

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product identifier: POTASSIUM PERMANGANATE
Synonyms: Permanganic acid, potassium salt; Permanganate of potash
Intended use: Water and wastewater treatment, Manufacturing of chemicals
Uses Advised Against: None identified.
Company Identification DPC Industries, Inc.
DPC Enterprises, LP
DXI Industries, Inc.
DX Terminals
PO Box 24600
Houston, TX 77229-4600

Emergency
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. (281) 457-4888
www.dxgroup.com

2. Hazard identification of the product

Physical Hazards	May intensify fire; strong oxidizer.	Category 2
Health Hazards	Harmful if swallowed Suspected of damaging the unborn child	Category 4 Category 2
Environmental Hazards	Very toxic to aquatic life Very toxic to aquatic life with long lasting effects	Category 1 Acute Category 1 Chronic
Label elements Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.		
Signal Word	Danger	
Hazard Statements	May intensify fire; oxidizer. Harmful if swallowed. Suspected of damaging the unborn child. Very toxic to aquatic life with long lasting effects.	
Precautionary Statements	Keep away from heat. Keep/Store away from combustibles. Do not breathe dust or mist. Avoid release to the environment.	
Prevention	Keep away from heat / sparks / open flames / hot surfaces - No smoking. Keep / Store away from clothing and combustible materials. Take any precaution to avoid mixing with combustibles. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves / eye protection / face protection.	
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor / physician if you feel unwell. 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 ON SKIN: Wash with plenty of soap and water. Remove contaminated clothing. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.	
Storage	Store locked up. Keep container closed when not in use.	
Disposal	Dispose of contents / container in accordance with local / national regulations.	

3. Composition/information on ingredients

Synonyms: Permanganic acid, potassium salt; Permanganate of potash
Substance classified with a health or environmental hazard.

Ingredient	CAS Number	Percent (%)	
Potassium permanganate	7722-64-7	75 - 100	Substance classified with a health or environmental hazard.
Manganese compounds (as Mn)	7439-96-5	1 - 10	Substance classified with a health or environmental hazard. Substance with a workplace exposure limit.

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4. First Aid Measures

General	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Inhalation	Remove to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention.
Eyes	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses, if present, and safe to do so. Continue rinsing. Seek medical attention.
Skin	Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Keep victim warm and quiet.
Ingestion	If accidentally swallowed, obtain immediate medical attention. Rinse mouth. Do NOT induce vomiting. Keep at rest. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	
Overview	Can cause serious skin and eye damage.
Indication of immediate medical attention and special treatment needed	Harmful if swallowed.

5. Fire-fighting measures

Recommended Extinguishing media	Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None known.
Special hazards arising from the substance or mixture	Upon heating, oxygen released. Decomposition products are alkaline. Keep away from heat / sparks / open flames / hot surfaces - No smoking. Keep / Store away from clothing and combustible materials. Take any precaution to avoid mixing with combustibles.
Advice for fire-fighters	Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing will only provide limited protection. These substances will accelerate burning when involved in a fire. May explode from heat or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, oil, clothing, etc.). Containers may explode when heated. Runoff may create fire or explosion hazard. Inhalation, ingestion or contact (skin, eyes) with vapors or substance may cause severe injury, burns or death. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. ERG Guide No. 140

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6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not allow spills to enter drains or watercourses.
Methods and material for containment and cleaning up	Contain spillage. Sweep up and shovel and then place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal. CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed in Section 1. As an immediate precautionary measure, isolate spill or leak area in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

7. Handling and storage

Precautions for safe handling	Avoid contact with skin and eyes. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Conditions for safe storage, including any incompatibilities	Minimize dust generation when handling. Keep away from food, drink, and animal feed. Do not store in open/unlabeled container. Keep container closed in dry, well-ventilated area. If in contact with hydrochloric acid, chlorine gas is liberated.

8. Exposure controls and personal protection

Exposure			
CAS No.	Components	Source	Value
7439-96-5	Manganese compounds (as Mn)	OSHA	Ceiling 5 mg/m3
		ACGIH	TWA 0.2 mg/m3
		NIOSH	TWA 1 mg/m3 STEL 3 mg/m3
0007722-64-7	Potassium permanganate.	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

Individual protection measures, such as personal protective equipment

Respiratory	Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.
Eyes	Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.
Skin	Chemical resistant clothing such as coveralls/apron boots should be worn. Chemical impervious gloves. Emergency eyewash station should be in close proximity.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

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9. Physical and chemical properties

Appearance:	Dark Purple/Bronze Solid; Crystal/Needle or Free Flow Powder Form Solid
Odor:	Little or no odor
Odor threshold:	Not Measured
pH:	7.2 to 9.7
Melting point / freezing point:	> 240 °C (>464 °F)
Initial boiling point and boiling range:	No Established Limit(C) No Established Limit(F)
Flash Point:	No Established Limit(C) No Established Limit(F)
Evaporation rate (Ether = 1):	Not Measured
Flammability (solid, gas):	Not Applicable
Upper/lower flammability or explosive limits:	Lower Explosive Limit: Not Measured
	Upper Explosive Limit: Not Measured
Vapor pressure (mmHg):	Not Available
Vapor Density:	No Available
Specific Gravity:	2.70
Solubility in Water:	Complete
Partition coefficient n-octanol/water (Log Kow):	Not Measured
Auto-ignition temperature (°C):	Not Measured
Decomposition temperature:	> 240 °C (> 464 °F)
Viscosity (cSt):	Not Measured
VOC %:	Not Measured

10. Stability and reactivity

Reactivity	Hazardous polymerization will not occur.
Chemical stability	Stable under normal circumstances.
Possibility of hazardous reactions	No data available.
Conditions to avoid	No data available
Incompatible materials	Avoid contact with acids, peroxides, and all combustible organic or readily oxidizable materials, zinc, copper, alcohols, hydrogen fluoride, and powdered metals. If in contact with hydrochloric acid, chlorine gas is liberated.
Hazardous decomposition products	Upon heating, oxygen released. Decomposition products are alkaline.

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11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Potassium permanganate (7722-64-7)	1,090.00, Rat	500.00, Mouse	No data available	No data available	No data available

Item	Hazard
Acute Toxicity (mouth)	Harmful if swallowed.
Acute Toxicity (skin)	Toxic in contact with skin.
Acute Toxicity (inhalation)	Not Applicable
Skin corrosion/irritation	Not Applicable
Eye damage/ irritation	Not Applicable
Sensitization (respiratory)	Not Applicable
Sensitization (skin)	Not Applicable
Germ toxicity	Not Applicable
Carcinogenicity	Not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
Reproductive Toxicity	No data available.
Specific target organ systemic toxicity (single exposure)	Not Applicable
Specific target organ systemic Toxicity (repeated exposure)	Not Applicable
Aspiration hazard	Not Applicable

12. Ecological information

Toxicity - Very toxic to aquatic life with long lasting effects.

Aquatic Ecotoxicity

Ingredient	LC50/96hr fish, mg/l	EC50/48hr crustacea, mg/l	EC50 algae, mg/l
Potassium permanganate (7722-64-7)	1.80 Oncorhynchus mykiss	0.084 Daphnia magna	Not Available

Persistence and degradability:	There is no data available on the preparation itself.
Bioaccumulative potential:	Not Measured
Mobility in soil:	No data available.
Results of PBT and vPvB assessment:	This product contains no PBT/vPvB chemicals.
Other adverse effects:	No data available.

13. Disposal considerations

Waste treatment methods:	Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet, advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.
Waste from material:	Offer surplus to a licensed disposal company. The waste determination should be made in discussion between the user and the waste disposal company.
Container management:	Empty containers or liners may retain some product residues.

14. Transport information

UN number:	UN1490
UN proper shipping name:	Potassium permanganate
Transport hazard class(es)	
DOT (Domestic Surface Transportation)	
DOT Proper Shipping Name:	Potassium permanganate
DOT Hazard Class	5.1
DOT Label:	5.1
UN / NA Number:	UN1490
DOT Packing Group:	II
CERCLA/DOT RQ:	100 lbs.

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Environmental hazards:	IMDG Marine Pollutant: No					
Special precautions for user:	Not Applicable					

15. Regulatory information

Regulatory Overview:	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory.					
WHMIS Classification:	C					
OSHA REGULATORY STATUS:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)					
US EPA Tier II Hazards:	Fire:	No		Immediate (Acute):	Yes	
	Sudden Release of Pressure:	No		Delayed (Chronic):	No	
	Reactive:	Yes				
SARA 302 Extremely Hazardous Substance / RQs (lbs) :		Not applicable.				
SARA 311/312 Chemicals and RQs (lbs) (>0.1%) :		Yes (100.00)				
SARA 313 (TRI)		No				
OSHA PSM (29 cfr 1910.119):		No				
TSCA:		Potassium Permanganate				
State Regulations:	N.J. RTK Substances (>1%)	Listed	Penn RTK Substances (>1%)	Listed	California Prop 65	Not listed

16. Other information

Revision Information: This is the first revision of this SDS format, changes from previous revision not applicable.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

THE USER IS CAUTIONED TO PERFORM HIS OWN HAZARD EVALUATION AND TO RELY ON HIS OWN DETERMINATIONS.