



# MATERIAL SAFETY DATA SHEET

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT:** H Cement

November 28, 2005

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

**MSDS # MGM063A**

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	%
14808-60-7	Silicon Dioxide	13.4-22.3
7664-38-2	Phosphoric Acid	5.4-9.2
1344-28-1	Aluminum Oxide	2.3-6.7
1308-38-9	Chromium Oxide	<2.3
1333-82-0	Water Soluble Chromium VI Compound	<1.3
1308-14-1	Chromium III Compounds	0.3-2.0

## SECTION 3: HEALTH HAZARD DATA

**Routes of Entry:**

**Inhalation:** Yes    **Skin:**    **Ingestion:** Accidental

**Health Hazards (Acute and Chronic):** May cause irritation or sensitization by skin contact.

**Carcinogenicity:** NTP: See Note  
IARC Monographs: See Note  
OSHA Regulated: See Note

NOTE: This product contains silicon dioxide and chromium VI compounds, both of which are considered carcinogenic by inhalation.

**Signs and Symptoms of Exposure:**

**INHALATION:** May cause respiratory irritation.

**EYE CONTACT:** May cause burns and/or irritation.

**SKIN CONTACT:** Prolonged skin contact may cause burns. Prolonged or repeated skin contact may cause irritation or sensitization.

**INGESTION:** May be harmful if swallowed. May cause internal irritation if ingested.

**Conditions Generally Aggravated by Exposure:** None listed.

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

**INHALATION:** Remove victim to fresh air. Obtain medical attention.

**EYE CONTACT:** Promptly rinse eyes with large amounts of water for 15 to 20 minutes, while lifting upper and lower eye lids. Get medical attention.

**SKIN CONTACT:** Immediately flush skin with water. Remove contaminated clothing and wash before reuse. Severe skin contact may require medical attention.

**INGESTION:** Do NOT induce vomiting. Rinse mouth thoroughly with water. If conscious, give large quantities of water to drink, followed by Milk of Magnesia.

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

**Flash Point (Method Used):** None

**Flammable limits:** LEL: Unknown UEL: Unknown

**Extinguishing Media:** Carbon dioxide, sand, dry chemical.

**Special Firefighting Procedures:** Wear appropriate protective equipment including self-contained breathing apparatus.

**Unusual Fire and Explosion Hazards:** Thermal decomposition will generally release water vapor and some phosphorus and chromium compounds.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Steps to be taken if material is released or spilled:** Absorb onto sand or vermiculite, then scoop up for disposal. Rinse spill area with water.

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

**Respiratory Protection:** Use NIOSH/MSHA approved respirator if dust is being generated.

**Ventilation:** Apply product in area with adequate ventilation.

**Protective Gloves:** Chemical resistant gloves required for prolonged or repeated contact. Use protective gloves made of impermeable material, rubber or plastic.

**Eye Protection:** Wear splash-proof goggles to prevent any possibility of eye contact. An eyewash station should be available in areas where accidental exposure is possible.

**Other Protective Clothing or Equipment:** Wear appropriate protective clothing as needed to prevent skin contact.

**Work / Hygienic Practices:** Use good industrial hygiene practice. Wash hands using soap and water after use and before eating, drinking or smoking. Wash contaminated clothing before reuse.

**SECTION 8: HANDLING AND STORAGE**

**Precautions to be taken in handling and storing:** Use with adequate ventilation. Avoid spilling. Avoid contact with skin, eyes, and clothing.

**Other Precautions:** Keep in a cool, dry, well-ventilated storage area. Keep containers closed when not in use.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Boiling Point:</b>	220°F (104.4°C)
<b>Vapor Pressure (mmHg):</b>	23.7 @ 20°C
<b>Vapor Density (Air = 1):</b>	<1
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	1.6
<b>Melting Point:</b>	Not known
<b>Evaporation Rate (BuAc = 1):</b>	1
<b>Volatile Organic Compounds:</b>	Nil
<b>Solubility in Water:</b>	Miscible

**Appearance and Odor:** Green slurry; no odor.

**SECTION 10: STABILITY AND REACTIVITY DATA**

**Stability:** Stable under normal conditions of use and storage.

**Conditions to Avoid:** None known.

**Incompatibility (Materials to Avoid):** Alkalis and strong oxidizing or reducing agents.

**Hazardous Decomposition or By-products:** Thermal decomposition may yield phosphoric oxide. Direct contact with alkalis may produce hydrogen gas.

**Hazardous Polymerization:** Will not occur.

**SECTION 11: TOXICOLOGICAL INFORMATION**

## Silicon Dioxide

OSHA PEL:	10 mg/m <sup>3</sup>
ACGIH TLV:	0.1 mg/m <sup>3</sup>
OTHER:	None listed

## Phosphoric Acid

OSHA PEL:	1 mg/m <sup>3</sup>
ACGIH TLV:	1 mg/m <sup>3</sup>
OTHER:	None listed

## Aluminum Oxide

OSHA PEL:	15 mg/m <sup>3</sup>
ACGIH TLV:	10 mg/m <sup>3</sup>
OTHER:	None listed

## Chromium Oxide

OSHA PEL:	0.5 mg/m <sup>3</sup>
ACGIH TLV:	0.5 mg/m <sup>3</sup>
OTHER:	None listed

## Water Soluble Chromium VI

OSHA PEL:	0.1 mg/m <sup>3</sup>
ACGIH TLV:	0.05 mg/m <sup>3</sup> (as Chromium)
OTHER:	None listed

## Chromium III Compounds

OSHA PEL:	0.5 mg/m <sup>3</sup>
ACGIH TLV:	0.5 mg/m <sup>3</sup>
OTHER:	None listed

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

<b>SECTION 13: TRANSPORTATION INFORMATION</b>
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SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Corrosive Liquid, N.O.S. (Phosphoric Acid, Chromium Oxide)	8	II	UN 1760

<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
7664-38-2	Phosphoric Acid	5.4-9.2
1308-38-9	Chromium Oxide	<2.3
1333-82-0	Water Soluble Chromium VI Compounds	<1.3
1308-14-1	Chromium III Compounds	0.3-2.0

**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.