

# SPI Supplies Division

Structure Probe, Inc.

P.O. Box 656 West Chester, PA 19381-0656 USA

Phone: 1-(610)-436-5400 Fax: 1-(610)-436-5755

spi3spi@2spi.com

http://www.2spi.com

Manufacturer's CAGE: 1P573

# Safety Data Sheet

Date Effective: December 8, 2015

02529-AA

SPI Chem™ Potassium Permanganate

## Section 1: Identification

Chemical Name/Synonyms ..... Potassium Permanganate

Chemical Family ..... Inorganic salt

Relevant Use: ..... Laboratory Chemical

Emergencies

Contacting CHEMTREC:

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Product or Trade Name ..... Potassium Permanganate

CAS #'s ..... 7722-64-7

Chemical Formula.....  $\text{KMnO}_4$

## Section 2: Hazard Identification

**GHS Classification of the substance or mixture**

**(According to Regulation (EC) No 1272/2008)**

Oxidizing solids (Category 2)

Acute toxicity, Oral (Category 4)

Skin Corrosion (Category 1B)

Serious eye damage (Category 1)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

**GHS Label Elements**

**Pictogram**



**Signal Word:** Danger

**Hazard Statements:**

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H410 Very toxic to aquatic life with long lasting effects.

**Precautionary Statements:**

- P210 Keep away from heat.
- P220 Keep/Store away from clothing/ combustible materials.
- P221 Take any precaution to avoid mixing with combustibles.
- P260 Do not breathe dust or mist.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301+P312+P330+P331 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340+P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- P391 Collect spillage.
- P405 Store locked up.
- P501 Dispose of contents / container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS – none.**

**Results of PBT and vPvB assessment:**

- PBT: Not applicable
- vPvB: Not applicable

**Hazardous Material Information System USA**

- Health ..... 1
- Fire Hazard ..... 3
- Reactivity ..... 0
- Personal Protection .....

**NFPA Rating (estimated)**

- Health ..... 1
- Flammability ..... 3
- Reactivity ..... 0
- Special hazard ..... OX

**Section 3: Composition**

Potassium Permanganate, KMnO<sub>4</sub> ~100% CAS#: 7722-64-7 EC#: 231-460-3  
 Index Number: 025-002-00-9

**Section 4: First Aid Measures**

**Description of first aid measures:**  
**General advice:**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled:**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed:**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed:**

The most important known symptoms and effects are described in the labeling in Section 2 and/or in Section 11.

**Indication of any immediate medical attention and special treatment needed:**

No data available.

## ***Section 5: Fire Fighting Measures***

**Suitable Extinguishing media:**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture:**

Potassium oxides, Manganese/ manganese oxides.

**Advice for firefighters:**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information:**

Use water spray to cool unopened containers.

## ***Section 6: Accidental Release Measures***

**Personal precautions, protective equipment and emergency procedures:**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protections see Section 8.

**Environmental precautions:**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up:**

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

**Reference to other sections:**

For disposal see Section 13.

## **Section 7: Handling and Storage**

### **Precautions for safe handling:**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – No smoking. Keep away from heat and sources of ignition. For precautions see Section 2.

### **Conditions for safe storage, including any incompatibilities:**

Keep container tightly closed in a dry and well-ventilated place.

Storage class: Oxidizing hazardous materials.

### **Specific end uses(S):**

Laboratory chemical. No other relevant uses are specified.

## **Section 8: Exposure Controls and Personal Protection**

### **CAS# 7722-64-7 Potassium Permanganate, reagent**

PEL:	Ceiling limit value:	5 mg/m <sup>3</sup> as Mn
REL:	Short-term value:	3 mg/m <sup>3</sup> as Mn
	Long-term value:	1 mg/m <sup>3</sup> as Mn
TLV:	Long-term value:	0.02 mg/m <sup>3</sup> respirable as Mn 0.1 mg/m <sup>3</sup> inhalable fraction as Mn

### **Appropriate engineering controls:**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

### **Personal protective equipment:**

#### Eye protection:

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Glove material - Neoprene, nitrile or polyvinyl chloride gloves conforming to at least EN374.

#### Body protection:

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respiratory type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure:

Prevent further leakage or spillage if safe to do so. Do not let the product enter drains. Discharge into the environment must be avoided.

## **Section 9: Physical and Chemical Properties**

### **Information on basic physical and chemical properties:**

Appearance:	crystalline, dark violet
Odor:	odorless
Odor threshold:	Not determined
pH:	Not determined
Melting point/melting point range:	>240°C (>464°F)
Boiling point/boiling point range:	Not determined
Flash Point:	Not applicable
Flammability (solid, gas):	No data available
Decomposition temperature:	Not determined
Auto igniting:	Not determined
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Oxidizing properties:	The substance is classified as oxidizing with the category 2.
Vapor pressure at 20°C (68°F):	0 hPa
Density at 20°C (68°F):	2.703 g/cm <sup>3</sup> (22.557 lbs/gal)
Relative density:	Not determined
Vapor density:	Not applicable
Evaporation rate:	Not applicable
Partition coefficient (n-octanol/water):	Not determined
Viscosity:	
Dynamic:	Not applicable
Kinematic:	Not applicable
Other information:	No further relevant information available.

## **Section 10: Stability and Reactivity**

**Reactivity:** No data available.

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** No data available.

**Conditions to avoid:** No data available.

**Incompatible materials:** Strong reducing agents, Powdered metals, Peroxide, Zinc, Copper, Alcohols, Hydrogen fluoride, Acids

### **Hazardous decomposition products:**

No dangerous decomposition products known.  
In the event of fire: see Section 5

## **Section 11: Toxicological Information**

### **Information on toxicological effects:**

#### **Acute toxicity**

LD50 Oral – Rat 1,090 mg/kg  
Inhalation: No data available  
Dermal: No data available

#### **Skin corrosion/irritation:**

Skin Rabbit Corrosive – 4 hours

**Serious eye damage/ eye irritation:**

No data available

**Respiratory or skin sensitization:**

Maximization Test (GPMT) Guinea pig Does not cause skin sensitization (OECD Test Guideline 406)

**Germ cell mutagenicity:**

No data available.

**Carcinogenicity:**

Not listed by IARC, ACGIH, NTP, or OSHA as a probable, possible, potential, known, or anticipated carcinogen.

**Reproductive Toxicity:**

No data available.

**Specific target organ toxicity – single exposure or repeated exposure:**

No data available

**Aspiration hazard:**

No data available.

**Additional information:**

RTECS: DS6475000.

Contact with skin can cause: Oedema, Necrosis

Effects due to ingestion may include: Methemoglobinemia, Psychological disturbances, Vomiting, Nausea, Diarrhea

**Section 12: Ecological Information****Toxicity:**

Toxicity to fish

LC50 – Oncorhynchus mykiss (rainbow trout) 0.3 – 0.6 mg/l – 96.0 hours

Toxicity to daphnia and other aquatic invertebrates:

EC50 – Daphnia magna (Water flea) 0.084 mg/l – 48 hours

**Persistence and degradability:**

The methods for determining biodegradability are not applicable to inorganic substances.

**Bioaccumulative Potential:**

Bioaccumulation Lamellibranchia (mussel)

Bioconcentration factor (BCF): <10,000

Remarks: Can accumulate in aquatic organisms.

**Mobility in Soil:**

No data available.

**Results of PBT and vPvB assessment:**

PBT/vPvB assessment not applicable.

**Other adverse effects:**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

**Section 13: Disposal Considerations**

Waste treatment methods:

Product:

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging:  
Dispose of as unused product.

## **Section 14: Transport Information**

### DOT (US)

UN Number: 1490  
Class: 5.1  
Packing Group: II  
Proper shipping name: Potassium permanganate  
Reportable Quantity (RQ): 100 lbs

### IATA

UN Number: 1490  
Class: 5.1  
Packing Group: II  
Proper shipping name: Potassium permanganate

### IMDG

UN Number: 1490  
Class 5.1  
Packing Group: II  
EMS-No: F-H, S-Q  
Proper shipping name: POTASSIUM PERMANGANATE  
Marine pollutant: yes

## **Section 15: Regulatory Information**

### **TSCA Inventory:**

This chemical is listed on the TSCA Inventory list.

### **SARA 302 Components:**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### **SARA 313 Components:**

The following components are subject to reporting levels established by SARA Title III, Section 313:

Potassium permanganate	CAS# 7722-64-4	Revision Date: 1993-04-24
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### **SARA 311/312 Hazards:**

Reactivity Hazard, Acute Health Hazard

### **State Right-to-Know Lists:**

Potassium permanganate, CAS# 7722-64-7, is listed on the Massachusetts, Pennsylvania, and New Jersey Right-to-Know lists.

### **California Prop. 65 Components:**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## **Section 16: Other Information**

### **Disclaimer of Liability:**

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues or fluids.

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