

SAFETY DATA SHEET
Potassium Permanganate

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Issued: 12/09/2025
Revision No: 3

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product Name: POTASSIUM PERMANGANATE
Index No.: 025-002-00-9
EC Number: 231-760-3
CAS No.: 7722-64-7
Synonyms: CAIROX, POTASSIUM PERMANGANTE FF AQUOX, PERMANGANIC ACID POTASSIUM SALT, CHEMLEON MINERAL, CONDY CRYSTALS, PERMANGANTE OF POTASH, POTASSIUM PERMANGANTE 93 BP, POTASSIUM PERMANGANTE MIN 97%, POTASSIUM PERMANGANTE TECH AQUOX, POTASSIUM PERMANGANTE FREE FLOWING, POTASSIUM PERMANGANTE UNI EN 12672/2008, POTASSIUM PERMANGANTE FF, AQUOX POTASSIUM PERMANGANATE PHARMA PWD.

Pure substance/mixture: Substance

Molecular weight: 158 g/mol

Relevant identified uses of the substance or mixture and uses advised against:

Recommended use: Oxidising Agent.
Chemical.
Industrial application.
Professional use.
For further information, see attached Exposure Scenario.

Uses advised against: Do not use for products which come into direct contact with the skin.

Details of the supplier of the safety data sheet:

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Oxidising solids	Category 2 - (H272)
Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 1 Sub-category C - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Reproductive toxicity	Category 2 - (H361d)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

Label elements:



Signal word:

Danger

Hazard statements:

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 through prolonged or repeated exposure if inhaled.
H410 - Very toxic to aquatic life with long lasting effects.
H272 - May intensify fire, oxidiser.

Precautionary statements:

P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Other hazards:

No information available.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Chemical name	Weight -%	EC No (EU Index No)	UK REACH reg no.	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Potassium Permanganate 7722-64-7	90-100%	231-760-3 (025-002-00-9)	-	Ox. Sol. 2 (H272) Acute Tox. 4 (H302) Skin Corr. 1C (H314) Eye Dam. 1 (H318) Repr. 2 (H361d) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	10	10

Full text of H- and EUH-phrases: see section 16.

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59).

4. FIRST AID MEASURES

Description of first aid measures:

General advice:

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation:

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention. Chemical burns must be treated promptly by a physician.

Skin contact:

Wash off immediately with plenty of water. Take off contaminated clothing. Chemical burns must be treated promptly by a physician.

Ingestion:

Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider:

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed:

Eyes:

Burning sensation. Causes serious eye damage.

Dermal:

Burning sensation. Causes severe burns.

[cont...]

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Indication of any immediate medical attention and special treatment needed:

Note to doctors: Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or oesophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
NOTE! Effects may be delayed. Keep affected person under observation.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Water spray. Dry chemical. Alcohol resistant foam.

Large fire: CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media: Do not scatter spilled material with high pressure water streams.

Special hazards arising from the substance or mixture:

Specific hazards arising from the chemical:

The product is an oxidiser. Danger of explosion in contact with combustible materials.
Exposure to combustion products may be a hazard to health.

Advice for firefighters:

Special protective equipment and precautions for fire-fighters:

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Cool containers with flooding quantities of water until well after fire is out. Collect contaminated fire extinguishing water separately. Do not allow it to enter drains or surface water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Evacuate personnel to safe areas. Ventilate area of leak or spill. Do not get in eyes, on skin, or on clothing. Avoid generation of dust. Do not breathe dust. Use personal protection recommended in Section 8.

Other information: Refer to protective measures listed in Sections 7 and 8.

For emergency responders: See Section 8 for information on appropriate personal protective equipment.

Environmental precautions: Suppress (knock down) gases/vapours/mists with a water spray jet. Keep out of drains, sewers, ditches and waterways. Retain contaminated washing water and dispose of it. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up:

Methods for containment: Contain spill and move containers from spill area. Take up mechanically, placing in appropriate containers for disposal. Ventilate the area.

Methods for cleaning up: Clean contaminated objects and areas thoroughly observing environmental regulations.

Prevention of secondary hazards: Observe good chemical hygiene practices.

Reference to other sections: See section 8 for more information. See section 13 for more information.

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7. HANDLING AND STORAGE

Precautions for safe handling:

Advice on safe handling:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe dust. Use only with adequate ventilation. Remove dust deposits. ATTENTION: Contaminated organic solids (like textiles/paper) may ignite without an external source of ignition (self-ignition) after the water has evaporated. Wash contaminated material at once with plenty of water.

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Barrier creams may help to protect the exposed areas of skin. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities:

Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store locked up. Keep away from heat. Protect from humidity. Store away from direct sunlight or ultraviolet light. Keep away from food, drink and animal feeding stuffs. Keep at temperatures between 10 and 35°C. Keep valves and fittings free from oil and grease. Store away from incompatible materials. Reducing agents. Acids. See section 10 for more information. Keep/store away from clothing/combustible materials.

Packaging materials:

Only packages which are UN approved may be used.

Specific end use(s):

See section 1 for more information.

Risk Management Methods (RMM): The information required is contained in this Safety Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Exposure Limits:

Manganese, inorganic compounds, CAS 7722-64-7: TWA 0.05 mg/m³ (IOELV).

Biological occupational exposure limits: This product, as supplied, does not contain any hazardous materials with biological limits established by the region-specific regulatory bodies.

Derived No Effect Level (DNEL) – Workers:

Chemical name	Oral	Dermal	Inhalation
POTASSIUM PERMANGANATE 7722-64-7			0.2 mg/m ³ [4] [6]

[4] Systemic health effects.

[6] Long term.

Derived No Effect Level (DNEL) - General Public:

Chemical name	Oral	Dermal	Inhalation
POTASSIUM PERMANGANATE 7722-64-7	0.01111 mg/kg [4] [6]		0.0389 mg/m ³ [4] [6]

[4] Systemic health effects.

[6] Long term.

[cont...]

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Predicted No Effect Concentration (PNEC):

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
POTASSIUM PERMANGANATE 7722-64-7	0.00006 mg/l	0.6 µg/L			

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
POTASSIUM PERMANGANATE 7722-64-7			1.64 mg/L		1.64 mg/l

Exposure controls:

Engineering controls: Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact during pregnancy/while nursing.

Personal protective equipment:

Eye/face protection: Use eye protection according to EN 166. Face protection shield and/or safety goggles.

Hand protection: Chemical resistant gloves required for prolonged or repeated contact. Gloves must conform to standard EN 374. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Examples of acceptable glove barrier materials include: Polyvinyl chloride (PVC). Natural rubber. Polychloroprene. Nitrile rubber. Fluorinated rubber.

Gloves:

Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Polyvinyl chloride (PVC) Rubber (natural, latex) Chloroprene rubber (CR)	>= 0.5 mm	> 480 minutes
Long term (repeated)	Nitrile rubber	>= 0.35 mm	> 480 minutes
Long term (repeated)	Fluorinated rubber	>= 0.4 mm	> 480 minutes

Skin and body protection: Protective clothing for use against solid particulates.

Respiratory protection: In case of inadequate ventilation wear respiratory protection. Use respiratory equipment with particle filter, type P2. Particulates filter conforming to EN 143.

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Barrier creams may help to protect the exposed areas of skin. Remove contaminated clothing and protective equipment before entering eating areas.

Environmental exposure controls: Use appropriate container to avoid environmental contamination. Keep out of drains, sewers, ditches and waterways.

[cont...]

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	Solid.
Appearance:	Crystalline.
Colour:	Violet.
Odour:	Odourless.
Odour threshold:	No information available.
Melting point / freezing point:	150°C. Decomposes.
Initial boiling point and boiling range:	Not determined.
Flammability:	Non-combustible.
Flammability Limit in Air:	Not applicable.
Upper flammability or explosive limits:	
Lower flammability or explosive limits:	
Flash point:	Not applicable.
Autoignition temperature:	Not applicable.
Decomposition temperature:	> 240°C. No information available.
pH:	No information available.
pH (as aqueous solution):	7 - 9 solution (2%).
Kinematic viscosity:	Not applicable.
Dynamic viscosity:	No information available.
Water solubility:	Soluble in water 64 g/l @ 20°C.
Solubility(ies):	No information available.
Partition coefficient:	Not relevant. Inorganic substance.
Vapour pressure:	Not determined.
Relative density:	No information available.
Bulk density:	1300 - 1600 kg/m ³ . No information available
Liquid Density:	2.7 g/cm ³ @ 20°C
Relative vapour density:	No information available.
Particle characteristics:	No information available.
Particle Size:	No information available.
Particle Size Distribution:	No information available.
Explosive properties:	No information available.
Oxidising properties:	No information available.
Other information:	
Molecular weight:	158 g/mol

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10. STABILITY AND REACTIVITY

Reactivity: The product is an oxidiser. See sub-sections below.

Chemical stability:

Stability: Stable under recommended storage conditions.

Explosion data:

Sensitivity to mechanical impact: None.

Sensitivity to static discharge: None.

Possibility of hazardous reactions: Reacts with: Acids. Reducing agents. SULPHUR. Phosphorus. Hydrogen peroxide. Impurities. Combustible material. Coal. Wood. Paper.

Conditions to avoid: Exposure to air or moisture over prolonged periods. Avoid generation of dust.

Incompatible materials: Acids. Bases. Oxidising agent. Acids. Reducing agents. SULPHUR. Phosphorus. Hydrogen peroxide. Impurities. Combustible material. Coal. Wood. Paper.

Hazardous decomposition products: Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Information on likely routes of exposure:

Product Information:

Inhalation: May cause damage to organs through prolonged or repeated exposure if inhaled.

Eye contact: Causes serious eye damage.

Skin contact: Causes severe burns.

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics:

Symptoms: Burning. Redness. May cause irreversible damage to eyes. Shortness of breath, wheezing and coughing. The effect of inhalation may be delayed.

Acute toxicity:

Numerical measures of toxicity:

Component Information:

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium Permanganate	=750 mg/kg (Rat)	>2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Skin corrosion/irritation: Causes severe skin burns and eye damage.

POTASSIUM PERMANGANATE (7722-64-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal	0.5g	4 hours	Corrosive

[cont...]

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Serious eye damage/eye irritation: Causes serious eye damage.

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes serious eye damage

Respiratory or skin sensitisation: Based on available data the classification criteria are not met.

POTASSIUM PERMANGANATE (7722-64-7)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity: Based on available data the classification criteria are not met.

Component Information

POTASSIUM PERMANGANATE (7722-64-7)

Method	Species	Results
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	Mouse	Negative

Carcinogenicity: Based on available data the classification criteria are not met.

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	United Kingdom
POTASSIUM PERMANGANATE	Repr. 2

STOT - single exposure: Based on available data the classification criteria are not met.

STOT - repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Based on available data the classification criteria are not met.

Other adverse effects: No information available.

12. ECOLOGICAL INFORMATION

Toxicity:

Ecotoxicity: Very toxic to aquatic life with long lasting effects.

POTASSIUM PERMANGANATE (7722-64-7)

Method	Species	Endpoint	Effective dose	Exposure time	Results
EU Method C.1	Poecilia reticulata	LC50	0.47 mg/L	96 hours	
EU Method C.2	Daphnia magna	EC50	0.06 mg/L	48 hours	
EU Method C.3	Desmodesmus subspicatus	EbC50	0.43 mg/L	72 hours	
EU Method C.3	Desmodesmus subspicatus	ErC50	0.8 mg/L	72 hours	
EU Method C.3	Desmodesmus subspicatus	NOEC	0.32 mg/L	72 hours	

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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium Permanganate	-	LC50: 2.97 - 3.11mg/L (96h, Cyprinus carpio). LC50: 3.16 - 3.77mg/L (96h, Cyprinus carpio). LC50: =2.3mg/L (96h, Lepomis macrochirus). LC50: 1.8 - 5.6mg/L (96h, Lepomis macrochirus). LC50: =2.7mg/L (96h, Lepomis macrochirus). LC50: 1.08 - 1.38mg/L (96h, Oncorhynchus mykiss). LC50: 0.769 - 1.27mg/L (96h, Oncorhynchus mykiss).	-	-

Persistence and degradability: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulation: Not applicable to inorganic substances.

Mobility in soil: No information available.

Results of PBT and vPvB assessment:

PBT and vPvB assessment: The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Potassium Permanganate	The substance is not PBT / vPvB

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Waste from residues/unused products: Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Contaminated packaging: Do not reuse empty containers. Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

[cont...]

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14. TRANSPORT INFORMATION

IATA:

UN number or ID number: UN1490
UN proper shipping name: POTASSIUM PERMANGANATE
Transport hazard class(es): 5.1
Packing group: II
Environmental hazards: Yes
Special precautions for user:
Special Provisions: None
ERG Code: 5L

IMDG:

UN number or ID number: UN1490
UN proper shipping name: POTASSIUM PERMANGANATE
Transport hazard class(es): 5.1
Packing group: II
Environmental hazards: Yes
Special precautions for user:
Special Provisions: None
EmS-No: F-H, S-Q

Maritime transport in bulk according to IMO instruments: No information available

RID:

UN number or ID number: UN1490
UN proper shipping name: POTASSIUM PERMANGANATE
Transport hazard class(es): 5.1
Packing group: II
Environmental hazards: Yes
Special precautions for user:
Special Provisions: None
Classification code: O2

ADR:

UN number or ID number: UN1490
UN proper shipping name: POTASSIUM PERMANGANATE
Transport hazard class(es): 5.1
Packing group: II
Environmental hazards: Yes
Special precautions for user:
Special Provisions: None
Classification code: O2
Tunnel restriction code: (E)

[cont...]

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15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

National regulations:

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Product restricted per REACH Annex XVII: 3

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
POTASSIUM PERMANGANATE 7722-64-7	75	-

Persistent Organic Pollutants: Not applicable.

Export Notification requirements: Not applicable.

Dangerous substance category per COMAH Regulations 2015 (as amended):

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

P8 - OXIDISING LIQUIDS AND SOLIDS

Named dangerous substances per COMAH Regulations 2015 (as amended): Not applicable.

The Ozone-Depleting Substances Regulations 2015: Not applicable.

The Biocidal Products Regulations 2001 (as amended): Not applicable.

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended): Not applicable.

Poisons Act 1972 (Explosive Precursors) Regulations (as amended): Not applicable.

Chemical safety assessment:

Chemical Safety Report: A Chemical Safety Assessment has been carried out for this substance.

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet:

Full text of H-Statements referred to under section 3:

H272 - May intensify fire, oxidiser

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H361d - Suspected of damaging the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

[cont...]

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Legend:

SVHC: Substances of Very High Concern for Authorisation
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: Exposure controls/personal protection:

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value
*	Skin designation
+	Sensitisers

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.