Material Safety Data Sheet

Potassium Permagnate (50 ML Pkg) (RXSOL-60-6110-001)

1. Product and Company Identifaction

Product Name	Potassium Permagnate (50 ML Pkg)
Part Number	RXSOL-60-6110-001

Company Details:

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

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

Phone	+91 22 20871200 - 1400
Fax	+91 22 27612100 :::AOH :0091 9821214367
Email	mail@rxmarine.com
Website	www.rxmraine.comA

2. Composition / informationon ingredients

Chemical Name	CAS	EC numbe	Weight	Formula
Potassium permanganate	7722-64-7	231-760-3	= 100 %	$KMnO_4$

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H272 May intensify fire; oxidizer. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H361d Suspected of damaging the unborn child. H373 May cause damage to organs (Brain) through prolonged or repeated exposure if inhaled. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
Supplemental Hazard Statements	None.
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

General advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician.
Eye Contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
Swallowed	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
Inhalation	Remove patient to fresh air, keep warm and at rest and get medical assistance in necessary.
Ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

Flammability	Not flammable or combustible.
Flash Point	Dry powder Dry sand
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Potassium oxides Manganese/manganese oxides Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapours.
Further information	Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Protective Equipment	Use personal protective equipment.
Specific Hazards Arising from the Chemical	Oxides of phosphorus Sodium oxides Not combustible. Fire may cause evolution of: Oxides of phosphorus Ambient fire may liberate hazardous vapours.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Enviromental Precaution	Do not let product enter drains.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

7. Handling and Storage

Advice on safe handling	Work under hood. Do not inhale substance/mixture.
Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2..
Precautions for safe handling	For precautions see section 2.2.
Storage conditions	Tightly closed. Do not store near combustible materials.
Storage class	Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Storage stability	Recommended storage temperature -20 °C
Advice on general occupational hygiene	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

Requirements for storage	Keep in cool and store under shade.

8. Exposure controls and personal protection

Exposure controls	Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Control parameters	Ingredients with workplace control parameters Contains no substances with occupational exposure limit values.
Engineering Control	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles
Skin Protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L
Body Protection	Protective clothing
Respiratory protection	Required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P3 The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Hygiene measures	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Control of environmental exposure	Do not let product enter drains.

9. Physical and chemical properties

Physical state	Solid
Colour	No data available
Odour	No data available
Odor Threshold	Not Applicable
pH	No data available
Melting Point	No data available
Boiling Point	No data available
Flash Point	No data available
Evaporation Rate	Not Applicable
Flammability (solid, gas)	No data available
Explosive limits	No Data Available
Lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	No data available
Density	2,70 g/cm3 at 20 °C
Relative Vapour Density	No data available
Freezing point	No data available
Specific Gravity	No data available
Partition coefficient	No data available
Explosive properties	No data available
Solubility	No data available

Ignition temperature	No information available.
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	No data available
Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Risk of explosion with: powdered aluminium Ammonia ammonium compounds arsenic Dimethylformamide acetic acid Acetic anhydride formaldehyde oxidisable substances Nitro compounds phosphorus pyridine strong reducing agents hydrochloric acid sulfur Titanium sugars ammonium nitrate sulfuric acid Combustible Liquids Organic Substances mineral acids anhydrides mineral wool Alcohols with sulfuric acid alkali salts with sulfuric acid Risk of ignition or formation of inflammable gases or vapours with: Acetaldehyde Alcohols antimony Aldehydes silanes dimethyl sulfoxide Ethylene glycol ethanol Hydrogen fluoride organic solvent glycerol hydroxylamine Organic Substances oxalic acid sulfuric acid hydrogen sulphide hydrogen peroxide triethanolamine Esters glycerol with sulfuric acid sulfuric acid with Organic Substances Exothermic reaction with: Reducing agents Nitric acid carbides Generates dangerous gases or fumes in contact with: Hydrogen chloride gas
Conditions to avoid	No data available
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - 750 mg/kg Remarks: (RTECS) Inhalation: No data available LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)
Skin corrosion/irritation	Skin - Rabbit Result: Corrosive after 4 hours or less of exposure (OECD Test Guideline 404)
Serious eye damage/eye irritation	Remarks: Causes serious eye damage.
Respiratory or skin sensitization	Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406)
Toxic Effects on Human	May cause damage to the following organs: upper respiratory tract. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation (lung irritant, lung sensitizer).
Carcinogenicity	Remarks: No data available
Germ cell mutagenicity	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: In vivo micronucleus test Species: Rat Cell type: Bone marrow Application Route: Oral Method: OECD Test Guideline 474 Result: negative
Reproductive toxicity	Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure	Inhalation - May cause damage to organs through prolonged or repeated exposure. - Brain
Special Remarks on other Toxi Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization, an allergic reation, which becomes evident upon re-exposure to this material. Eyes: Causes eye irritation. Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed. Inhalation: Causes respiratory tract irritation. May cause chemical pneumonitis and pulmonary edema, inflammation, edema of bronchi and larynx. Chronic Potential Health Effects: Repeated or prolonged skin exposure may cause allergic reactions in sensitive individuals. Repeated or prolonged exposure by inhalation may affect respiration and metabolism.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. RTECS: SD6475000 Contact with skin can cause:, Edema, Necrosis, Effects due to ingestion may include:, methemoglobinema, psychological disturbances, Vomiting, Nausea, Diarrhea To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

Bioaccumulative potential	No data available
Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.

Toxicity to fish	Semi-static test LC50 - Poecilia reticulata (guppy) - 0,47 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Semi-static test EC50 - Daphnia magna (Water flea) - 0,06 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Static test ErC50 - Desmodesmus subspicatus (green algae) - 0,8 mg/l - 72 h (OECD Test Guideline 201) static test NOEC - Desmodesmus subspicatus (green algae) - 0,32 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	Static test EC50 - activated sludge - 164 mg/l - 180 min (OECD Test Guideline 209)
Mobility in soil	No Information available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other adverse effects	No data available

13. Disposal considerations

Disposal methods	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging	Dispose of as unused product.
Waste treatment Method	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

UN number	ADR/RID: 1490 IMDG: 1490 IATA: 1490
UN proper shipping name	ADR/RID:POTASSIUMPERMANGANATE,IMDG:POTASSIUMPERMANGANATE IATA:POTASSIUMPERMANGANATE
Transport hazard class	ADR/RID: 5.1 IMDG: 5.1 IATA: 5.1
Packaging group	ADR/RID: II IMDG: II IATA: II
Environmental hazards	ADR/RID: yes IMDG: yes IATA: NO
Further information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Safety, health and environmental regulations specific for the product in question	European Inventory of Existing Commercial Chemical Substances (EINECS) -Listed.EC Inventory Listed. United States Toxic Substances Control Act (TSCA) Inventory- Listed. China Catalog of Hazardous chemicals 2015 Not- Listed. New Zealand Inventory of Chemicals (NZIoC)Listed. PICCS - Listed. Vietnam National Chemical Inventory -Listed. IECSC Listed. Korea Existing Chemicals List (KECL) -Listed.
National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : OXIDISING LIQUIDS AND SOLIDS : ENVIRONMENTAL HAZARDS : OXIDISING LIQUIDS AND SOLIDS : ENVIRONMENTAL HAZARDS
Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out.

16. Other information

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 merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.