

MATERIAL SAFETY DATA SHEET**Product Name:** Potassium permanganate Solution (N/10)**CAS No.:** 7722-64-7**Version:** 0**1. Identification**

Product Code : 97014
Company Name : Advent Chembio Private Limited
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2. Hazards 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

Labels 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,

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and product characteristics at time of disposal.

Other hazards which do not result in GHS classification : None.**3. Composition/Information on Ingredients**

Ingredient	CAS No	Percent
POTASSIUM PERMANGANATE	7722-64-7	0.1 ± 0.005 N

4. First Aid Measures

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Rinse mouth. Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Inhalation** : Move to fresh air. Apply artificial respiration if victim is not breathing. If breathing is difficult, give oxygen. Get medical attention.
- 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** : May cause irritation to skin, eyes, and respiratory tract.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

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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. Use personal protective equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

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.

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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. 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 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Appropriate engineering controls : No data available.

Individual protection measures, such as personal protective equipment

General information : No data available.

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Eye/face protection	:	Wear safety glasses with side shields (or goggles) and a face shield.
Hand protection	:	Chemical resistant gloves.
Other	:	Wear suitable protective clothing and gloves.
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	:	Pink violet coloured clear solution.
Odor	:	Odorless
pH	:	No data available.
Melting point/freezing point	:	Approximate 240 °C
Initial boiling point and boiling range	:	No data available.
Flash Point	:	No data available
Vapor pressure	:	No data available
Vapor density	:	5.40 AIR=1
Relative density	:	2.7 (20 °C)
Solubility in water	:	70 g/l
Solubility (other)	:	No data available.
Formula	:	KMnO ₄
Molecular Weight	:	158.03 g/mol

10. Stability and Reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable; however, may decompose if heated.
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 (H ₂ O ₂) Ferrous salts. Peroxides.
Hazardous decomposition products	:	Toxic metal fumes may form when heated to decomposition.

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- Ingestion** : Toxic if swallowed.
Inhalation : Toxic if inhaled.
Skin contact : Toxic in contact with skin. Causes skin irritation.
Eye contact : Causes eye irritation.

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 : Toxic in contact with skin. Causes skin irritation.
Serious eye damage/eye irritation Product : Causes eye irritation.
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 DIOXANE : No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE : 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.

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- Fish Product** : No data available.
Specified substance(s): : LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 0.267 - 0.442 mg/l Mortality
POTASSIUM PERMANGANATE h): 0.267 - 0.442 mg/l Mortality
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): : EC 50 (Amphipod (*Crangonyx pseudogracilis*), 48 h): 0.86 - 1.12 mg/l Intoxication
POTASSIUM 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 consideration

- 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.

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14. Transport information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1490	Potassium permanganate	5.1	II	No
IMDG	UN 1490	Potassium permanganate	5.1	II	No
IATA	UN 1490	Potassium permanganate	5.1	II	No

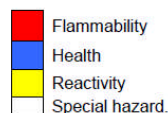
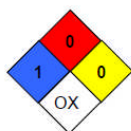
15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information

NFPA Hazard ID



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

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