

# SAFETY DATA SHEET

## POTASSIUM PERMANGANATE CRYSTALS

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Potassium Permanganate Crystals

**Catalog Numbers:** SO-884

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

H272-Oxidizing solids: 2

H302-Acute toxicity, oral: 4

H314-Skin corrosion/irritation: 1B

H318-Serious eye damage/eye irritation: 1

H335-Specific target organ toxicity, single exposure; Respiratory tract irritation: 3

H361-Reproductive toxicity: 2

H373-Specific target organ toxicity, repeated exposure: 2

H400-Hazardous to the aquatic environment, acute toxicity: 1

H410-Hazardous to the aquatic environment, chronic toxicity: 1

#### Pictograms or Hazard symbols and Hazard statement(s):



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  
H335-May cause respiratory irritation  
H361-Suspected of damaging fertility or the unborn child  
H373-May cause damage to organs through prolonged or repeated exposure (target organs: brain)  
H400-Very toxic to aquatic life  
H410-Very toxic to aquatic life with long lasting effects

## **Precautionary Statements:**

P201-Obtain special instructions before use.  
P202-Do not handle until all safety precautions have been read and understood.  
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/fume/gas/mist/vapours/spray.  
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264-Wash thoroughly after handling.  
P270-Do not eat, drink, or smoke when using this product.  
P271-Use only outdoors or in a well-ventilated area.  
P273-Avoid release to the environment.  
P280-Wear protective gloves/protective clothing/eye protection/face protection.  
P281-Use personal protective equipment as required.  
P301+P312-If swallowed: Call a Poison Center or doctor/physician if you feel unwell.  
P301+P330+P331-If swallowed: 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-If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338-If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313-If exposed or concerned: Get medical advice/attention.  
P310-Immediately call a Poison Center or doctor/physician.  
P312-Call a Poison Center or doctor/physician if you feel unwell.  
P314-Get medical advice/attention if you feel unwell.  
P330-Rinse mouth.  
P363-Wash contaminated clothing before reuse.  
P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam for extinction.  
P391-Collect spillage.  
P403+P233-Store in a well-ventilated place. Keep container tightly closed.  
P405-Store locked up.  
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7722-64-7	Potassium Permanganate	≥99

### Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention.

**Oral Exposure:** If swallowed, seek immediate medical advice. Do NOT induce vomiting.

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

**Hazardous Combustion Products:** Potassium oxides, manganese/manganese oxides, heavy metal oxides, irritating fumes and gases.

**Flash Point:** Not available

**Autoignition Temperature:** Not applicable

**Explosion Limits, Lower:** Not available

**Upper:** Not available

**NFPA Rating:** (estimated) Health: 3; Flammability: 0; Instability: 2

### Section 6 - Accidental Release Measures

**Procedure(s) of Personal Precaution(s):**

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Avoid dust formation.

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Avoid dust formation. Do not release to the environment. Do not release to drains. This material is very toxic to aquatic life with long lasting effects.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Ensure adequate ventilation. Wash thoroughly after handling. Avoid generating dusty conditions. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Store in a tightly closed container at room temperature. Keep away from combustible materials. Keep away from incompatible materials.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

### Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Potassium Permanganate CAS#7722-64-7	0.02 mg/m <sup>3</sup> TWA 0.1 mg/m <sup>3</sup> TWA	1 mg/m <sup>3</sup> TWA 3 mg/m <sup>3</sup> STEL 500 mg/m <sup>3</sup> IDLH	5 mg/m <sup>3</sup> Ceiling

**OSHA Vacated PELs:** Potassium Permanganate: 5 mg/m<sup>3</sup> Ceiling

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** Dark purple

**Odor:** Odorless

**Vapor Pressure:** Not available

**Odor threshold:** Not available

**Vapor Density:** Not applicable

**pH:** approx. 8 (16 g/L at 20°C)

**Relative density:** Not available

**Melting point/freezing point:** 240°C

**Solubility:** Soluble in water  
**Boiling Point:** Not available  
**Flash point:** Not available  
**Evaporation Rate:** Not applicable  
**Flammability (solid, gas):** Not available  
**Partition coefficient: n-octanol/water:** Not available  
**Auto-ignition temperature:** Not applicable  
**Decomposition temperature:** 240°C  
**Viscosity:** Not applicable  
**Specific Gravity/Density:** 2.700 g/cm<sup>3</sup>

#### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Oxidizer: Contact with combustible/organic material may cause fire.  
**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, freezing, and combustible material. Open flame and hot surfaces.  
**Incompatibilities with Other Materials:** Reducing agents, strong acids, and combustible material.  
**Hazardous Decomposition Products:** Potassium oxides, manganese/manganese oxides, heavy metal oxides, irritating fumes and gases.

#### Section 11 - Toxicological Information

**CAS#7722-64-7 Potassium Permanganate: RTECS#: SD6475000**

LD50 Oral: 750 mg/kg (rat)  
LD50 Dermal: >2000 mg/kg (rat)  
LC50 Inhalation: Not available

**Carcinogenicity:** Potassium Permanganate CAS#7722-64-7 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

**Epidemiology:** Not available  
**Teratogenicity:** Not available  
**Reproductive Effects:** Suspected of damaging fertility or the unborn child.  
**Developmental Effects:** Not available  
**Neurotoxicity:** Not available  
**Mutagenicity:** Not available  
**Specific Target Organ Toxicity, Single Exposure:** Respiratory system and central nervous system.  
**Specific Target Organ Toxicity, Repeated Exposure:** Brain.

Note: Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Strong caustic effect of skin and mucous membranes. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal burns and perforation of the digestive tract. Causes serious eye damage.

**The toxicological properties of this material have not been thoroughly investigated.**

## Section 12 - Ecological Information

**Ecotoxicity:** Do not release to the environment. Do not release to drains. Very toxic to aquatic life with long lasting effects. May cause long-term adverse effects in the environment.

**CAS#7722-64-7 Potassium Permanganate:**

LC50, freshwater fish: 0.47 mg/L 96h semi-static (*poecilia reticulata*)(guppy)

EC50, freshwater algae: 0.41 mg/L 72h

ErC50, freshwater algae: 0.8 mg/L 72h static (*desmodesmus subspicatus*)(green algae)

EC50, water flea: 0.06 mg/L 48h semi-static (*daphnia magna*)

EC50, bacteria: 164 mg/L 180min static (activated sludge)

**Persistence and degradability:** Not available.

**Bio-accumulative potential:** Not available.

**Mobility:** Will likely be mobile in the environment due to its water solubility.

## Section 13 - Disposal Considerations

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

## Section 14 – Transport Information

**DOT**

Proper shipping name: POTASSIUM PERMANGANATE

UN1490

PG II

Hazard class 5.1

## Section 15 - Regulatory Information

### Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information
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**SDS Creation Date:** 8-16-18

**Revision #1.** 5-26-22

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