1. Product and Company Identifaction

Product Name	**Potassium Permanganate**
Part Number	RXSOL-60-6109-005

Chemical Formula: KMnO4

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

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Email	mail@rxmarine.com; 123@rxmarine.com

2. Composition / Information on ingredients

Chemical Name	Concentration	CAS Number	EC Number	R Phrases*	Sym
Potassium Permanganate	99-100%	7722-64-7	231-760-3	50/5	Xn.

*See Section 16

3. Hazards Identification

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental Hazards	Aquatic Chronic 2 - H411
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardou contact (permeator). Possibly corrosive to eyes and skin. The amount of tissue damage depends on length of contac result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure damage, choking, unconsciousness or death. Prolonged exposure may result in skin burns and ulcerations. Over-expo may cause respiratory irritation.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.

EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeate eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung

4. First Aid Measures

Contact with skin	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated c Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean sh Get medical attention immediately.
Contact with eyes	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least water may be used. Get medical attention immediately.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unco large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a c waistband
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get m
General	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistban difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It ma the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious o immediate medical attention.

5. Fire-fighting Measures

Flammability of the Product	:	Non-flammable
Auto-Ignition Temperature	:	Not applicable.
Flash Points	:	Not applicable.
Flammable Limits	:	Not applicable.
Products of Combustion	:	Not applicable.
Fire Hazards in Presence of Various Substances	:	organic materials, metals, combu
Explosion Hazards in Presence of Various Substances	:	Risks of explosion of the produc impact: Not available. Risks of presence of static discharge: N presence of organic materials, of
Fire Fighting Media and Instructions	:	Not applicable.
Special Remarks on Fire Hazards	:	Spontaneously flammable on co Potassium Permanganate being tube ignited the tube. When soli into contact with solid potassi

		produced immediately a with fla decomposes hydrogen trisulfide is liberated to ignite the trisulfid and solid potassium permangan metals ignite.
Special Remarks on Explosion Hazards	;	Take care in handling as explosi in contact with organic or other either in solution or in dry stat sulfuric acid or hydrogen peroxi + acetic acid or acetic a permanganate is not kept cold. permanganates come on cont disulfide, diethyl ether, ethyl a matter. Contact with glycero ma of potassium permanganate expl with phosphorous. A mixt permanganate + ammonium n explosion 7 hrs. later. Addition o dimethylformamide to give a explosion after 5 min. During a addition of the concentrated acid potassium permanganate, a shar occasion.

6. Accidental Release Measures

Personal Precautions	Wear protective clothing as per section 8.
Environmental Precautions	Avoid discharge into drains or watercourses or onto the ground. Contain spillage with sand,earth or other suitable material. The product contains substances which are water-soluble and may spread in water systems. The produc substances which may spread in the atmosphere
Immediate Actions	Shut off source of leak if safe to do so.
Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill	Oxidizing material. Corrosive solid. Stop leak if without risk. Do not get water inside container. Avoid contact w material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. U reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on dispos the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and Storage

Handling	Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immedia container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as organic materials, me

Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, red combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

8. Exposure controls and personal protection

Engineering Control	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below reco limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below
Personal Protection	Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivale
Personal Protection in case of Large Spill	Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus shoul inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling
Exposure Limits	TWA: 5 Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Odour	:	Odourless
Taste	:	Sweetish, astringent.
Appereance	:	Solid/Powder/Crystal
Molecular Weight	:	158.03 g/mole
pH (1% soln/water)	:	Not available
Boiling Point	:	Not available
Melting Point	:	Decomposes.
Critical Temperature	:	Not available.
Specific Gravity	:	2.7 @ 15 C (Water = 1)
Vapor Pressure	:	Not available.
Vapor Density	:	Not available.
Volatility	:	Not available.
Odor Threshold	:	Not available.
Water/Oil Coeff	:	Not available.
Ionicity (in Water):	:	Not available.
Solubility	:	Easily soluble in methanol, acetone water, hot water. Soluble in Sulfuri

10. Stability and reactivity

Stability	:	The product is stable.
Instability Temperature	:	Not available

Conditions of Instability	:	Incompatible materials
Incompatibility with various substances	:	Highly reactive with organic material Reactive with reducing agents, combu
Corrosivity	:	Not available.
Special Remarks on Reactivity	:	It is a powerful oxidizing agent reducing agents, acids, formal nitrate,dimethylformamide, glyc materials, alcohols, arsenites, bromid organic substances, ferrous or mercurous salts, hypopho sulfites, peroxides, oxalates, ethylen salts in air oxidize the toxic sulfur sulfur trioxide. Can react violentl powders, ammonia, ammonium salts finely divided organic compounds (liquids, acids, sulfur.
Polymerization	:	Will not occur.

11. Toxicological information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 1090 mg/kg [Rat]. Lowest Published Lethal Dose: LDL[Woman] - Route: mg/kgLDL[Human] - Route: Oral; Dose: 143 mg/kg.
Chronic Effects on Humans	MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: kidneys, nervous system (CNS).
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of eye contact (corrosive), of ingestion, of inhalation. Slightly hazardou contact (permeator).
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May cause adverse reproductive effects (Male and Female fertility) based on animal data. May affect genetic mate based on animal data.

12. Ecological information

Ecotoxicity	Not available
Mobility	Completely soluble in water
BOD5 and COD	Not available
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may aris Products of Biodegradation: The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available

13. Disposal considerations

Disposal considerations	Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

- Not classified as hazardous for transport
- DOT Classification: CLASS 5.1: Oxidizing material.
- Identification: : Potassium permanganate UNNA: 1490 PG: II
- Special Provisions for Transport: Not available.

15. Regulatory information

Federal and State Regulations	Connecticut carcinogen reporting list.: Potassium permanganate Illinois toxic substances disclosure to employe permanganate Illinois chemical safety act: Potassium permanganate New York release reporting list: Potassium per Island RTK hazardous substances: Potassium permanganate Pennsylvania RTK: Potassium permanganate Ma Potassium permanganate Massachusetts spill list: Potassium permanganate New Jersey: Potassium permanganate Ne Potassium permanganate Louisiana spill reporting: Potassium permanganate California Director's list of Hazar Potassium permanganate
Other Regulations	**OSHA:** Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product i Inventory of Existing Commercial Chemical Substances. **Other Classifications**: **WHMIS (Canada):** **CLASS C**: Oxidizing material. CLASS E: Corrosive solid. **DSCL (EEC):** R8- Contact with combustible material may cause fire. R22- Harmful if swallowed. R50/53- Ver organisms, may cause long-term adverse effects in the aquatic environment. S60- This material and its container must hazardous waste. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.
HMIS (U.S.A.):	**Health Hazard: 2** **Fire Hazard:** 0 **Reactivity:** 0 **Personal Protection**: j
National Fire Protection Association	**Health:** 1 **Flammability:** 0 **Reactivity:** 0 **Specific hazard:** NA
Protective Equipment:	Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. respirator when ventilation is inadequate. Splash goggles.

16. Other information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantabi with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the i event shall ***Rx Marine International*** *be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, co arising, even if* ***Rx Marine International*** *has been advised of the possibility of such damages..*

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