



MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Epoxy BR 22 Part A

November 29, 2005

Vishay Micro-Measurements
Post Office Box 27777
Raleigh, NC 27611

MSDS # MGM071A

919-365-3800

CHEMTREC 1-800-424-9300 (U.S.)
703-527-3887 (Outside U.S.)

NOTE: CHEMTREC numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

CAS NUMBER	CHEMICAL IDENTITY	%
97-99-4	Heterocyclic Alcohol	<12
14808-60-7	Crystalline Silica	<14
14807-96-6	Talc	<8
25068-38-6	Epoxy Resin	<9
28064-14-4	Epoxy Resin	<25
28064-14-4	Epoxy Resin	<53

WARNING: This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

Inhalation: Yes **Skin:** Yes **Ingestion:** Accidental

Health Hazards (Acute and Chronic): May cause allergic skin reaction in susceptible individuals. May cause sensitization with repeated or prolonged contact.

Carcinogenicity:

NTP:	Yes - Crystalline Silica
IARC Monographs:	Yes - Crystalline Silica
OSHA Regulated:	Yes - Crystalline Silica

NOTE: Overexposure to this material (or its components) may cause reproductive harm based on animal studies.

Signs and Symptoms of Exposure:

INHALATION: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache, or nausea.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause allergic skin reaction. May be harmful if absorbed through skin.

INGESTION: May be harmful if swallowed.

Conditions Generally Aggravated by Exposure: Overexposure may aggravate existing eye, skin, and/or respiratory disorders.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES
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INHALATION: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing give artificial respiration. Consult a physician.

EYE CONTACT: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician.

SKIN CONTACT: In case of contact, immediately flush skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash and thoroughly clean contaminated clothing and shoes before reuse. Consult a physician.

INGESTION: If swallowed, consult a physician. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA
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Flash Point (Method Used): 165°F (74°C) (Estimate)

Flammable limits: LEL: NA UEL: NA

Extinguishing Media: Carbon dioxide, dry chemical, foam, and vaporizing liquid type extinguishing agents have all been found suitable for use on flammable liquid fires of moderate size. Water spray (fog) is particularly effective on fires in flammable liquids and volatile solids having flash points above 100°F (38°C); but with liquids having flash points above 212°F (100°C), frothing may occur.

Special Firefighting Procedures: Remove all ignition sources. Keep personnel not involved with emergency activities away and upwind of fire. Water spray may be ineffective and may cause fire to spread. If water is used, fog nozzles are preferable. Water may be used to cool closed containers in order to prevent pressure build up which may result in an explosion. Use self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards: A straight stream of water will spread fire. A vapor accumulation will flash and/or explode if ignited. Containers may burst explosively if overheated in fire. Cool containers with water, spray or fog. Empty containers may also present a fire and/or explosion hazard due to residual vapor.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Remove all ignition sources. Provide adequate ventilation. Avoid breathing vapors. Shut off source of spill if it can be done safely. Use non-sparking tools. Absorb with inert absorbent material and dispose of properly.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: Respiratory protection may be required if material is used in poorly ventilated areas or if material is sprayed or heated.

Ventilation: Use with adequate ventilation. Provide general dilution or local exhaust ventilation in volume and pattern to keep the air contaminant concentration below the applicable exposure limit of the combined components. All application areas should be ventilated in accordance with applicable OSHA regulations.

Protective Gloves: Impervious gloves required.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other Protective Clothing or Equipment: Impervious clothing and boots as needed to prevent contact. Eyewash station and safety shower should be available.

Work / Hygienic Practices: Wash thoroughly after handling.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Do not store above 120°F (48.9°C). Keep container closed and upright to prevent leakage. Store out of sunlight and away from heat, sparks, flame. Store in a well ventilated area.

Other Precautions: Do not get in eyes. Avoid skin contact. Prevent repeated or prolonged breathing of vapors or spray mist. Avoid contact with, or breathing of vapors during curing process.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
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Boiling Point:	NA
Vapor Pressure (mmHg):	NA
Vapor Density (Air = 1):	NA
Specific Gravity (H₂O = 1):	1.36
Melting Point:	NA
Evaporation Rate (BuAc = 1):	NA
Volatile Organic Compounds:	7% by weight
Solubility in Water:	Insoluble

Appearance and Odor: Grey-brown liquid with slight odor.

SECTION 10: STABILITY AND REACTIVITY DATA
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Stability: Stable.

Conditions to Avoid: Excess heating over long periods of time degrades the resin.

Incompatibility (Materials to Avoid): Strong oxidizing agents, bases, acids, amines.

Hazardous Decomposition or By-products: The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION
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Heterocyclic Alcohol

OSHA PEL:	Not determined
ACGIH TLV:	Not determined
OTHER:	Not determined

Crystalline Silica

OSHA PEL:	0.05 mg/m ³
ACGIH TLV:	0.05 mg/m ³
OTHER:	None

Talc

OSHA PEL:	20 mppcf
ACGIH TLV:	2 mg/m ³
OTHER:	None

Epoxy Resin

OSHA PEL:	Not determined
ACGIH TLV:	Not determined
OTHER:	Not determined

SECTION 12: DISPOSAL CONSIDERATIONS
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Waste Disposal Method: Dispose of in accordance with local, state, and federal environmental regulations.

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Chemical Kit	9	II	UN 3316

(When shipped with Epoxy BR22 Part B.)

SECTION 14: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION:

This product contains a toxic chemical or chemicals (as listed below) subject to the reporting requirements of Section 313 Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

CAS NUMBER	CHEMICAL NAME	% BY WEIGHT
None Listed		

TSCA NOTIFICATION:

All components of this product are listed in the Toxic Substance Control Act Chemical Substance Inventory (TSCA).

SECTION 15: OTHER INFORMATION

To the best of our knowledge, the information provided above meets the requirements of the United States Occupational Safety and Health Act and regulations established under 29 CFR 1910.1200 (g)(2)(c)(1)-(4) for a mixture of hazardous chemicals which has not been tested as a whole. The data provided on this Material Safety Data Sheet is from manufacturers of the original components. Vishay Micro-Measurements specifically disclaims any and all form of liability and/or responsibility for the application of this product.