Safety Data Sheet

Potassium Permanganate

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name:	Potassium Permanganate
Recommended Use:	Science education applications
Synonyms:	Permanganic acid, potassium salt
Distributor:	Carolina Biological Supply Company 2700 York Road, Burlington, NC 27215 1-800-227-1150
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec:	800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER

May intensify fire; oxidizer. Harmful if swallowed. Toxic to aquatic life.

GHS Classification:
Oxidizing Solid Category 2, Hazardous to the aquatic environment - Acute Category 2, Acute Toxicity - Oral Category 4

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Potassium Permanganate	7722-64-7	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation:	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact:	After contact with skin, wash immediately with plenty of water.
Ingestion:	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5 Firefighting Procedures

Extinguishing Media:	Water spray
Fire Fighting Methods and Protection:	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards:	Product is a strong oxidizer. Contact with combustible materials, flammable materials, or powdered metals can cause fire or explosion. Can react violently with reducing agents.
Hazardous Combustion Products:	Potassium Oxide, Metal Oxides,

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Avoid the generation of dusts during clean-up.

Methods for Clean-up Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Do not allow the spilled product to enter public drainage system or open waterways. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

Section 7 Handling and Storage

Handling: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep/Store away from clothing/…/combustible materials. Take any precaution to avoid mixing with combustibles. Wash thoroughly after handling. Do no eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Keep container tightly closed in a cool, well-ventilated place.

Storage: Store in a secure area suitable for oxidizing agents. Store away from flammable materials, organic solvents and combustible materials.

Storage Code: Yellow - Reactive. Store separate and away from incompatible material.

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Potassium Permanganate	0.02 mg/m3 TWA (as Mn, listed under respirable fraction); 0.1 mg/m3 TWA (as Mn)	N/A	N/A	N/A

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use. Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Nitrile

Section 9 Physical Data

Formula: KMnO4
Molecular Weight: 158.04
Appearance: Purple Crystalline Solid
Odor: None
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: No data available
Flash Point: No data available
Flammable Limits in Air: N/A

Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): 5.4
Specific Gravity: 2.7
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 0% (21°C)

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Section 10 Reactivity Data

Reactivity:	Not generally reactive under normal conditions.
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures.
Incompatible Materials:	Alcohols, Metals (ferrous), Metals (powdered), Metal Salts, Peroxides, Strong acids
Hazardous Decomposition Products:	Metal Oxides,
Hazardous Polymerization:	Will not occur

Section 11 Toxicity Data

Routes of Entry	Inhalation, ingestion, eye or skin contact.
Symptoms (Acute):	Gastrointestinal,, Respiratory Irritation, Eye Irritation
Delayed Effects:	No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Potassium Permanganate	7722-64-7	Oral LD50 GUINEA PIG 1151 mg/kg Oral LD50 Mouse 2157 mg/kg	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available				

Chronic Effects:

Mutagenicity:	No evidence of a mutagenic effect.
Teratogenicity:	No evidence of a teratogenic effect (birth defect).
Sensitization:	No evidence of a sensitization effect.
Reproductive:	No evidence of negative reproductive effects.
Target Organ Effects:	
Acute:	See Section 2
Chronic:	N/A

Section 12 Ecological Data

Overview:	Severe ecological hazard. This product may be toxic to plants and/or wildlife. Keep out of waterways.
Mobility:	No data
Persistence:	No data
Bioaccumulation:	No data
Degradability:	No data
Other Adverse Effects:	No data

Chemical Name	CAS Number	Eco Toxicity
Potassium Permanganate	7722-64-7	96 HR LC50 CARASSIUS AURATUS 3.3 - 3.93 MG/L [STATIC] 96 HR LC50 CYPRINUS CARPIO 2.97 - 3.11 MG/L 96 HR LC50 CYPRINUS CARPIO 3.16 - 3.77 MG/L 96 HR LC50 LEPOMIS MACROCHIRUS 2.3 MG/L [FLOW-THROUGH] 96 HR LC50 LEPOMIS MACROCHIRUS 1.8 - 5.6 MG/L [STATIC] 96 HR LC50 LEPOMIS MACROCHIRUS 2.7 MG/L 96 HR LC50 ONCORHYNCHUS MYKISS 1.08 - 1.38 MG/L 96 HR LC50 ONCORHYNCHUS MYKISS 0.769 - 1.27 MG/L [STATIC]

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Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Waste Disposal Code(s): D001

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
UN1490, Potassium permanganate, 5.1, II

Air - IATA Proper Shipping Name:
UN1490, Potassium permanganate, 5.1, II

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Potassium Permanganate	7722-64-7	No	100 lb RQ	100 lb final RQ; 45.4 kg final RQ	No	No

California Prop 65: No California Proposition 65 ingredients

Section 16 Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health