



MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: PLMH-4R

April 14, 2010

Vishay Measurements Group, Inc.
Post Office Box 27777
Raleigh, NC 27611

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	%
111-42-2	Diethanolamine	60-100
25068-38-6	Bisphenol A	10-30
106-89-8	Epichlorohydrin	<0.01

NOTE: CAS # 25068-38-6 is an epoxy resin produced by the condensation reaction of epichlorohydrin and bisphenol A. The epichlorohydrin is consumed in the process and residual levels are controlled to 2-3 ppm maximum.

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

Inhalation: Yes Skin: Yes Ingestion: Yes

Health Hazards (Acute and Chronic): May cause irritation of skin, eyes and respiratory tract. May cause allergic skin reaction.

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

*NOTE: Epichlorohydrin is listed as a possible carcinogen by NTP and IARC Monographs.

Signs and Symptoms of Exposure:

INHALATION: May cause respiratory tract irritation. Vapors or mists, especially if generated from heating the material or as from exposure in poorly ventilated areas or confined spaces, are irritating and can cause nasal discharge, coughing and discomfort in nose and throat. Chest pain.

EYE CONTACT: Contact may cause eye irritation, corneal damage, swelling, excessive tearing, redness, pain and discomfort.

SKIN CONTACT: Harmful if absorbed through the skin. May cause allergic skin reaction. Moderate skin irritation, pain and discomfort, itching, redness, swelling.

INGESTION: Harmful if swallowed. Moderately toxic. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. May cause drowsiness, faintness, weakness, collapse, and coma.

Conditions Generally Aggravated by Exposure: Pre-existing eye, skin and respiratory disorders. Kidney disorders, dermatitis, liver disorders, asthma.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT: Immediately remove contaminated clothing or shoes. Wipe excess from skin and flush with plenty of water for at least 15 minutes. Do not reuse clothing until thoroughly decontaminated. Get medical attention if symptoms develop and persist.

INGESTION: Seek medical attention immediately. Do NOT induce vomiting unless directed to do so by medical personnel. Give a conscious person several glasses of water. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 280°F (138°C) Closed Cup

Flammable limits: LEL: NA UEL: NA

Extinguishing Media: Use water fog, foam, dry chemical, carbon dioxide.

Special Firefighting Procedures: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full faceshield operated in the positive pressure mode. Move containers from fire area if it can be done safely. Use water to keep fire-exposed containers cool.

Unusual Fire and Explosion Hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Prevent product from entering drains or open waters. Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a closed containers until ready for disposal. Flush area with water to remove trace residue.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: Use a NIOSH approved respirator if ventilation is inadequate.

Ventilation: Use local exhaust ventilation near the source. Use good ventilation, particularly if heated or sprayed.

Protective Gloves: Use impermeable gloves as necessary to prevent skin contact. Polyvinyl chloride gloves.

Eye Protection: chemical splash goggles or safety glass with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Other Protective Clothing or Equipment: Apron or other protective clothing to prevent contact with skin. A safety shower and eye wash station should be within reasonable distance of the work area.

Work / Hygienic Practices: Use good industrial hygiene practices. Wash hands using soap and water after use and before eating, drinking or smoking. Wash contaminated clothing before reuse. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures. Keep containers closed and tightly sealed. Do not expose to direct sunlight.

Other Precautions: Use only with adequate ventilation. Avoid contact with eyes, skin, clothing. Do not taste or swallow. Do not breathe mist or vapors.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
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Boiling Point:	Not known
Vapor Pressure (mmHg):	0.2
Vapor Density (Air = 1):	3.6
Specific Gravity (H₂O = 1):	1.0
Melting Point:	NA
Evaporation Rate (BuAc = 1):	<0.1
Volatile Organic Compounds:	None
Solubility in Water:	Insoluble

Appearance and Odor: Medium viscosity amber liquid with ammonia odor.

SECTION 10: STABILITY AND REACTIVITY DATA
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Stability: Stable at normal conditions.

Conditions to Avoid: Avoid contact with heat, flame, sparks and other sources of ignition. Do not store with incompatible materials.

Incompatibility (Materials to Avoid): Strong oxidizing agents. Strong acids and strong bases, amines, aldehydes, ketones, acrylates, organic anhydrides, organic halides, formates and oxalates.

Hazardous Decomposition or By-products: Nitrogen oxides, carbon dioxide, carbon monoxide, hydrogen chloride, phenolics and irritating organic vapors may be formed during combustion.

Hazardous Polymerization: None under normal processing.

SECTION 11: TOXICOLOGICAL INFORMATION
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Diethanolamine

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	Not established

Bisphenol A

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	ORAL (RAT) LD ₅₀ 11.4 g/kg ORAL (MOUSE) LD ₅₀ 15.6 g/kg SKIN (RABBIT) LD ₅₀ >20 ml/kg

Epichlorohydrin

OSHA PEL: 2 ppm SKIN
ACGIH TLV: 2 ppm SKIN
OTHER: Possible contribution to overall exposure is possible by skin absorption.

SECTION 12: DISPOSAL CONSIDERATIONS

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

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	UN NUMBER
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Not regulated.

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
106-89-8	Epichlorohydrin	<0.01

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. Micro-Measurements specifically disclaims any and all form of liability and/or responsibility for the application of this product.