

SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

GHS Product identifier: Potassium Permanganate, Volumetric Solutions

Other means of identification

Product No.: 6139, 5651

Recommended use: For Laboratory, Research or Manufacturing Use.

Limitations on use: Not determined.

Details of the supplier of the safety data sheet:

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200
Radnor, PA 19087

Telephone:

Customer Service: 855-282-6867

Contact Person: Product Information Compliance

E-mail: info@avantormaterials.com

Emergency telephone: CHEMTREC: 800-101-2201 (24/7)

2 HAZARDS IDENTIFICATION

GHS classification:

Environmental Hazards:

Acute hazards to the aquatic environment Category 2

Chronic hazards to the aquatic environment Category 2

GHS label elements:

Symbol(s):



Signal Words:

Hazard Statement(s):

Toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

Avoid release to the environment.

Response:

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 classification:

Primary hazards:

No data available.

Specific hazards: No data available.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Substance or Preparation:

General information:

Chemical name	Concentration	CAS-No.	EC No.
Water	92.00 - 99.70%	7732-18-5	231-791-2
Potassium permanganate	0.30 - 8.00%	7722-64-7	

4 FIRST AID MEASURES

General:	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. Apply artificial respiration if victim is not breathing Call a physician or poison control center immediately.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air.
Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute delayed:	Irritating to eyes, respiratory system and skin.
Indication of immediate medical attention and special treatment needed, if necessary:	Treat symptomatically. Symptoms may be delayed.

5 FIRE-FIGHTING MEASURES

Extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	None.
Specific hazard arising from the chemical:	None known.
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.
Special protective action 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. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the SDS for Personal Protective Equipment.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
Methods and material for containment and cleaning up:	Neutralize with lime or soda ash. Neutralize spill area and washings with dilute acetic acid. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal. Clean surface thoroughly to remove residual contamination.
Notification Procedures:	Prevent entry into waterways, sewer, basements or confined areas. Stop leak if you can do so without risk. Inform authorities if large amounts are involved.

7 HANDLING AND STORAGE

Precautions for safe handling:	Wear protective gloves/protective clothing/eye protection/face protection. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment.
Condition for safe storage, including any incompatibilities:	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Store in a cool and well-ventilated place. Keep from freezing.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriated engineering control measures:	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.
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Occupational Exposure Limits:

Chemical name	Type	Exposure Limit Values	Source
Potassium permanganate - as Mn	TWA	1 mg/m3	Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order) (2006)

Personal protective equipment (ppe)

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. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
Eye Protection:	Wear safety glasses with side shields (or goggles).
Hand Protection:	Chemical resistant gloves
Skin Protection:	Wear suitable protective clothing.

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:	Liquid
Form:	Liquid
Color:	purple
Odor:	Odorless
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	-2 °C
Boiling Point:	102 °C
Flash Point:	Not applicable
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)—:	No data available.
Flammability Limit - Lower (%)—:	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	1.02 (20 °C)
Solubility(ies)	
Solubility in Water:	Miscible
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

10 STABILITY AND REACTIVITY

Incompatible Materials:	Reducing agents. Metals. Sulfuric acid.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Contact with incompatible materials.
Hazardous Decomposition Products:	None known.

11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation: Irritating to respiratory tract.

Ingestion:	May cause irritation of the gastrointestinal tract.
Skin Contact:	Prolonged skin contact may cause temporary irritation.
Eye contact:	May cause temporary eye irritation.

Information on toxicological effects

Acute toxicity

Oral

Product: ATEmix (Rat): 9,375 mg/kg

Dermal

Product: ATEmix (Rabbit): > 25,000 mg/kg

Inhalation

Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation:

Product: May cause transient irritation.

Serious Eye Damage/Eye Irritation:

Product: May cause temporary eye irritation.

Respiratory or Skin Sensitization:

Product: Not a skin nor a respiratory sensitizer.

Germ Cell Mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Carcinogenicity

Product: No data available.

Specified substance(s)

Water No data available.

Potassium permanganate No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s)

Water No data available.

Potassium permanganate No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specified substance(s)

Water No data available.

Potassium permanganate No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s)

Water	No data available.
Potassium permanganate	No data available.

Aspiration Hazard

Product: Not classified

Metabolism: No data available.

Other effects: None known.

12 ECOLOGICAL INFORMATION

General information: Not applicable Contains a substance which causes risk of hazardous effects to the environment.

Ecotoxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s):

Water	LC 50 (Fish, 96 h): > 100 mg/l
Potassium permanganate	LC 50 (Rainbow Trout, 96 h): 0.267 - 0.442 mg/l
	LC 50 (Striped Bass, 96 h): 0.348 mg/l
	LC 50 (Bluegill Sunfish, 96 h): 0.713 - 0.959 mg/l
	NOAEL (Poecilia reticulata, 96 h): 0.35 mg/l
	LC 50 (Poecilia reticulata, 96 h): 0.47 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Water	No data available.
Potassium permanganate	EC 50 (Amphipod (Crangonyx pseudogracilis), 48 h): 0.86 - 1.12 mg/l
	LC 50 (Zebra mussel (Dreissena polymorpha), 48 h): > 40 mg/l
	NOAEL (Daphnia magna, 48 h): 0.01 mg/l
	EC 50 (Daphnia magna, 48 h): 0.06 mg/l

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s):

Water	NOEC (Fish): > 1 mg/l
Potassium permanganate	No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Water	No data available.
Potassium permanganate	No data available.

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

Water	No data available.
Potassium permanganate	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

Product: No data available on bioaccumulation.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: Not available.

Other adverse effects: Toxic to aquatic life with long lasting effects.

13 Disposal considerations

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

14 TRANSPORT INFORMATION
IMDG - International Maritime Dangerous Goods Code

Not regulated.

IATA

Not regulated.

15 REGULATORY INFORMATION
Applicable regulations:

Workplace Safety and Health Act
Act on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
Environmental Public Health Act
Environmental Public Health (Toxic Industrial Waste) Regulations
Singapore. Hazardous Substances Control List (Environmental Protection and Management Act, Second Schedule, Part 1, Control of Hazardous Substances)
Environmental Pollution Control (Hazardous Substances) Regulations
Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order)

16 OTHER INFORMATION
Inventory Status

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

Revision Information: Not relevant.

Issue Date: 10-31-2019

SDS No.:

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