

MATERIAL SAFETY DATA SHEET

Version Number:- 02

PRODUCT NAME: POTASSIUM PERMANGANATE

CAS Number: 7722-64-7

1. IDENTIFICATION:

Product Code : 90220, 90513, 13086, 13425

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

Skin corrosion : Sub Category 1 C

Serious eye damage : Category 1

Environmental hazards

Acute hazards to the aquatic environment : Category 1

Chronic hazards to the aquatic environment : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : 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.
Causes severe skin burns and eye damage

Precautionary statement



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- Prevention** : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed. Ground/ bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools. Take precautionary measures against static discharge.
- Response** : IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- Storage** : Store at ambient temperature in a dry and well ventilated place. Keep container tightly closed.
- 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** : Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
Potassium Permanganate	7722-64-7	90 - 100%	Yes

4. FIRST AID MEASURES:

- General information** : Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- 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.
- Inhalation** : Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.
Get medical attention if symptoms persist.
- Skin contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. 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.
- Most important symptoms/effects, acute and delayed** : May cause irritation to skin, eyes, and respiratory tract.

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Indication of immediate medical attention and special treatment needed : Symptoms may be delayed. Treat symptomatically.

5. FIRE FIGHTING MEASURES:

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

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Dry powder or dry sand.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : May intensify fire; oxidizer. Explosion risk in case of fire. Potassium oxides Manganese/manganese oxides.

Special protective equipment and precautions for firefighters

Special firefighting procedures : Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

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 : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up : Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures : 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 discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist

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or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.

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/m3	US. ACGIH Threshold Limit Values (02 2013)
POTASSIUM PERMANGANATE - Inhalable fraction. - as Mn	TWA	0.1 mg/m3	US. ACGIH Threshold Limit Values (02 2013)
POTASSIUM PERMANGANATE - Fume. as Mn	STEL	3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	1 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
POTASSIUM PERMANGANATE - as Mn	Ceiling	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	5 mg/m3	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 : 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. Use explosion-proof ventilation equipment.

Eye/face protection : Wear safety glasses with side shields (or goggles).

Hand protection : Chemical resistant gloves.

Other : Wear suitable protective clothing.

Respiratory protection : If engineering controls do not maintain airborne concentrations below recommended

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Hygiene measures : exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. 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. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance : Dark purple or almost black crystalline powder with metallic lustre.

Odor : Odorless

Solubility in water : 70 g/l

Solubility : No data available.

Formula : KMnO_4

Molecular Weight : 158.04 g/mol

Specific Gravity : 2.7 (20 °C)

pH : No data available.

% Volatiles by volume @ 21C (70F) : No data available.

Boiling Point : No data available.

Melting Point : Approximate 240 °C

Flash Point : No data available.

Vapor Density (Air=1) : 5.40

Vapor Pressure (mm Hg) : No data available.

Evaporation Rate (BuAc=1) : No data available.

10. STABILITY AND REACTIVITY:

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under recommended storage 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.

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11. TOXICOLOGICAL INFORMATION:**Information on likely routes of exposure**

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

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

- Oral Product** : LD 50 (Rat): 750 mg/kg
- Dermal Product** : Rat - male and female - > 2.000 mg/kg
- 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** : Irritating to 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 data available.
- Reproductive toxicity Product** : No components toxic to reproduction.
- Specific target organ toxicity - single exposure Product** : Not known.
- Specific target organ toxicity - repeated exposure Product** : None known.

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Aspiration hazard Product : No data available.**Other effects** : None known.**12. ECOLOGICAL INFORMATION:****Ecotoxicity****Acute hazards to the aquatic environment****Fish Product** : No data available.**Specified substance(s):** LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 0.267 - 0.442 mg/l
Potassium Permanganate : 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** : No data available.
Product**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** : No data available.
Product**Toxicity to Aquatic Plants** : No data available.
Product:**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** : No data available on bioaccumulation.
(BCF) Product**Partition coefficient n-** : No data available.
octanol / water (log Kow)**Product****Mobility in soil** : The product is partly soluble in water. May spread in the aquatic environment.**Other adverse effects** Very toxic to aquatic life with long lasting effects.



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13. DISPOSAL CONSIDERATION:

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

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.

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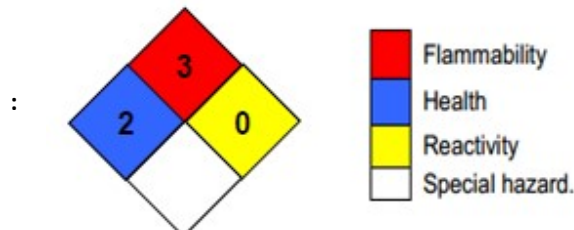
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16. OTHER INFORMATION:

NFPA Hazard ID



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

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