

Material Safety Data Sheet

Version 3.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Manganese(II) nitrate tetrahydrate

Product Number : 63547
Brand : Sigma-Aldrich

Company : Sigma-Aldrich Canada, Ltd
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA

Telephone : +19058299500
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : $\text{MnN}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$
Molecular Weight : 251.01 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Manganese(II) nitrate tetrahydrate			
20694-39-7	-	-	-

3. HAZARDS IDENTIFICATION**Emergency Overview****Target Organs**

Blood, Central nervous system, Lungs

WHMIS Classification

C Oxidizing Material
D2A
D2B

Oxidizer
Carcinogen
Moderate skin irritant
Moderate respiratory irritant
Moderate eye irritant

HMIS Classification

Health Hazard: 0
Flammability: 0
Physical hazards: 3

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.

Ingestion

May be harmful if swallowed.

4. FIRST AID MEASURES**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Flammable properties**

Flash point not applicable

Ignition temperature no data available

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers. The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from combustible material.

Storage

Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	crystalline
Colour	light red

Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong reducing agents, Strong acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO_x)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

IARC: Group 2A - Probably carcinogenic to humans (Manganese(II) nitrate tetrahydrate)

Signs and Symptoms of Exposure

Men exposed to manganese dusts showed a decrease in fertility. Chronic manganese poisoning primarily involves the central nervous system. Early symptoms include languor, sleepiness and weakness in the legs. A stolid mask-like appearance of the face, emotional disturbances such as uncontrollable laughter and a spastic gait with tendency to fall in walking are findings in more advanced cases. High incidence of pneumonia has been found in workers exposed to the dust or fume of some manganese compounds. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.
Target Organs	Blood, Central nervous system, Lungs,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 2724 Class: 5.1

Packing group: III

Proper shipping name: Manganese nitrate

Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 2724 Class: 5.1 Packing group: III EMS-No: F-A, S-Q
Proper shipping name: MANGANESE NITRATE
Marine pollutant: No

IATA

UN-Number: 2724 Class: 5.1 Packing group: III
Proper shipping name: Manganese nitrate

15. REGULATORY INFORMATION

DSL Status

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

Manganese(II) nitrate tetrahydrate	CAS-No. 20694-39-7
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WHMIS Classification

C	Oxidizing Material	Oxidizer
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D2B		Moderate skin irritant
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		Moderate eye irritant

16. OTHER INFORMATION

Further information

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