Potassium Permanganate,

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: **Potassium Permanganate,**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **S25497A**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Oxidizing
Oxidizing solids, category 2

Irritant
Acute toxicity (oral, dermal, inhalation), category 4

Environmentally Damaging
Chronic hazards to the aquatic environment, category 1
Acute hazards to the aquatic environment, category 1

Corrosive
Skin corrosion, category 1B
Serious eye damage, category 1

Oxidizing Solids 2.
Ac. Oral Tox. 4.
Skin Corr. 1B.
Eye. Damage 1.
Aq. AcTox. 1.
Aq. ChrTox. 1.

Signal word: Danger

Hazard statements:

May intensify fire; oxidizer.
Harmful if swallowed.
Causes severe skin burns and eye damage.
Causes serious eye damage.

Very toxic to aquatic life with long lasting effects.

Precautionary statements:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
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.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
Immediately call a POISON CENTER or doctor/physician.
Wash contaminated clothing before reuse.
In case of fire: Use agents recommended in section 5 for extinction.
Collect spillage.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
Continue rinsing.
Store in a dry place.
Dispose of contents and container as instructed in Section 13.

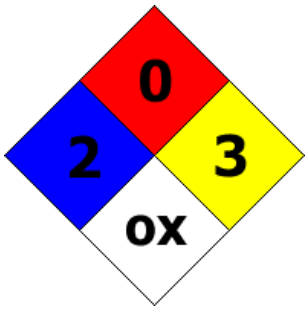
Other Non-GHS Classification:

WHMIS

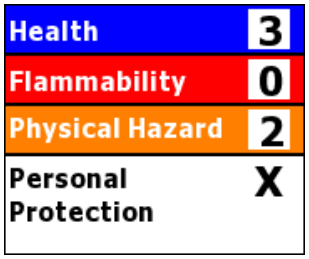
C 

D2B 

NFPA/HMIS



NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:

CAS 7722-64-7	Potassium Permanganate	>95 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position. Seek medical assistance if cough or other symptoms appear.

After skin contact:

Immediately enter emergency shower rinsing while removing contaminated clothing and shoes. Immediately seek medical attention. Wash hands and exposed skin with soap and plenty of water.

After eye contact:

Immediately seek medical attention. Continue rinsing eyes during transport to the hospital. Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.

After swallowing:

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately seek medical attention.

Most important symptoms and effects, both acute and delayed:

Irritation. Shortness of breath. Headache. Nausea. Dizziness. Central Nervous System impairment.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

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

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Contact with other material may cause a fire. Some oxidizers may react explosively with hydrocarbons. Containers may explode when heated. Combustible dust formation is a risk. Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid dust formation. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet - brushing and place in container for disposal according to local regulations (see section 13). Wear protective eyeware, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wash hands after handling. Avoid contact with skin and eyes. Discard contaminated materials. Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Protect from freezi ng and physical damage. Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection




Control Parameters:	7722-64-7, Potassium permanganate, C 5.000000 mg/m3 USA. OSHA. 7722-64-7, Potassium permanganate, TWA 0.200000 mg/m3 USA. ACGIH. 7722-64-7, Potassium permanganate, TWA 1.000000 mg/m3 USA. NIOSH.
Appropriate Engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment. Use only under chemical fume hood.
Protection of skin:	Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.
Eye protection:	Tightly fitting safety goggles and faceshield (8 - inch minimum) are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures: Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before rewearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Dark brown solid	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Odorless	**Vapor pressure at 20°C**:	Not Determined
Odor threshold:	Not Determined	**Vapor density**:	Not Determined
pH-value:	7.2 - 9.7 at 20 g/l at 20 °C	**Relative density**:	2.710 g/cm3
Melting/Freezing point:	> 240 °C	**Solubilities**:	Soluble in water: 65.1 g/l at 20 °C.
Boiling point/Boiling range:	Not Determined	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	> 240 °C
Flammability (solid, gaseous):	Not Determined	**Viscosity**:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density at 20°C:	Not Determined		

SECTION 10: Stability and reactivity

Reactivity:

Oxidizing Solid. Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials. Moisture , excess heat, and dust formation. Oxalates slowly corrode steel.

Incompatible materials:

Strong reducing agents, Powdered metals, Peroxides, Zinc, Copper, Alcohols, Hydrogen fluoride, Acids, Sulfuric acid.

Hazardous decomposition products:

Potassium oxides, Manganese, or Manganese oxides. Formic acid.

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

7722-64-7 LD50 Oral - Rat - 1,090 mg/kg

Chronic Toxicity: No additional information.

Corrosion Irritation:

Dermal:

7722-64-7 Skin - Rabbit Result : Corrosive - 4 h

Sensitization: No additional information.
Numerical Measures: No additional information.
Carcinogenicity: No additional information.
Mutagenicity: No additional information.
Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

7722-64-7: LC50 - Oncorhynchus mykiss (rainbow trout) - 0.3 - 0.6 mg/l - 96.0 h

7722-64-7: EC50 - Daphnia magna (Water flea) - 0.084 mg/l - 48 h

Persistence and degradability: No additional information.
Bioaccumulative potential:

7722-64-7: Bioaccumulation Lamellibranchia (mussel). 7722-64-7: Bioconcentration factor (BCF) : < 10,000
Remarks : Can accumulate in aquatic organisms.

Mobility in soil: No additional information.
Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA 1490

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Potassium permanganate.
Hazard Class: 5
Packing Group: II.
Marine Pollutant (if applicable): No additional information.

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Potassium permanganate.
Hazard Class: 5
Packing Group: II.
Marine Pollutant (if applicable): No additional information.

Comments: None

Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Reactive, Acute

SARA Section 313 (Specific toxic chemical listings):

7722-64-7 Potassium Permanganate.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7722-64-7 Potassium Permanganate 100 lb.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

7722-64-7 Potassium Permanganate.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information

contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms: None

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