

Safety Data Sheet

Potassium Permanganate, 0.15% Acidified

Section 1 - Chemical Product and Company Identification

SDS Name: Potassium Permanganate, 0.15% Acidified

Catalog Numbers: SO-248

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

H290-Corrosive to metals: 1

H314-Skin corrosion/irritation: 1A

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 (target organs: brain)

H410-Hazardous to the aquatic environment, long-term hazard: 1

Pictograms or Hazard Symbols and Hazard Statement(s):



Signal Word: Danger

Hazard Statements:

H290-May be corrosive to metals

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
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.
P234-Keep only in original packaging.
P260-Do not breathe dust/fume/gas/mist/vapours/spray.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
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.
P301+P330+P331-If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353-If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340-If inhaled: Remove person to fresh air and keep 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/doctor.
P312-Call a Poison Center/doctor if you feel unwell.
P314-Get medical advice/attention if you feel unwell.
P363-Wash contaminated clothing before reuse.
P390-Absorb spillage to prevent material damage.
P391-Collect spillage.
P403+P233-Store in a well-ventilated place. Keep container tightly closed.
P405-Store locked up.
P406-Store in a corrosion resistant container with a resistant inner liner.
P501-Dispose of contents/container in accordance with all local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7722-64-7	Potassium Permanganate	0.15 w/v
7664-93-9	Sulfuric Acid	0.15 v/v
7732-18-5	Water	Balance

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. Obtain immediate medical attention.

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

Oral Exposure: If swallowed, clean mouth with water and seek immediate medical advice. Do NOT induce vomiting.

Inhalation Exposure: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Seek immediate medical attention.

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, or alcohol-resistant foam. Do not put water on leaked material. Do not use water to extinguish.

Hazardous Combustion Products: Sulfur oxides, potassium oxides, manganese/manganese oxides, hydrogen gas, hydrogen chloride fumes, irritating and toxic fumes and gases.

Flash Point: Not applicable

Autoignition Temperature: Not available

Explosion Limits, Lower: Not available

Upper: Not available

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 1

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. Do not breathe fume/mist/vapors/spray.

Methods for Cleaning up: Neutralize spilled material with alkaline material (soda ash, lime). Absorb with sand, earth, or vermiculite. Do not use water. Carefully sweep up and containerize for proper disposal. 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. Wash thoroughly after handling. Use only under a chemical fume hood. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Do not breathe fume/mist/vapors/spray. Store in a cool, dry, and well-ventilated area. Keep in a tightly closed and non-metal container. Protect from direct sunlight. Keep away from incompatible materials. Residue in empty containers may still be hazardous.

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 chemical-resistant 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 - TLV	NIOSH - IDLH	OSHA - Final PELs
Potassium Permanganate CAS#7722-64-7	0.02 mg/m3 TWA 0.1 mg/m3 TWA	1 mg/m3 TWA 3 mg/m3 STEL 500 mg/m3 IDLH	5 mg/m3 Ceiling
Sulfuric Acid CAS#7664-93-9	0.2 mg/m3 TWA	1 mg/m3 TWA 15 mg/m3 IDLH	1 mg/m3 TWA

OSHA Vacated PELs: Potassium Permanganate: 5 mg/m3 Ceiling
Sulfuric Acid: TWA 1 mg/m3

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Dark Purple

Odor: Odorless

Vapor Pressure: Not available

Odor Threshold: Not available
Vapor Density: Not available
pH: Approx. 1.4
Relative Density: Not available
Melting point/freezing point: Not available
Solubility: Soluble in water
Boiling Point: Not available
Flash Point: Not available
Evaporation Rate: Not available
Flammability (solid, gas): Not available
Partition coefficient: n-octanol/water: Not available
Autoignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity: Not available
Specific Gravity/Density: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable in closed containers under normal storage and handling conditions.

Conditions to Avoid: Incompatible materials, ignition sources, freezing, and excess heat. Avoid direct sunlight and hot surfaces/open flame. Avoid combustible materials.

Incompatibilities with other materials: Water, organic materials, strong acids, strong bases, metals, alcohols, strong oxidizing agents, reducing agents, potassium chlorate, potassium perchlorate, sodium, lithium, halogens, metal acetylides, oxides, hydrides, cyanides, finely powdered metals, metal oxides, amines, hydroxides, cyanides, sulfides, sulfites, formaldehyde, chlorates, carbides, carbonates, picrates, alkali compounds, nitrates, and combustible material.

Hazardous Decomposition Products: Sulfur oxides, potassium oxides, manganese/manganese oxides, hydrogen gas, hydrogen chloride fumes, irritating and toxic 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.

CAS#7664-93-9 Sulfuric Acid: RTECS#: WS5600000

LD50 Oral: 2140 mg/kg (rat)

LD50 Dermal: Not available

LC50 Inhalation: 0.375 mg/L (rat) 4h

Investigated as a tumorigen, mutagen, and reproductive effector.

Carcinogenicity: Sulfuric Acid CAS#7664-93-9 is not listed by OSHA. Sulfuric Acid ("strong inorganic acid mists containing sulfuric acid") is listed by IARC (Group 1,

Carcinogenic to Humans), NTP (Known Carcinogen), ACGIH (A2, Suspected Human Carcinogen) and by California Prop. 65 as a carcinogen.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.

Teratogenicity: Not available.

Reproductive Effects: Suspected of damaging fertility and/or the unborn child.

Developmental Effects: Not available.

Neurotoxicity: Not available.

Mutagenicity: Not available.

Specific Target Organ Toxicity, Single Exposure: Respiratory system.

Specific Target Organ Toxicity, Repeated Exposure: Brain.

Symptoms associated with exposure: This material causes burns by all exposure routes. Corrosive material. Contact with eyes may cause serious eye damage including burns, corneal lesions, blindness, blurred vision, redness, pain, watering, and severe tissue burns. Ingestion may cause severe burns, swelling, stomach pains, nausea, vomiting, diarrhea, and severe damage to the delicate tissue and danger of perforation. Inhalation of liquid aerosols and mists causes severe burns to the mucous membranes and upper respiratory tract. May cause coughing, nose/throat irritation, labored breathing, lung edema. Skin contact may cause severe skin burns, redness, pain, blistering, and scabs. Strong inorganic acid mists containing sulfuric acid can cause cancer. Long term exposure to mist or vapors may damage teeth.

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. pH shift may cause a harmful effect to 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

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

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

EC50, freshwater algae: 0.8 mg/L 72h static (*desmodesmus subspicatus*)(green algae)

CAS#7664-93-9 Sulfuric Acid:

LC50, freshwater fish: >500 mg/L 96h static (*brachydanio rerio*)

LC50, freshwater fish: 42 mg/L (*gambusia affinis*)(western mosquito fish)

LC50, flounder: 100-330 mg/L 48h (*platichthys flesus*)(European flounder)

LC50, common shrimp: 70-80 mg/L 48h (*crangon*)

EC50, water flea: >100 mg/L 48h static (*daphnia magna*)

EC50, algae: >100 mg/L 72h static (*desmodesmus subspicatus*)(green algae)

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: Corrosive liquid, Acidic, Inorganic, N.O.S (Sulfuric Acid Solution)

UN3264

PG II

Hazard Class 8

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

SDS Creation Date: 2-7-23

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Rowley Biochemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, howsoever arising, even if Rowley Biochemical, Inc. has been advised of the possibility of such damages.