



# MATERIAL SAFETY DATA SHEET

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT:** Epoxy BR 22 Part B

November 29, 2005

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

**MSDS # MGM072A**

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	%
14808-60-7	Crystalline Silica	<30
14807-96-6	Talc	<13
89-32-7	Pyromellitic Dianhydride	<51

Balance of ingredients are non-hazardous or below the OSHA reporting requirements.

## SECTION 3: HEALTH HAZARD DATA

### Routes of Entry:

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

**Health Hazards (Acute and Chronic):** Repeated or prolonged contact may cause respiratory sensitization. Long term inhalation of crystalline silica dusts may cause lung disease (silicosis). Crystalline silica has been classified as a possible human carcinogen by IARC.

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

**Signs and Symptoms of Exposure:**

**INHALATION:** May cause allergic respiratory reaction.

**EYE CONTACT:** Dust should be considered slight to moderately irritating.

**SKIN CONTACT:** Causes skin irritation.

**INGESTION:** Effects of ingestion are unknown.

**Conditions Generally Aggravated by Exposure:** Pre-existing upper-respiratory disorders.

<b>SECTION 4: EMERGENCY AND FIRST AID PROCEDURES</b>
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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.

<b>SECTION 5: FIRE AND EXPLOSION HAZARD DATA</b>
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**Flash Point (Method Used):** >200°F (93.3°C) (estimate)

**Flammable limits:** LEL: No data UEL: No data

**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 flashpoints 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:** Dust may form explosive mixtures in air.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Steps to be taken if material is released or spilled:** Sweep or vacuum and place into closable container for disposal, avoiding dusty conditions. Wear protective equipment during clean up.

**SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION**

**Respiratory Protection:** Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application unless air monitoring demonstrates that vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use.

**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 applicable areas should be ventilated in accordance with all 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 and before eating, drinking or smoking.

**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 container out of sunlight and away from heat, sparks, and flame. Store in well ventilated area.

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

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Boiling Point:</b>	NA
<b>Vapor Pressure (mmHg):</b>	NA
<b>Vapor Density (Air = 1):</b>	NA
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	2.13
<b>Melting Point:</b>	NA
<b>Evaporation Rate (BuAc = 1):</b>	NA
<b>Volatile Organic Compounds:</b>	0%
<b>Solubility in Water:</b>	Slightly soluble

**Appearance and Odor:** White powder with minimal odor.

<b>SECTION 10: STABILITY AND REACTIVITY DATA</b>
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**Stability:** Stable.

**Conditions to Avoid:** Warm storage; ignition sources and moisture contamination.

**Incompatibility (Materials to Avoid):** Hydrofluoric acid.

**Hazardous Decomposition or By-products:** Irritating and toxic fumes at elevated temperatures.

**Hazardous Polymerization:** Will not occur.

<b>SECTION 11: TOXICOLOGICAL INFORMATION</b>
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Crystalline Silica

OSHA PEL:	0.05 mg/m <sup>3</sup>
ACGIH TLV:	0.05 mg/m <sup>3</sup>
OTHER:	none

Talc

OSHA PEL:	2.0 mg/m <sup>3</sup>
ACGIH TLV:	2.0 mg/m <sup>3</sup>
OTHER:	none

Pyromellitic Dianhydride

OSHA PEL:	15.0 mg/m <sup>3</sup>
ACGIH TLV:	10.0 mg/m <sup>3</sup>
OTHER:	none

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

<b>SECTION 13: TRANSPORTATION INFORMATION</b>
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SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Chemical Kit	9	II	UN 3316

(When shipped with Epoxy BR 22 Part A.)

**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.

<b>CAS NUMBER</b>	<b>CHEMICAL NAME</b>	<b>% BY WEIGHT</b>
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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.