

Safety Data Sheet **MANGANESE CHLORIDE Tetrahydrate**

SDS no. P8JF7N31 • Version 1.0 • Date of issue: 2024-06-13

SECTION 1: Identification

GHS Product identifier

Product name MANGANESE CHLORIDE Tetrahydrate

Recommended use of the chemical and restrictions on use

Catalyst in the chlorination of organic compounds, paint drier, dyeing, pharmaceutical preparations, fertiliser compositions, feed additive, dietary supplement, Winkler's determination of dissolved oxygen, steel alloy manufacture, other alloys with iron, copper, zinc and aluminium, analytical reagent and laboratory reagent.

Supplier's details

Name ChemSupply Australia Pty Ltd
Address 38-50 Bedford Street
5013 Gillman South Australia
Australia

Telephone 08 8440 2000
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Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, oral, Cat. 4
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2

GHS label elements, including precautionary statements

Pictograms



Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed
H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/phycsian if you feel unwell,
P501 Dispose of contents/container to an approved waste disposal facility
P273 Avoid release to the environment.
P391 Collect spillage.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 197.91

Components

Component	CAS no.	Concentration
Manganese (II) chloride tetrahydrate	13446-34-9	<= 100 % (weight)
CLASSIFICATIONS: Acute toxicity, oral, Cat. 4; Hazardous to the aquatic environment, long-term (chronic), Cat. 2. HAZARDS: H302 - Harmful if swallowed; H411 - Toxic to aquatic life with long lasting effects.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

If inhaled Remove victim to fresh air. If breathing has stopped, apply artificial respiration. Seek medical advice if effects persist.

In case of skin contact Wash affected areas with copious quantities of water immediately. If irritation occurs seek medical advice.

In case of eye contact Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.

If swallowed Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Not combustible. Use measures suitable for extinguishing surrounding fire.

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Specific hazards arising from the chemical

Hazards from Combustion Products: May evolve toxic fumes in fire (hydrogen chloride).

Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Runoff may pollute waterways.

Special protective actions for fire-fighters

Wear SCBA and structural firefighter's uniform.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation and ingestion. Avoid contact with skin, eyes and clothing.

Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Prevent further leakage or spillage and prevent from entering drains Use appropriate containment to avoid environmental contamination.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid generation or accumulation of dusts.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place. Keep containers closed at all times. Keep container tightly closed and in a cool, well-ventilated place

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or

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planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Rose-coloured crystals.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	58 °C (anhydrous subs.).
Boiling point or initial boiling point and boiling range	1190 °C (anhydrous). Loss of 1 H ₂ O at 106 °C, loss of all 4 H ₂ O by 198 °C.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	5 - 6 (50 g/l, H ₂ O, 20 °C).
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Very soluble (99 g/l @ 20 °C). Solubility in Organic Solvents: Soluble in alcohol. Insoluble in ether.
Partition coefficient n-octanol/water (log value)	LogP (o/w): 0.85
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 1.913
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No data available.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable under normal conditions of use and storage. Hygroscopic.

Possibility of hazardous reactions

Hazardous Polymerization: Will not occur.

Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Strong acids, hydrogen peroxide, sodium, sodium oxides, potassium and zinc.

Hazardous decomposition products

Hydrogen chloride gas, manganese, manganese oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LD50 (rat): 1484 mg/kg (RTECS)

Ingestion: May be harmful if swallowed. May cause abdominal pain and nausea. May produce hypoglycemia and decreased calcium blood levels. Poisonings rarely occur after ingestion of manganese salts, because they are poorly absorbed from the gut.

Inhalation: Irritating to the respiratory tract. Manganese fume is toxic and produces nervous system effects characterised by tiredness. May cause flu-like illness (metal fume fever), which subsides within 24-36 hours following removal from exposure. Symptoms may be delayed for up to 12 hours and begin with the sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalised feeling of malaise. Mild to severe headache, nausea, occasional vomiting, fever or chills, exaggerated mental activity, profuse sweating, diarrhoea, excessive urination and prostration may also occur. May increase the incidence of upper respiratory infections (chemical pneumonia).

// ----- From the Suggestion report (09/07/2024, 10:47 AM) ----- //

The ATE (oral) of the mixture is: 500 mg/kg bw

Skin corrosion/irritation

Causes skin irritation with redness and pain.

Serious eye damage/irritation

Causes eye irritation, smarting, redness and pain.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

No data available.

Specific target organ toxicity (STOT) - repeated exposure

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No data available.

Aspiration hazard

No data available.

Additional information

Chronic Effects: Chronic manganese poisoning can result from excessive inhalation and ingestion exposure and involves impairment of the central nervous system. Early symptoms include sluggishness, sleepiness and weakness in the legs. Advance cases have shown fixed facial expression, emotional disturbances, spastic gait and falling. Illness closely resembles Parkinson's Disease. Kidney effects, blood changes and manganese psychosis also may occur as a result of chronic exposure. Chronic inhalation exposure can cause lung damage. Prolonged exposure may cause skin reactions.

Manganese (II) chloride tetrahydrate: mouse LD50 intraperitoneal 144mg/kg (144mg/kg) Toxicology and Applied Pharmacology. Vol. 63, Pg. 461, 1982.

[Link to PubMed](#)

mouse LD50 subcutaneous 320mg/kg (320mg/kg) Toxicology Letters. Vol. 69, Pg. 45, 1993.

[Link to PubMed](#)

rat LD50 intraperitoneal 138mg/kg (138mg/kg) EHP, Environmental Health Perspectives. Vol. 10, Pg. 95, 1975.

[Link to PubMed](#)

rat LD50 oral 1484mg/kg (1484mg/kg) EHP, Environmental Health Perspectives. Vol. 10, Pg. 95, 1975.

[Link to PubMed](#)

rat LD50 parenteral 225mg/kg (225mg/kg) Journal of Inorganic and Nuclear Chemistry. Vol. 41, Pg. 1507, 1979.

SECTION 12: Ecological information

Toxicity

Toxic for aquatic organisms.

Bioaccumulative potential

Log P(o/w): 0.85.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal

Log P(o/w): 0.85.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)