



MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: PC-10

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	%
101-90-6	Resorcinol Diglycidyl Ether	38.6
25068-38-6	Bisphenol A Diglycidyl Ether Polymer	>34.7
7429-90-5	Aluminum	>18.5
3101-60-8	P-Tertbutylphenyl Glycidyl Ether	0.4-3.8
8016-11-3	Linseed oil, Epoxidized	1.9
108-46-3	Resorcinol	1.6
57-11-4	Stearic Acid	<0.8
7440-21-3	Silicon	<0.2
7439-89-6	Iron	<0.2
106-89-8	Epichlorohydrin	2-3 ppm

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 the 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): Overexposure to this material may cause liver and kidney damage.

Carcinogenicity:

NTP:	See Note
IARC Monographs:	See Note
OSHA Regulated:	NA

NOTE: International Agency for Research on Cancer (IARC) has classified epichlorohydrin as a possible human carcinogen (IARC GROUP 2A) based on the following conclusions: Human Evidence - Inadequate; Animal Evidence - Sufficient. Epichlorohydrin has also been classified by National Toxicology Program (NTP) as an anticipated carcinogen based on sufficient evidence of carcinogenicity from studies in experimental animals.

Signs and Symptoms of Exposure:

INHALATION: Heating can produce vapors that could cause headache, nausea, dizziness, and respiratory irritation. May cause central nervous system depression.

EYE CONTACT: Contains material that may cause severe eye injury if not treated immediately.

SKIN CONTACT: Contains material that may cause skin injury (reddening, swelling). Sensitizer--may cause allergic skin reaction which may be severe in some individuals.

INGESTION: Moderately toxic. Harmful if swallowed.

Conditions Generally Aggravated by Exposure: Pre-existing eye, skin, and respiratory disorders may be aggravated by exposure to this product. Pre-existing skin and respiratory tract allergies may increase the chance of developing increased allergy symptoms.

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: 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 and shoes. Wipe excess from skin and flush with plenty of water for at least 15 minutes. Do not reuse clothing until thoroughly cleaned. Get medical attention.

INGESTION: Do not give liquids if victim is drowsy or unconscious. Get medical attention.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 230°F (110°C) PMCC

Flammable limits: LEL: NA UEL: NA

Extinguishing Media: Use carbon dioxide or dry chemical for small fires; aqueous foam or water for large fires.

Special Firefighting Procedures: Remove all ignition sources. Wear self-contained breathing apparatus and complete personal protective equipment when entering confined areas where potential for exposure to vapors or products of combustion exists. Use water spray to cool fire-exposed containers.

Unusual Fire and Explosion Hazards: Closed containers may rupture when exposed to extreme heat.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Dike spill. Absorb spill with inert material and collect for proper disposal. Flush area with water. Prevent washings from entering waterways.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: Wear a properly fitted NIOSH approved respirator whenever exposure to vapor/mist is likely unless levels are below applicable limits.

Ventilation:

Local Exhaust: Recommended when appropriate to control exposure.

Mechanical: NA

Special: NA

Other: NA

Protective Gloves: Neoprene gloves are recommended.

Eye Protection: Chemical splash goggles.

Other Protective Clothing or Equipment: For operations where contact can occur, coveralls, aprons, and rubber foot covering are recommended. A safety shower and eyewash facility should be available.

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

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Avoid excessive heat. Prevent damage to containers. Store in well ventilated, cool, dry area.

Other Precautions: Avoid contamination of skin. Remove and thoroughly launder contaminated clothing before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	>400°F (204°C)
Vapor Pressure (mmHg):	<1
Vapor Density (Air = 1):	>1
Specific Gravity (H ₂ O = 1):	1.51
Melting Point:	NA
Evaporation Rate (BuAc = 1):	<1
Volatile Organic Compounds:	None
Solubility in Water:	Insoluble

Appearance and Odor: Aluminum colored liquid; mild odor.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable.

Conditions to Avoid: Excess heat. Exposure to amines or amine derivatives.

Incompatibility (Materials to Avoid): Strong oxidizing agents, strong acids, bases, and mercaptans.

Hazardous Decomposition or By-products: Fumes produced when heated to decomposition may include carbon monoxide, carbon dioxide, and aldehydes.

Hazardous Polymerization: Will not occur under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Resorcinol Diglycidyl Ether

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	LD ₅₀ ORAL (RAT) 2570 mg/kg

Bisphenol A Diglycidyl Ether Polymer

OSHA PEL:	Not established
ACGIH TLV:	Not established
OTHER:	LD ₅₀ ORAL (RAT) >5000 mg/kg
	LD ₅₀ SKIN (RABBIT) >6000 mg/kg
	LC ₅₀ INHALATION (RAT) >3466 mg/m ³

PC-10 MSDS (Continued)

Aluminum

OSHA PEL: 15 mg/m³ (TOTAL DUST) 5 mg/m³ (Respirable Dust)
ACGIH TLV: 10 mg/m³ (TOTAL DUST) 5 mg/m³ (Respirable Dust)
OTHER: Not established

P-Tertbutylphenyl Glycidyl Ether

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

Linseed Oil, Epoxidized

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

Resorcinol

OSHA PEL: Not established
ACGIH TLV: 10 ppm (TWA)/20 ppm STEL
OTHER: LD₅₀ ORAL (RAT) 301 mg/kg
LD₅₀ SKIN (RABBIT) 3360 mg/kg

Stearic Acid

OSHA PEL: Not established
ACGIH TLV: 10 mg/m³ (TOTAL DUST)
OTHER: LD₅₀ INTRAVENOUS (MUSKRAT) 23 mg/kg

Silicon

OSHA PEL: 15 mg/m³ (Total Dust) 5 mg/m³ (Respirable Dust)
ACGIH TLV: 10 ppm Total Dust
OTHER: LD₅₀ ORAL (RAT) 3160 mg/kg

Iron

OSHA PEL: 10 mg/m³ (Respirable Dust)
ACGIH TLV: 5 mg/m³ (Respirable Dust)
OTHER: Not established

Epichlorohydrin

OSHA PEL: 2 ppm SKIN
 ACGIH TLV: 0.5 ppm SKIN
 OTHER: Potential 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 regulations.

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Toxic Liquid, Organic, N.O.S. (Resorcinol)	6.1	III	2810

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
7429-90-5	Aluminum	18.5
106-89-8	Epichlorohydrin	2-3 ppm

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.