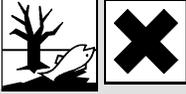


Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	<p>Environmental hazard. This material is toxic to aquatic organisms and may cause long term adverse effects to the aquatic environment. Harmful compound, minimize exposure. Irritating to skin, eyes, and the respiratory system. Reproductive effector. Moisture sensitive material.</p>	

Section I. Chemical Product and Company Identification

Chemical Name	Potassium Permanganate Solution (contains K ₂ CO ₃ , NaOH) [for TLC Stain]		
Catalog Number	P1483	Supplier	TCI America 9211 N. Harbortgate St. Portland OR 1-800-423-8616
Synonym	Permanganic acid (HMnO ₄), potassium salt (1:1) (CA INDEX NAME)		
Chemical Formula	KMnO ₄		
CAS Number	7722-64-7 (Potassium Permanganate) 584-08-7 (Potassium Carbonate) 1310-73-2 (Sodium Hydroxide) 7732-18-5 (Water)	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Potassium Permanganate Solution (contains K ₂ CO ₃ , NaOH) [for TLC Stain]	7722-64-7 (Potassium Permanganate) 584-08-7 (Potassium Carbonate) 1310-73-2 (Sodium Hydroxide) 7732-18-5 (Water)	Not available.	Not available.	Rat LD ₅₀ (oral) 750 mg/kg Mouse LD ₅₀ (oral) 2157 mg/kg Guinea Pig LD ₅₀ (oral) 1151 mg/kg

Section III. Hazards Identification

Acute Health Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	<p>CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY: Reproductive effects. Rat TDLo Intratesticular 400 mg/kg male 1 day prior to mating TOXIC EFFECTS: Effects on Fertility - Male fertility index Mouse TDLo Oral 513 mg/kg male 5 days prior to mating TOXIC EFFECTS: Paternal Effects - Spermatogenesis Gerbil - TDLo Intratesticular 25 mg/kg male 1 day prior to mating TOXIC EFFECTS: Effects on Fertility - Male fertility index Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.</p>

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.
Combustion Products	These products include toxic carbon oxides (CO, CO ₂), metallic oxides.		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Environmentally hazardous material. Harmful material. Irritating material. This material is a reproductive effector. Moisture sensitive material. Absorb with an inert material and put the spilled material in an appropriate waste disposal. Consult federal, state, and/or local authorities for assistance on disposal.
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Section VII. Handling and Storage

Handling and Storage Information	ENVIRONMENTAL HAZARD. HARMFUL. IRRITANT. REPRODUCTIVE EFFECTOR. MOISTURE SENSITIVE. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe gas/fumes/ vapor/spray. Always store away from incompatible compounds such as oxidizing agents, reducing agents.
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Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.
Personal Protection	Splash goggles. Lab coat. Vapor respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.
	
Exposure Limits	Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid. (Dark violet.)	Solubility	Not available.
Specific Gravity	1.06 (water=1)		
Molecular Weight	158.03	Partition Coefficient	Not available.
Boiling Point	Not available.	Vapor Pressure	Not available.
Melting Point	Not available.	Vapor Density	Not available.
Refractive Index	Not available.	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light. Moisture sensitive.
Incompatibilities	Reactive with oxidizing agents, reducing agents.

Section XI. Toxicological Information

RTECS Number	SD6475000
Routes of Exposure	Eye Contact. Ingestion. Inhalation.
Toxicity Data	Rat LD ₅₀ (oral) 750 mg/kg Mouse LD ₅₀ (oral) 2157 mg/kg Guinea Pig LD ₅₀ (oral) 1151 mg/kg

(contains K₂CO₃, NaOH) [for TLC Stain]

Chronic Toxic Effects	<p>CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY: Reproductive effects. Rat TDLo Intratesticular 400 mg/kg male 1 day prior to mating TOXIC EFFECTS: Effects on Fertility - Male fertility index Mouse TDLo Oral 513 mg/kg male 5 days prior to mating TOXIC EFFECTS: Paternal Effects - Spermatogenesis Gerbil - TDLo Intratesticular 25 mg/kg male 1 day prior to mating TOXIC EFFECTS: Effects on Fertility - Male fertility index Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.</p>
Acute Toxic Effects	<p>Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.</p>

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.
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Section XIV. Transport Information

DOT Classification	DOT CLASS 9: Miscellaneous
PIN Number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Packing Group (PG)	III
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	On DSL.
EINECS Number (EEC)	231-760-3
EEC Risk Statements	R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R51- Toxic to aquatic organisms. R53- May cause long-term adverse effects in the aquatic environment.
Japanese Regulatory Data	ENCS No. 1-446

Section XVI. Other Information

Version 1.0
Validated on 3/25/2009.
Printed 3/25/2009.

Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.