



# MATERIAL SAFETY DATA SHEET

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT:** M-Bond Curing Agent - Type 15

November 28, 2005

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

**MSDS # MGM006I**

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	%
104-78-9	3-Diethylaminopropylamine	100

## SECTION 3: HEALTH HAZARD DATA

### Routes of Entry:

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

**Health Hazards (Acute and Chronic):** None known.

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

### Signs and Symptoms of Exposure:

**INHALATION:** May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burn to the respiratory tract.

**EYE CONTACT:** May cause severe irritation, and possible eye burns.

**SKIN CONTACT:** Material is corrosive and may cause burns and irritation. Readily absorbed through skin.

**INGESTION:** Harmful if swallowed. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns.

**Conditions Generally Aggravated by Exposure:** Material may act as a sensitizer in susceptible individuals.

#### SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

**INHALATION:** In case of inhalation remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**EYE CONTACT:** Get medical aid immediately. Do not allow victim to rub or keep eyes closed. Extensive irrigation is required (at least 30 minutes).

**SKIN CONTACT:** Immediately flush skin with soap and water for at least 15 minutes while removing contaminated shoes and clothing. Wash contaminated clothing before reuse.

**INGESTION:** Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

#### SECTION 5: FIRE AND EXPLOSION HAZARD DATA

**Flash Point (Method Used):** 127°F (53°C)

**Flammable limits:** LEL: 1.4 UEL: 11.6

**Extinguishing Media:** Carbon dioxide, dry chemical powder or appropriate foam, water spray.

**Special Firefighting Procedures:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Unusual Fire and Explosion Hazards:** Material is combustible. Emits toxic fumes under fire conditions. Vapors may form an explosive mixture with air. Vapors can travel to source of ignition and flash back.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Steps to be taken if material is released or spilled:** Evacuate area. Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Absorb with sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material clean-up is complete.

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

**Respiratory Protection:** NIOSH / MSHA approved respirator.

**Ventilation:** Local exhaust ventilation may be necessary for some operations to prevent the heavier than air vapors from collecting and causing eye, skin, or mucous membrane irritation. If necessary, handle in chemical fume hood. Do not breathe vapor.

**Protective Gloves:** Chemical resistant rubber gloves are recommended.

**Eye Protection:** Safety goggles are recommended.

**Other Protective Clothing or Equipment:** Chemical resistant clothing is recommended. Should have access to safety shower and eyewash station in local area.

**Work / Hygienic Practices:** Wash thoroughly after handling.

## SECTION 8: HANDLING AND STORAGE

**Precautions to be taken in handling and storing:** Do not breathe vapor. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Readily absorbed through skin. Wash thoroughly after handling.

**Other Precautions:** Corrosive. Toxic. Harmful liquid. Keep tightly closed. Keep away from heat and open flame. Store in a cool dry place.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling Point:</b>	318°F (159°C)
<b>Vapor Pressure (mmHg):</b>	19.5 mmHg @ 70°C
<b>Vapor Density (Air = 1):</b>	4.4
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	0.826
<b>Melting Point:</b>	Not known
<b>Evaporation Rate (BuAc = 1):</b>	Not known
<b>Volatile Organic Compounds:</b>	0%
<b>Solubility in Water:</b>	Negligible

**Appearance and Odor:** Colorless liquid.

## SECTION 10: STABILITY AND REACTIVITY DATA

**Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Can autoignite in air at 419°F (215°C).

**Incompatibility (Materials to Avoid):** Acids, acid chlorides, acid anhydrides, strong oxidizing agents, carbon dioxide.

**Hazardous Decomposition or By-products:** Thermal decomposition may produce carbon monoxide, carbon dioxide and nitrogen oxides.

**Hazardous Polymerization:** Will not occur.

<b>SECTION 11: TOXICOLOGICAL INFORMATION</b>
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Diethylaminopropylamine

OSHA PEL:	N/A
ACGIH TLV:	N/A
OTHER:	ORAL RAT LD <sub>50</sub> 1410 mg/kg SKIN RABBIT LD <sub>50</sub> 750 ul/kg

<b>SECTION 12: DISPOSAL CONSIDERATIONS</b>
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**Waste Disposal Method:** This combustible material may be burned in a chemical incinerator equipped with an after burner and scrubber. Observe all local, state, and federal laws.

<b>SECTION 13: TRANSPORTATION INFORMATION</b>
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SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Diethylaminopropylamine (Flammable Liquid & Corrosive)	3/8	II	2684

<b>SECTION 14: REGULATORY INFORMATION</b>
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**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		

**TSCA NOTIFICATION:**

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

<b>SECTION 15: OTHER INFORMATION</b>
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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.