



MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: SR-4 Cement

April 13, 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	%
78-93-3	Methyl Ethyl Ketone	63.4
108-10-1	Methyl Isobutyl Ketone	10.1
9003-22-9	Vinyl Chloride Vinyl Acetate Polymer	6.1-10.2
56815-45-3	Polyurethane Polymer	6.1-10.2
64742-89-8	Lactol Spirits	1.9
108-88-3	Toluene	1.8
97-85-8	Isobutyl Isobutyrate	0.5
67-56-1	Methyl Alcohol	2.0

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

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

Health Hazards (Acute and Chronic): Prolonged skin contact with Methyl Ethyl Ketone may defat the skin and cause dermatitis. Chronic exposure may cause central nervous system effects.

SR-4 Cement MSDS (Continued)

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

Signs and Symptoms of Exposure:

INHALATION: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Exposure produces central nervous system depression. Inhalation of high concentrations of Methyl Isobutyl Ketone may cause liver abnormalities and/or visual abnormalities.

EYE CONTACT: Vapors may cause eye irritation. May cause painful sensitization to light. Contact can produce painful irritation, tearing, and eye damage.

SKIN CONTACT: Causes skin irritation with redness, itching, and pain. May be absorbed through the skin with systemic effects. Prolonged or repeated exposure may cause irritation and/or dermatitis.

INGESTION: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Aspiration into the lungs can produce severe lung damage and is a medical emergency. Other symptoms may be similar to those for inhalation.

Conditions Generally Aggravated by Exposure: Person with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of this product.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do not allow victim to rub or keep eyes closed.

SKIN CONTACT: Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

INGESTION: Aspiration hazard. If swallowed, vomiting may occur spontaneously, but do NOT induce. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 16°F (-9°C) CC (for Methyl Ethyl Ketone)

Flammable limits: LEL: 1.4 UEL: 11.4 (for Methyl Ethyl Ketone)

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol resistant foam. Water may be ineffective. For large fires, use water spray, fog or alcohol resistant foam. Do NOT use straight streams of water. Cool containers with flooding quantities of water until well after the fire is out.

Special Firefighting Procedures: Wear a self-contained breathing apparatus in pressure demand mode and full protective gear.

Unusual Fire and Explosion Hazards: Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire highly irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May polymerize explosively when involved in a fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Avoid run off into storm sewers and ditches which lead to waterways. Wear a self-contained breathing apparatus and appropriate personal protection. Scoop up with non-sparking tool, then place into a suitable container for disposal. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as saw dust. Provide ventilation.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air supplied respirator.

WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Ventilation: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion into the general work area. Use explosion proof equipment.

Protective Gloves: Wear impervious gloves.

Eye Protection: Use chemical safety goggles and/or a full faceshield where splashing is possible.

Other Protective Clothing or Equipment: Use protective clothing as need to prevent skin contact. Maintain eye wash and safety shower in work area.

Work / Hygienic Practices: Use good industrial hygiene practices. Wash hands after use and before eating, drinking or smoking.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Keep away from sources of ignition. Store in a cool, dry, well ventilated area away from incompatible substance. Ground and bond containers when transferring material. Use spark proof tools.

Other Precautions: Empty containers retain product residue, liquid and/or vapor, and can be dangerous.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
--

Boiling Point:	≈176°F (80°C)
Vapor Pressure (mmHg):	≈78
Vapor Density (Air = 1):	>1
Specific Gravity (H₂O = 1):	≈0.81
Melting Point:	Unknown
Evaporation Rate (BuAc = 1):	>1
Volatile Organic Compounds:	≈60-70%
Solubility in Water:	Slight

Appearance and Odor: Colorless liquid with aromatic odor.

SECTION 10: STABILITY AND REACTIVITY DATA
--

Stability: Stable under ordinary conditions of use and storage.

Conditions to Avoid: Heat, flames, ignition sources and incompatible materials.

Incompatibility (Materials to Avoid): Oxidizing materials, caustics, amines, ammonia, strong bases, chloroform, chlorosulfonic acid, oleum, potassium-t-butoxide, hydrogen peroxide, nitric acid.

Hazardous Decomposition or By-products: Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION
--

Methyl Ethyl Ketone

OSHA PEL:	200 ppm
ACGIH TLV:	200 ppm (300 ppm STEL)
OTHER:	ORAL (RAT) LD ₅₀ : 2737 mg/kg
	INHALATION (RAT) LC ₅₀ : 23,500 mg/m ³ (8-hour)
	SKIN (RAT) LD ₅₀ : 648 mg/kg

Methyl Isobutyl Ketone

OSHA PEL:	100 ppm
ACGIH TLV:	50 ppm (75 ppm STEL)
OTHER:	NIOSH – 50 ppm (500 ppm ID LH)
	INHALATION (MOUSE) LC ₅₀ : 23,300 mg/m ³
	INHALATION (RAT) LC ₅₀ : 100 gm/m ³
	ORAL (MOUSE) LD ₅₀ : 1900 mg/kg
	ORAL (RAT) LD ₅₀ : 2080 mg/kg

SR-4 Cement MSDS (Continued)

Vinyl Chloride-Vinyl Acetate Polymer

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

Polyurethane Polymer

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

Lactol Spirits

OSHA PEL:	Not established
ACGIH TLV:	300 ppm
OTHER:	Not established

Toluene

OSHA PEL:	200 ppm
ACGIH TLV:	100 ppm
OTHER:	Not established

Isobutyl Isobutyrate

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

Methyl Alcohol

OSHA PEL:	200 ppm
ACGIH TLV:	200 ppm
OTHER:	Not established

Talc

OSHA PEL:	2 mg/m ³ (Respirable dust)
ACGIH TLV:	0.5 mg/m ³ (Respirable dust)
OTHER:	Not established

Isopropyl Alcohol

OSHA PEL:	400 ppm (500 ppm STEL)
ACGIH TLV:	400 ppm (500 ppm STEL)
OTHER:	Not established

SR-4 Cement MSDS (Continued)

Acetone

OSHA PEL: 750 ppm
ACGIH TLV: 750 ppm (500 ppm STEL)
OTHER: Not established

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	PACKING GROUP	UN NUMBER
Flammable Liquid, N.O.S. (Methyl Ethyl Ketone, Methyl Isobutyl Ketone)	3	III	1993

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
78-93-3	Methyl Ethyl Ketone	63.4
108-10-1	Methyl Isobutyl Ketone	10.1
108-88-3	Toluene	1.8
67-56-1	Methyl Alcohol	2.0

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.