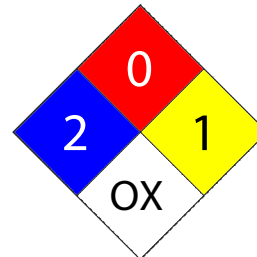


1. Product and Company Identification

Product Name Potassium Permanganate
 CAS # 7722-64-7
 Product use Regeneration of greensand iron filters
 Manufacturer Pentair Aquatic Eco-Systems, Inc.
 2395 Apopka Blvd.
 Apopka, FL 32703 US
 Phone 877-347-4788
 Emergency Phone: 1-8

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 2
Flammability	0
Physical Hazard	1
Personal Protection	B



2. Hazards Identification

Emergency overview **DANGER -- CORROSIVE**
 Oxidizing material.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes May cause chemical burns. May cause blindness.

Skin May cause chemical burns.

Inhalation Inhalation of dusts may cause respiratory irritation.

Ingestion Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Target organs Skin. Eyes. Respiratory system.

Chronic effects Long-term inhalation of dust concentrations higher than recommended permissible exposure limits may cause delayed lung injury. Prolonged or repeated exposure may lead to liver or kidney damage or central nervous system effects.

Signs and symptoms Symptoms may include redness, edema, drying, defatting and cracking of the skin. The product causes burns of eyes, skin and mucous membranes.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Potassium permanganate	7722-64-7	60 - 100

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact Brush away excess of dry material. Immediately flush with cool water for 15 minutes. Obtain medical attention if irritation persists. Wash contaminated clothing well before reuse or discard.

Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Water.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Container may explode in heat of fire. May decompose spontaneously if exposed to temperatures above 150°C. Increases flammability of combustible materials.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of manganese. Oxygen.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling	Avoid dust formation. Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
Storage	Keep out of reach of children. Store in a closed container away from incompatible materials. Keep away from heat, open flames or other sources of ignition.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
Potassium permanganate	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	Use only under good ventilation conditions or with respiratory protection. Local exhaust recommended.
Personal protective equipment	
Eye / face protection	Chemical splash goggles.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code. Rubber apron recommended.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Crystals
Color	Dark Metallic Purple
Form	Solid.
Odor	Odorless
Odor threshold	Not available
Physical state	Solid
pH	Not available
Melting point	Not available
Freezing point	Not applicable
Boiling point	Not applicable
Flash point	None
Pour point	Not available
Evaporation rate	Not applicable
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Specific gravity	2.7
Octanol/water coefficient	Not available
Solubility (H ₂ O)	Partially soluble
Auto-ignition temperature	Not applicable
Viscosity	Not applicable
Percent volatile	0

10. Stability and Reactivity

Chemical stability	Stable, however, may decompose if heated.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Acids. Reducing agents. Metals. Organic materials. Combustible materials. Hydrogen peroxide.
Hazardous decomposition products	May include and are not limited to: Oxides of manganese. Oxygen.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
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Potassium permanganate	Not available
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Component analysis - Oral LD50

Ingredient(s)	LD50
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Potassium permanganate	1090 mg/kg rat
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Effects of acute exposure

Eye	May cause chemical burns. May cause blindness.
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Skin	May cause chemical burns.
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Inhalation	Inhalation of dusts may cause respiratory irritation.
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Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
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Sensitization	Not classified or listed by IARC, NTP, OSHA and ACGIH.
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Chronic effects	Not classified or listed by IARC, NTP, OSHA and ACGIH.
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Carcinogenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.
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Mutagenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.
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Reproductive effects	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Teratogenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Synergistic Materials	Not available

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.	
Ecotoxicity - Freshwater Fish Species Data		
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]
Environmental effects	Harmful to aquatic life.	
Aquatic toxicity	Not available	
Persistence / degradability	Not available	
Bioaccumulation / accumulation	Not available	
Partition coefficient	Not available	
Mobility in environmental media	Not available	
Chemical fate information	Not available	
Other adverse effects	Not available	

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)	
Basic shipping requirements:	
Proper shipping name	Potassium permanganate
Hazard class	5.1
UN number	UN1490
Packing group	II
Additional information:	
Special provisions	IB8, IP4, T3, TP33
Packaging exceptions	152
ERG number	140



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	POTASSIUM PERMANGANATE
Hazard class	5.1
UN number	UN1490
Packing group	II



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Potassium permanganate	7722-64-7	1 %
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US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Potassium permanganate	7722-64-7	100 Lb final RQ; 45.4 kg final RQ
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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes
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CERCLA (Superfund) reportable quantity

Potassium permanganate: 100.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - Yes
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	Yes
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Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

WHMIS status Controlled

WHMIS classification Class C - Oxidizing Material, Class E - Corrosive Material

WHMIS labeling



State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section	339 - Director's List of Hazardous Substances	
Potassium permanganate	7722-64-7	Present
U.S. - Louisiana - Reportable Quantity List for Pollutants		
Potassium permanganate	7722-64-7	100 Lb final RQ; 45.4 kg final RQ
U.S. - Massachusetts - Right To Know List		
Potassium permanganate	7722-64-7	Present
U.S. - New Jersey - Right to Know Hazardous Substance List		
Potassium permanganate	7722-64-7	sn 1578
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances		
Potassium permanganate	7722-64-7	100 Lb RQ (air); 100 lb RQ (land/water)
U.S. - Pennsylvania - RTK (Right to Know) List		
Potassium permanganate	7722-64-7	Environmental hazard
U.S. - Rhode Island - Hazardous Substance List		
Potassium permanganate	7722-64-7	Flammable

Inventory name

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Prepared for

Pentair Aquatic Eco-Systems, Inc.