



MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: SR-4 Cement Solvent

October 26, 2005

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

MSDS # MGM102A

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	99-100

SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

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

Health Hazards (Acute and Chronic): Harmful or fatal if swallowed. Harmful if inhaled or absorbed through skin. Affects central nervous system. Causes irritation to skin, eyes and respiratory tract. Prolonged skin contact may defat the skin and produce dermatitis. Chronic exposure may cause central nervous system effects.

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

NOTE: Investigated as a mutagen, reproductive effector. Has shown teratogenic effects in laboratory animals.

Signs and Symptoms of Exposure:

INHALATION: Causes irritation to the nose and throat. Concentrations above the TLV may cause headache, dizziness, nausea, shortness of breath, and vomiting. Higher concentrations may cause central nervous system depression and unconsciousness.

EYE CONTACT: Vapors are irritating to the eyes. Splashes can produce painful irritation and eye damage.

SKIN CONTACT: Causes irritation to skin. Symptoms include redness, itching and pain. May be absorbed through the skin with possible systemic effects.

INGESTION: May produce abdominal pain, nausea. Aspiration into lungs can produce severe lung damage and is a medical emergency. Other symptoms are similar to those for inhalation.

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

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally.

SKIN CONTACT: Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes 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) Closed Cup

Flammable limits: LEL: 1.4 UEL: 11.4

Extinguishing Media: Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to non-flammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Special Firefighting Procedures: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. This highly flammable liquid must be kept from sparks, open flame, hot surfaces, and all sources of heat and ignition.

Unusual Fire and Explosion Hazards: Above flash point, vapor-air mixtures are explosive within flammable limits. Vapors can flow along surfaces to distant ignition sources and flash back. Contact with strong oxidizer may cause fire. Sealed containers may rupture when heated. Sensitive to static discharge.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Do not flush to sewer. Place in appropriate container for disposal.

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 of it into the general work area.

Protective Gloves: Wear impervious gloves.

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

Other Protective Clothing or Equipment: Maintain eyewash fountain and safety shower in work area.

Work / Hygienic Practices: Wash hands thoroughly after use and before eating, drinking, or smoking.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be "No Smoking" areas.

Other Precautions: Use non-sparking tools and equipment. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	176°F (80°C)
Vapor Pressure (mmHg):	78 @ 68°F (20°C)
Vapor Density (Air = 1):	2.5
Specific Gravity (H₂O = 1):	0.81
Melting Point:	-123°F (86°C)
Evaporation Rate (BuAc = 1):	2.7
Volatile Organic Compounds:	100%
Solubility in Water:	29g in 100g of water

Appearance and Odor: Clear, colorless liquid; sharp mint-like odor.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable under ordinary conditions of use and storage.

Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

Incompatibility (Materials to Avoid): Oxidizing materials, caustics, amines, ammonia, strong bases, chloroform, chlorosulfonic acid, oleum, potassium-t-butoxide, heat or flame, hydrogen peroxide, nitric acid. Can attack many plastics, resins and rubber.

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
OTHER:	ORAL (Rat) LD ₅₀ : 2737 mg/kg
	INHALATION (Rat) LC ₅₀ : 23,500 mg/m ³ 8 Hour
	SKIN (Rabbit) LD ₅₀ : 6480 mg/kg

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
Ethyl Methyl Ketone	3	II	1193

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	99-100

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.