



# MATERIAL SAFETY DATA SHEET

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT:** M-Bond GA-61 (Part B)

November 23, 2005

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

**MSDS # MGM017I**

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	%
89-32-7	Pyromellitic Dianhydride	<87
14807-96-6	Talc	<23
14808-60-7	Quartz (Crystalline Silica)	<1.0

## SECTION 3: HEALTH HAZARD DATA

### Routes of Entry:

**Inhalation:** YES    **Skin:** YES    **Ingestion:** Accidental

**Health Hazards (Acute and Chronic):** Repeated exposure may cause injury to the respiratory tract. Long term inhalation of crystalline silica dusts may cause lung disease (silicosis).

**Carcinogenicity:**  
NTP: See note  
IARC Monographs: See note  
OSHA Regulated: Not listed

**NOTE:** Crystalline silica has been classified as a probable human carcinogen by IARC.

**Signs and Symptoms of Exposure:**

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

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

**SKIN CONTACT:** Causes skin irritation.

**INGESTION:** May cause gastro-intestinal irritation.

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

<b>SECTION 4: EMERGENCY AND FIRST AID PROCEDURES</b>
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**INHALATION:** Move victim out of exposure area immediately. If breathing is difficult give oxygen. If not breathing, give artificial respiration. Consult a physician immediately.

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician immediately.

**SKIN 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)

**Flammable limits:** LEL: Not determined UEL: Not determined

**Extinguishing Media:** Foam, carbon dioxide, dry chemical 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 flashpoints 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 cleanup.

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

**Respiratory Protection:** Wear an appropriate, properly-fitted respirator (NISOH/MSHA approved) during and after application unless air monitoring demonstrated that vapor/mist levels are below applicable limits.

**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.

**Protective Gloves:** Impervious type gloves are required.

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

**Other Protective Clothing or Equipment:** As needed to minimize skin contact.

**Work / Hygienic Practices:** Wash thoroughly after use. Emergency eyewash and safety shower should be available.

**SECTION 8: HANDLING AND STORAGE**

**Precautions to be taken in handling and storing:** Do not store above 120°F (48.9°C). Keep closure tight and container upright to prevent leakage. Store container out of sunlight and away from heat, sparks, and flames. Store only in well-ventilated areas.

**Other Precautions:** Containers may be hazardous when empty. Empty containers may retain product residue (vapor, liquid, or solid).

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Boiling Point:</b>	752°F (>400°C)
<b>Vapor Pressure (mmHg):</b>	N/A
<b>Vapor Density (Air = 1):</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	1.81
<b>Melting Point:</b>	Not known
<b>Evaporation Rate (BuAc = 1):</b>	N/A
<b>Volatile Organic Compounds:</b>	0%
<b>Solubility in Water:</b>	Slightly soluble in water

**Appearance and Odor:** White to tan colored powder; odorless.

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

**Conditions to Avoid:** Open flame, sparks, or high temperature.

**Incompatibility (Materials to Avoid):** Hydrolyzed by water. Reacts with alcohols and alkalis.

**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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Pyromellitic Dianhydride

OSHA PEL:	3 mg/m <sup>3</sup> (Respirable dust)
ACGIH TLV:	3 mg/m <sup>3</sup> (Respirable dust)
OTHER:	LD <sub>50</sub> (ORAL-RAT) 5000 mg/kg

Quartz

OSHA PEL:	0.1 mg/m <sup>3</sup> TWA (Respirable dust)
ACGIH TLV:	0.05
OTHER:	N/E

Talc

OSHA PEL:	N/E
ACGIH TLV:	2.0 mg/m <sup>3</sup>
OTHER:	

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

<b>SECTION 13: TRANSPORTATION INFORMATION</b>
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**SHIPPING NAME**

**CLASS**

**UN NUMBER**

Not Required -- Non-hazardous for transportation.

**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>
None Listed		

**TSCA NOTIFICATION:**

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

**CALIFORNIA PROPOSITION 65 STATUS**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**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.