MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: M-Prep Neutralizer 5A

November 22, 2005

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

919-365-3800

MSDS # MGM048L

CHEMTREC 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	%
1336-21-6	Ammonium Hydroxide	<0.02
7601-54-9	Trisodium Phosphate	<0.05
1303-96-4	Sodium Tetraborate Pentahydrate	<0.01
7732-18-5	Distilled Water	99.92

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

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

Health Hazards (Acute and Chronic): Ammonium hydroxide is irritating and corrosive to body tissues and a sensitized person may react to even dilute solutions.

Carcinogenicity:

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

Signs and Symptoms of Exposure:

INHALATION: May cause headache, coughing, and possible lung damage (edema and difficulty in breathing). Excessive inhalation of vapors is irritating to the mucous membranes of the respiratory tract.

EYE CONTACT: May cause possible burning and reddening. Liquid contact to the eye can be severely damaging and can result in loss of vision.

SKIN CONTACT: May cause irritation, reddening, and possible burns.

INGESTION: May cause possible burning sensation. Ingestion is corrosive to the digestive tract.

Conditions Generally Aggravated by Exposure: Preclude from exposure anyone with eye or pulmonary disease.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If breathing is difficult have a trained person administer oxygen. Keep warm and at rest, and contact physician promptly.

EYE CONTACT: Immediately flush with plenty of water for at least 15 minutes while holding the eyelids open. Contact physician, preferably an ophthalmologist.

SKIN CONTACT: Flush with plenty of water while removing contaminated clothing. Wash affected area with soap and water. Launder contaminated clothing before reuse. Seek medical aid if irritation persists.

INGESTION: If conscious, promptly give lots of water, dilute vinegar, or citrus juices to drink, followed by milk. Do NOT induce vomiting. Contact physician.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): NONE

Flammable limits: **LEL**: N/A **UEL**: N/A

Extinguishing Media: Will not support combustion.

Special Firefighting Procedures: Use media appropriate to surrounding fire conditions. Use cold water spray to control vapors and cool fire exposed containers.

Unusual Fire and Explosion Hazards: When heated, material will emit anhydrous ammonia vapor which necessitates respiratory and eye protection for firefighting. Use protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Ventilate area. Absorb with absorbent material. Neutralize with dilute acid. Flush spill area with plenty of water.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: For air contaminants above TLV or permissible limits use NIOSH approved respirator for organic vapors.

Ventilation:

Local Exhaust: Keep below TLV
Mechanical: Keep below TLV
Special: N/A
Other: N/A

Protective Gloves: Neoprene or rubber gloves are recommended.

Eye Protection: Full face shield or chemical safety goggles are recommended.

Other Protective Clothing or Equipment: Rubber apron is recommended. Safety shower and eyewash should be available in work area.

Work / Hygienic Practices: Use good housekeeping practices. Wash thoroughly after use.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Store below 80°F (27°C) in dry place. Keep containers tightly sealed.

Other Precautions: Avoid breathing vapors and direct contact.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	212°F (100°C)
Vapor Pressure (mmHg):	760 mmHg @ 100°C
Vapor Density (Air = 1):	1.0
Specific Gravity (H_2O = 1):	1.0
Melting Point:	32°F (0°C)
Evaporation Rate (BuAc = 1):	<1
Volatile Organic Compounds:	0%
Solubility in Water:	100%

Appearance and Odor: Colorless liquid; mild ammonia odor.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable.

Conditions to Avoid: Adding Sodium Hydroxide to this material and/or heating will volatize Ammonia.

Incompatibility (Materials to Avoid): Acids, peroxides, metallic copper, tin, zinc, and their alloys, halogenated compounds.

Hazardous Decomposition or By-products: None known.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Ammonium Hydroxide

OSHA PEL:	35 ppm (STEL)
ACGIH TLV:	35 ppm (STEL)
OTHER:	N/A

Trisodium Phosphate

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	N/A

Sodium Tetraborate Pentahydrate

OSHA PEL:	Not established
ACGIH TLV:	1 mg/m^3
OTHER:	N/A

Distilled Water

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	N/A

SECTION 12: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Neutralize absorbent material with dilute acid. Dispose of in accordance with local, state, and federal regulations.

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Corrosive Liquids, N.O.S. (Ammonium Hydroxide)	8	III	1760

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		

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.