

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: August 22, 2020

1 Identification

- **Product identifier**
- **Trade name: Potassium Permanganate, ACS Grade**
- **Product code:** PP1000
- **CAS Number:**
7722-64-7
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- Ox. Sol. 2 H272 May intensify fire; oxidizer.
- Acute Tox. 4 H302 Harmful if swallowed.
- Skin Corr. 1C H314 Causes severe skin burns and eye damage.
- Eye Dam. 1 H318 Causes serious eye damage.
- Repr. 2 H361 Suspected of damaging fertility or the unborn child.
- STOT RE 2 H373 May cause damage to the liver through prolonged or repeated exposure. Route of exposure: Oral.

· Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:



GHS03 GHS05 GHS07 GHS08

- **Signal word:** Danger
- **Hazard statements:**

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H272 May intensify fire; oxidizer.

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H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to the liver through prolonged or repeated exposure. Route of exposure: Oral.

· **Precautionary statements:**

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.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves and eye 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.

P314 Get medical advice/attention if you feel unwell.

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use for extinction: Water.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **NFPA ratings (scale 0 - 4)** The substance possesses oxidizing properties.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

7722-64-7 potassium permanganate

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Brush off loose particles from skin.

If skin irritation continues, consult a doctor.

Seek immediate help for blistering or open wounds.

· **After eye contact:**

Protect unharmed eye.

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Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Danger of severe eye injury.

Caustic effect on skin and mucous membranes.

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

· **Danger:**

Danger of gastric perforation.

Causes serious eye damage.

Harmful if swallowed.

· **Indication of any immediate medical attention and special treatment needed:**

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No relevant information available.

· **Special hazards arising from the substance or mixture**

May intensify fire; oxidizer.

During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Take any precaution to avoid mixing with combustibles.

· **Environmental precautions**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Methods and material for containment and cleaning up**

Sweep up and place into an appropriate container.

Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and storage

- **Handling**
- **Precautions for safe handling:** Use only in well ventilated areas.
- **Information about protection against explosions and fires:**
Take any precaution to avoid mixing with combustibles.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** Avoid storage near extreme heat.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from flammable substances.
Do not store together with acids.
Store away from reducing agents.
- **Further information about storage conditions:**
Keep containers tightly sealed.
This product is hygroscopic.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**

7722-64-7 potassium permanganate

PEL (USA)	Ceiling limit value: 5 mg/m ³ as Mn
REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV (USA)	Long-term value: 0.02* 0.1** mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0.2; 0.02* mg/m ³ as Mn; R, *respirable
LMPE (Mexico)	Long-term value: 0.2 mg/m ³ como Mn

- **Exposure controls**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:**
Not required under normal conditions of use.
Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands:**

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Protective gloves

· **Material of gloves**

Butyl rubber, BR

Neoprene gloves

Natural rubber, NR

Sensibilization by the components in the glove materials is possible.

· **Eye protection:**

Contact lenses should not be worn.



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**

Form: Crystalline

Color: Purple

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Melting point/Melting range:** >240 °C (>464 °F)

· **Boiling point/Boiling range:** Not determined.

· **Flash point:** The product is not flammable.

· **Flammability (solid, gaseous):** Contact with combustible material may cause fire.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits**

Lower: Not determined.

Upper: Not determined.

· **Oxidizing properties:** Oxidizer

· **Vapor pressure at 20 °C (68 °F):** 0 hPa

· **Density at 20 °C (68 °F):** 2.7 g/cm³ (22.53 lbs/gal)

· **Relative density:** Not determined.

· **Vapor density:** Not applicable.

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- | | |
|---|------------------------------------|
| · Evaporation rate: | Not applicable. |
| · Solubility in / Miscibility with Water: | Soluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity | |
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |
| · Other information | No relevant information available. |

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Acts as an oxidizing agent on organic materials such as wood, paper and fats.
Reacts with reducing agents.
Toxic fumes may be released if heated above the decomposition point.
Exothermic reaction with acids.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**
Flammable materials.
Acids.
Reducing agents.
- **Hazardous decomposition products**
Oxygen
Under fire conditions only:
Toxic metal oxide smoke

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:** Harmful if swallowed.
 - **LD/LC50 values that are relevant for classification:**
- | | | |
|---|------|------------------|
| 7722-64-7 potassium permanganate | | |
| Oral | LD50 | 1090 mg/kg (rat) |
- **Primary irritant effect:**
 - **On the skin:** Caustic effect on skin and mucous membranes.
 - **On the eye:** Strong irritant with the danger of severe eye injury.
 - **Sensitization:** Based on available data, the classification criteria are not met.

- **IARC (International Agency for Research on Cancer):**

Substance is not listed.

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· **NTP (National Toxicology Program):**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

Substance is not listed.

· **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):**

Harmful if swallowed.
Causes severe skin burns and eye damage.

· **Repeated dose toxicity:** Possible risk of irreversible effects.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:**

May cause damage to the liver through prolonged or repeated exposure. Route of exposure: Oral.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity**

7722-64-7 potassium permanganate

LC50 0.47 mg/l (fish)

EC50 0.06 mg/l (daphnia)

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Very toxic for fish

· **Additional ecological information**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Very toxic for aquatic organisms

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and

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disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	
· DOT, ADR/RID/ADN, IMDG, IATA	UN1490
· UN proper shipping name	
· DOT	Potassium permanganate
· ADR/RID/ADN	P O T A S S I U M P E R M A N G A N A T E ,
· IMDG, IATA	ENVIRONMENTALLY HAZARDOUS POTASSIUM PERMANGANATE
· Transport hazard class(es)	
· DOT	
	
· Class	5.1
· Label	5.1
· ADR/RID/ADN	
	 
· Class	5.1 (O2)
· Label	5.1
· IMDG, IATA	
	
· Class	5.1
· Label	5.1
· Packing group	
· DOT, ADR/RID/ADN, IMDG, IATA	II
· Environmental hazards	Not applicable.
· Special precautions for user	Warning: Oxidizing substances
· Hazard identification number (Kemler code):	50
· EMS Number:	5.1-06
· Segregation groups	Permanganates

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· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· DOT

· **Hazardous substance:** 100 lbs, 45.4 kg

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for females:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency):**

D

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **Canadian Domestic Substances List (DSL):**

Substance is not listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

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IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration
Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Repr. 2: Reproductive toxicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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