

SAFETY DATA SHEET

1. Identification

Product identifier: POTASSIUM PERMANGANATE

Other means of identification

Product No.: 3228, 3227, H953

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard classification

Physical hazards

Oxidizing solids Category 2

Health hazards

Acute toxicity (Oral) Category 4

Environmental hazards

Acute hazards to the aquatic environment Category 1

Chronic hazards to the aquatic environment Category 1

Label elements

Hazard symbol:



Signal word: Danger

Hazard statement: Harmful if swallowed.
May intensify fire; oxidizer.
Very toxic to aquatic life with long lasting effects.

Precautionary statement

- Prevention:** 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 hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment.
- Response:** In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Collect spillage.
- Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Substances

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
POTASSIUM PERMANGANATE		7722-64-7	90 - 100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

- General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance. Ensure that emergency personnel are aware of the material involved, and take precautions to protect themselves.
- Ingestion:** Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person.
- Inhalation:** Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary.
- Skin contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes. IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed

Symptoms: May cause irritation to skin, eyes, and respiratory tract.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed. Treat symptomatically.

5. Fire-fighting measures

General fire hazards: Oxidizing material. In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: May intensify fire; oxidizer. Explosion risk in case of fire.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

Methods and material for containment and cleaning up: Remove sources of ignition. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Use only non-sparking tools.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling: Do not taste or swallow. Wash hands thoroughly after handling. Avoid contact with eyes. Keep away from food, drink and animal feeding stuffs. Keep away from combustible material. Do not eat, drink or smoke when using the product. Do not smoke, use open fire or other sources of ignition. Use personal protective equipment as required. See Section 8 of the MSDS for Personal Protective Equipment. Observe good industrial hygiene practices. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Take any precaution to avoid mixing with combustibles. Wear fire/flame resistant/retardant clothing. Avoid contact with skin.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, well-ventilated place. Keep container dry. Store away from incompatible materials. Eliminate sources of ignition.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
POTASSIUM PERMANGANATE - Respirable fraction. - as Mn	TWA	0.02 mg/m ³	US. ACGIH Threshold Limit Values (02 2013)
POTASSIUM PERMANGANATE - Inhalable fraction. - as Mn	TWA	0.1 mg/m ³	US. ACGIH Threshold Limit Values (02 2013)
POTASSIUM PERMANGANATE - Fume. - as Mn	STEL	3 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	1 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
POTASSIUM PERMANGANATE - as Mn	Ceiling	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate engineering controls

No data available.

Individual protection measures, such as personal protective equipment

General information:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection:

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection:

Chemical resistant gloves

Other:

Wear suitable protective clothing.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Hygiene measures:

Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid contact with eyes, skin, and clothing.

9. Physical and chemical properties

Appearance

Physical state:

Solid

Form:

Crystals or powder.

Color:

purple

Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	Approximate 240 °C
Initial boiling point and boiling range:	No data available.
Flash Point:	Not applicable
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	5.40 AIR=1
Relative density:	2.7 (20 °C)
Solubility(ies)	
Solubility in water:	70 g/l
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Other information	
Molecular weight:	158.03 g/mol (HMnO4)

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, sparks, flames. Shocks and physical damage. Contact with incompatible materials.
Incompatible materials:	Reducing agents. Flammable/combustible material. Organic compounds. Powdered metal. Alcohols. Arsenites. Bromides. Iodides. Phosphorus. Sulfuric acid. Hydrogen peroxide (H2O2) Ferrous salts. Peroxides.
Hazardous decomposition products:	Toxic metal fumes may form when heated to decomposition.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Harmful if swallowed.
Inhalation:	May be harmful if inhaled.
Skin contact:	May cause irritation.
Eye contact:	May irritate eyes.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)****Oral****Product:** LD 50 (Rat): 750 mg/kg**Dermal****Product:** No data available.**Inhalation****Product:** No data available.**Repeated dose toxicity****Product:** No data available.**Skin corrosion/irritation****Product:** May cause skin irritation.**Serious eye damage/eye irritation****Product:** May irritate eyes.**Respiratory or skin sensitization****Product:** Not a skin sensitizer.**Carcinogenicity****Product:** This substance has no evidence of carcinogenic properties.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ cell mutagenicity**In vitro****Product:** No mutagenic components identified**In vivo****Product:** No mutagenic components identified**Reproductive toxicity****Product:** No components toxic to reproduction**Specific target organ toxicity - single exposure****Product:** No data available.**Specific target organ toxicity - repeated exposure****Product:** No data available.**Aspiration hazard****Product:** Not classified**Other effects:**

None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

POTASSIUM LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 0.267 - 0.442 mg/l Mortality
 PERMANGANATE LC 50 (Striped bass (Morone saxatilis), 96 h): 0.348 mg/l Mortality
 LC 50 (Bluegill (Lepomis macrochirus), 96 h): 0.713 - 0.959 mg/l Mortality

Aquatic invertebrates

Product: No data available.

Specified substance(s):

POTASSIUM EC 50 (Amphipod (Crangonyx pseudogracilis), 48 h): 0.86 - 1.12 mg/l Intoxication
 PERMANGANATE LC 50 (Zebra mussel (Dreissena polymorpha), 48 h): > 40 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF)

Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil:

The product is water soluble and may spread in water systems.

Other adverse effects:

Very toxic to aquatic life with long lasting effects.

13. Disposal considerations

Disposal instructions:

Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated packaging:

Since emptied containers retain product residue, follow label warnings even

after container is emptied.

14. Transport information

DOT

UN number:	UN 1490
UN proper shipping name:	Potassium permanganate
Transport hazard class(es)	
Class(es):	5.1
Label(s):	5.1
Packing group:	II
Marine Pollutant:	No

IMDG

UN number:	UN 1490
UN proper shipping name:	POTASSIUM PERMANGANATE
Transport hazard class(es)	
Class(es):	5.1
Label(s):	5.1
EmS No.:	F-H, S-Q
Packing group:	II
Marine Pollutant:	No

IATA

UN number:	UN 1490
Proper Shipping Name:	Potassium permanganate
Transport hazard class(es):	
Class(es):	5.1
Label(s):	5.1
Marine Pollutant:	No
Packing group:	II

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

POTASSIUM	Reportable quantity: 100 lbs.
PERMANGANATE	

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely hazardous substance

None present or none present in regulated quantities.

SARA 304 Emergency release notification

Chemical identity	RQ
POTASSIUM	100 lbs.
PERMANGANATE	

SARA 311/312 Hazardous chemical

Chemical identity	Threshold Planning Quantity
POTASSIUM	500 lbs
PERMANGANATE	

SARA 313 (TRI reporting)

Chemical identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
POTASSIUM	10000 lbs	25000 lbs.
PERMANGANATE		

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

POTASSIUM	Reportable quantity: 100 lbs.
PERMANGANATE	

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US state regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

POTASSIUM	Listed
PERMANGANATE	

US. Massachusetts RTK - Substance List

POTASSIUM	Listed
PERMANGANATE	

US. Pennsylvania RTK - Hazardous Substances

POTASSIUM	Listed
PERMANGANATE	

US. Rhode Island RTK

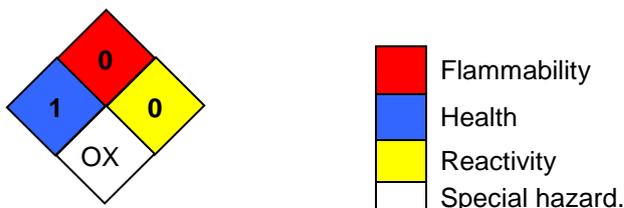
POTASSIUM	Listed
PERMANGANATE	

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe
OX: Oxidizing agent

Issue date: 09-04-2014
Revision date: No data available.
Version #: 1.0
Further information: No data available.

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