

Material Safety Data Sheet

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Revision Date: August 29, 2003

Product Name: Epoxy Adhesive Resin
Product Number: 1 pack: 115-3302
DISTRIBUTOR: Circuit Technology Center, Inc.
45 Research Drive, Haverhill, MA 01832-1293
Phone: 978-374-5000, Fax: 978-372-5700

Emergency Response 24-Hour Telephone: **CHEMTREC** United States: (800) 424-9300
International: (703) 527-3887 (collect)

Section 2. COMPOSITION, INFORMATION OR INGREDIENTS

CHEMICAL	C.A.S. Number	Weight %
Phenol 4,4-(1-methylethylidene)bis-, polymer with (chloromethyl) oxirane n-Butyl glycidyl ether	025068-38-6 002426-08-6	70-90 up to 20

Other ingredients (if any) per OSHA 1910.1200 (g)(2)(i)(c)(1) which may
compose less than 1% of the composition, and/or which are non-hazardous
or not listed on the Massachusetts Hazardous Substance List. NA up to 10

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	Exposure Limits 8 Hours TWA (PPM)		
	OSHA PEL	ACGIH TLV	Ingestion LD50 (rats)
Phenol 4,4-(1-methylethylidene)bis-, polymer with (chloromethyl) oxirane n-Butyl glycidyl ether	NA	NA	NA
	NA	133mg/M3 (25ppm)	1200mg/kg

Section 3. HAZARD IDENTIFICATION

Emergency Overview:

Potential Health Effects:

GENERAL: Repeated contact or breathing of vapors may cause irritation; material is also a strong sensitizer. Eye and skin contact may cause transient irritation, defatting and drying of skin. Chronic exposure may be mutagenic.

NOTE 1: For Industrial Use Only: WARNING: May cause sensitization, irritation, or other allergic responses. Avoid eye and skin contact and prolonged inhalation of vapors.

Routes of entry: Skin, eyes and inhalation.

None of the ingredients in this product are known carcinogens, neurotoxins or teratogens.

Section 4. FIRST AID MEASURES

INHALATION: Remove to fresh air.
EYE CONTACT: Flush with water, get medical attention.
SKIN CONTACT: Wash with soap and water; remove contaminated clothing.
INGESTION: No known antidote but give milk or water; induce vomiting if large amount swallowed.

Section 5. FIRE-FIGHTING MEASURES

Flash Point & Method: 164°F (setaflash)
Flammable Limits: LEL: NA UEL: NA
Autoignition Temperature: NA
GENERAL HAZARD: Toxic gases may be liberated; handle as combustible; store in a cool place.
FIRE FIGHTING INSTRUCTIONS: Avoid breathing smoke. Addition of water may reduce flame intensity.
HAZARDOUS COMBUSTION PROD.: NA
FLAMMABLE PROPERTIES: NA
EXTINGUISHING MEDIA: Dry chemicals, chemical foam, carbon dioxide, water.

Section 6. ACCIDENTAL RELEASE MEASURES

LAND SPILL: Prevent skin and eye contact. Soak up absorbent material, or scrape up, and transfer to disposal container. Wipe up remaining residue with solvents, observing solvent flammability cautions, or use detergents.
NEUTRALIZING AGENT: NA

Section 7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient
STORAGE PRESSURE: Atmospheric
GENERAL: Store in a cool place in closed containers. Handle per Hazard Potential of Hardener.

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls:
(X) Local Exhaust ventilation is recommended.
(X) Mechanical ventilation recommended.
() Use explosion proof ventilation equipment.
() Do not use in confined spaces without mechanical ventilation equipment.
See section 2 for component exposure guidelines.

Personal Protection:
RESPIRATOR: Air supplied or organic canister, mask in confined areas.
HAND PROTECTION: (X) Protective Gloves Required (Rubber or Plastic disposable)
EYE PROTECTION: (Use one of the following)
(X) Safety Glasses (X) Chemical Goggles
OTHER RECOMMEND.: (Use all of the following)
(X) Eye Bath (X) Safety Shower

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Density..... 1.2 g/ml pH..... NA
Boiling Point..... >350°F % Volatile By Volume..... <0.2
Freezing Point..... NA % Solids..... NA
Vapor Density (Air = 1)..... >1 Evaporation Rate (BuAc = 1)..... Low
Solubility in Water..... Low Viscosity..... NA
Molecular Weight..... NA Physical State..... Liquid
Non-Exempt VOC (g/L)..... NA Odor..... Sweet
Appearance: Translucent, medium viscosity liquid Vapor Pressure(mmHg)..... >1

Section 10. STABILITY AND REACTIVITY

GENERAL: Stable.
INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Avoid uncontrolled excess heating over long periods, uncontrolled amine reactions, high temperatures, strong acids, certain organics and metallic acids. Incompatible with strong acids and bases and strong oxidizing agents.
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: CO, CO₂, aldehydes, phenol.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

RESULTS OF COMPONENT TOXICITY TEST PERFORMED: Information not available.
HUMAN EXPERIENCE: Information not available.

Section 12. ECOLOGICAL INFORMATION

FURTHER INFORMATION: Information not available.

Section 13. DISPOSAL CONSIDERATIONS

RCRA 40 CFR 261 Classification:

Federal, State, and Local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

WASTE DISPOSAL METHOD: Dispose of hazardous waste according to local, state and federal regulations. Disposal method can be land burial or chemical.

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Section 14. TRANSPORT INFORMATION

DOT, IATA, ICAO, and IMO Description:

Basic Description: NA
Proper Shipping Name: NA
Hazard Class: NA
Packaging Group: NA
UN Number: NA
Label Requirements: NA
Max. Shippable Qty.: NA
Packaging: NA
Reportable Quantity (RQ): NA
1996 NAERG Guide#: NA
Limitations: NA

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Section 15. REGULATORY INFORMATION

UNITED STATES FEDERAL REGULATIONS:

MSDS complies with OSHA's Hazard Communication Rule, 29 CFR 1910.1200.

CERCLA/SUPERFUND, 40 CFR 117, 302:

--- None of the chemicals are Superfund hazards ---

SARA SUPERFUND AND REAUTHORIZATION ACT OF 1986 TITLE III Sections 302, 311, 312 and 313:

Section 302 - Extremely hazardous substances (40 CFR 355)

--- None of the chemicals are Section 302 hazards ---

Section 311/312 - Material Safety Data Sheet Requirements (40 CFR 370)

() By our hazard evaluation, this product is non-hazardous

(X) By our hazard evaluation, this product is hazardous. It should be reported under the following

EPA hazard:

(X) Immediate (acute) health hazard

(X) Delayed (chronic) chronic health hazard

() Sudden release of pressure hazard

() Reactive Hazard

Section 313 - List of Toxic Chemicals (40 CFC 372)

This product contains the following chemicals (at levels of 1% or greater) which are found on the 313 list of Toxic Chemicals

<u>CHEMICAL</u>	<u>C.A.S. Number</u>	<u>Weight %</u>
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TOXIC SUBSTANCE CONTROL ACT (TSCA): All substances are TSCA Listed.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA 40 CFR 261) Subpart C&D:

Refer to Section 11. for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (FORMERLY SECTION 307), 40 CFR 116 (FORMERLY SECTION 311)

This product contains the following chemicals which are listed:

<u>CHEMICAL</u>	<u>C.A.S. Number</u>	<u>Weight %</u>
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CLEAN AIR ACT: --- No Information ---

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

This product contains the following ingredients which appear on the California proposition 65 list: CHEMI-

CAL	C.A.S. Number	Weight %
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INTERNATIONAL REGULATIONS:

CANADA WHIMS: NA

EUROPE EINECS NUMBERS: NA

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Section 16. OTHER INFORMATION

LABEL INFORMATION:

European risk and Safety Phrases: NA

European Symbols Needed: NA

Canadian WHIMS Symbols: NA

NFPA HAZARD RATING:

(2) Flammability (3) Health (0) Reactivity

REVISION DATES, SECTIONS, REVISED BY:

08-OCTOBER-98, J. FORBES

ABBREVIATIONS USED IN THIS DOCUMENT:

NE - Not Established, NA - Not Applicable/Not Available, NIF - No Information Found

REFERENCES:

- Code of Federal Regulations (CFR)
- The Sigma-Aldrich Library of Regulatory and Safety Data
- Chemical Guide and OSHA Hazard Communication Standard
- Various Federal, State & Local Regulations

To the best of our knowledge, the information contained herein is accurate. However, neither Circuit Technology Center, Inc. nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.