlorhydrin) reaction product | 71.0-79.0 | N/E | N/E | N/E |
| 84-74-2 | Dibutyl Phthalate | 10.00- 11.00 | 5 mg/m3 | 5 mg/m3 | N/A |
| 2210-79-9 | Oxirane, [(2-methylphenoxy)methyl]- | 11.00-12.00 | N/A | N/A | N/A |

Section 3: Hazards Identification

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|--------------------|--|
| Eyes: | Mildly irritating |
| Skin: | Prolonged exposure may cause skin irritation. May cause allergic reaction in some individuals. |
| Inhalation: | At room temperature, exposure to vapors is unlikely due to physical properties. Higher temperatures may generate vapor levels sufficient to cause irritation. |
| Ingestion: | Single dose oral toxicity is low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury. |
| Chronic: | In long term exposures, Dibutyl Phthalate is reproductively toxic. |

Section 4: First Aid Measure

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| Eyes: | Remove contact lenses. Flush with water or saline. Get medical aid. |
| Skin: | Wash skin with large amounts of soap and water. Get medical aid if symptoms persist. |
| Inhalation: | Immediately remove from exposure to fresh air. Get medical aid if symptoms persist. |
| Ingestion: | Do not induce vomiting. If conscious, give 1-2 glasses of water. Get medical aid. |

Section 5: Fire Fighting Measures

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| Autoignition Temperature: 404 °C/759 | Flash Point: 95 °C | LEL / UEL: N/A |
| Extinguishing Media: | Use water spray, dry chemical, carbon dioxide or I foam. | |
| General Information: | Will burn if involved in a fire. | |

Section 6: Accidental Release Measures

Spill Procedure: Remove all sources of ignition. Provide adequate ventilation. Wear appropriate personal protection. Sprinkle absorbent compound onto spill, then sweep into a plastic or metal container. Wipe up further residue with paper towel and place in container. Wash spill area with soap and water.

Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Do not expose container to heat or flame.

Storage: Keep away from sources of ignition. Store in a cool, dry, well-ventilated area, away from incompatible substances.

Section 8: Exposure Controls

Routes of entry: Eyes, inhalation, and skin.

Ventilation: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

Personal Protection: Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

Section 9: Physical and Chemical Properties

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|----------------------------------|----------------------------------|---|--|
| Physical State: liquid | Odor: Mild | Solubility in water: Insoluble | Evaporation Rate: N/A |
| Boiling Point: N/A | Specific Gravity: 1.14 | Vapor Pressure: <0.13kPa@20°C (68°F) | Vapor Density: N/A pH: n/a |

Section 10: Stability and Reactivity

Stability: Stable at normal temperatures and pressures.

Conditions to avoid: Avoid contact with heat, sparks, open flame, and static discharge. Excessive heating over a long period of time degrades the resin.

Incompatibilities: Oxidizing agents, strong acids and bases, amines, Mercaptans

Polymerization: Will not occur under normal processing

Decomposition: Carbon dioxide, carbon monoxide, hydrogen bromide, bromine.

Section 11: Toxicological Information

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| Sensitization: (effects of repeated exposure) | This product is a skin sensitizer. |
| Carcinogenicity: (risk of cancer) | No |
| Teratogenicity: (risk of malformation in an unborn fetus) | No |
| Reproductive Toxicity: (risk of sterility) | Yes |
| Mutagenicity: (risk of heritable genetic effects) | Yes |

| Lethal Exposure Concentrations: | Ingestion (LD50): | Inhalation (LC50): | Skin (LD50): | Inhalation (TCLo): |
|---|--------------------------|---------------------------|---------------------|----------------------------|
| Bisphenol A-(epichlorhydrin) reaction product | N/A | N/A | N/A | N/A |
| Dibutyl Phthalate | 10gm/kg Guinea pig | 25 gm/m3 Mouse | >20mL/kg Mouse | 900 mg/m3/6h/35D Rat |



Oxirane, [(2-methylphenoxy)methyl]-

4gm/kg rat

60910
mg/m³/4H Rat

N/A

N/A

Section 12: Ecological Information

Volatile Organic compounds, % by weight: N/A

Volatile Organic compounds, grams per litre: N/A

Section 13: Disposal Information

General Information: Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

Section 14: Transportation Information

Ground

Ground Canada: (5 L and under)

Classified as **Consumer Commodity**.

Recommend Shipper be trained and certified. Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations).

Ground Canada: (Over 5 L)

UN number: **3082**, Shipping Name: **Environmentally Hazardous Substance, Liquid, N.O.S. (N-Butyl Phthalate)**, Class: **9**,

Packing Group: **III**, Flash Point: **95°C**. ERG# 171.

Recommend Shipper be trained and certified. Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations).

Ground USA: (5 L and under)

Classified as **ORM-D**.

Recommend Shipper be trained and certified. Refer to USA CFR 49 Regulations (Parts 100 to 185).

Ground USA: (Over 5 L)

UN number: **3082**, Shipping Name: **Environmentally Hazardous Substance, Liquid, N.O.S. (N-Butyl Phthalate)**, Class: **9**, Packing Group: **III**, Flash Point: **95°C**. ERG# 171.

Recommend Shipper be trained and certified. Refer to USA CFR 49 Regulations (Parts 100 to 185).

Air - All Sizes:

Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations.

UN number: **3082**, Shipping Name: **Environmentally Hazardous Substance, Liquid, N.O.S. (N-Butyl Phthalate)**, Class: **9**,

Packing Group: **III**, Flash Point: **95°C**. ERG# 171.

Ocean Vessel (IMO/IMDG) - All Sizes:

Shipper must be trained and certified. Refer to IMDG regulations.

UN number: **3082**, Shipping Name: **Environmentally Hazardous Substance, Liquid, N.O.S. (N-Butyl Phthalate)**, Class: **9**,

Packing Group: **III**, Flash Point: **95°C**.

Section 15: Regulatory Information

CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

DSL

All ingredients in this product are listed on the Domestic Substances List

WHMIS

This product belongs to the following categories: **D2A**

Industry and Science Canada

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.
 This product does not contain any class 2 ozone depleting substances.
 This product does not contain any chemicals listed as hazardous air pollutants.

Health Canada

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling Regulations.

USA

SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

None of the chemicals in this product have a reportable quantity.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain any chemicals subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

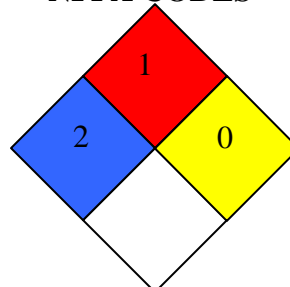
California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

This product does not contain any chemicals listed.

HMIS RATING

| | |
|-----------------------------|---|
| HEALTH: | 2 |
| FLAMMABILITY: | 1 |
| PHYSICAL HAZARD: | 0 |
| PERSONAL PROTECTION: | |

NFPA CODES



EUROPE

RoHS

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

WEEE

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

Definitions: N/A = not applicable, N/E = not established

Disclaimer: This material safety data sheet is provided as an information resource only. M.G. Chemicals believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.