

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/23/2014

Reviewed on 05/25/2012

1 Identification**Product identifier****Product name:** Manganese(II) chloride tetrahydrate**Stock number:** 11563**CAS Number:**
13446-34-9**EC number:**
231-869-6**Relevant identified uses of the substance or mixture and uses advised against.****Identified use:** SU24 Scientific research and development**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department**Emergency telephone number:**

During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification**Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R22: Harmful if swallowed.

Information concerning particular hazards for human and environment: Not applicable**Hazards not otherwise classified** No information known.**Label elements****Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms

GHS06

Signal word Danger**Hazard statements**

H301 Toxic if swallowed.

Precautionary statements

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...

P321 Specific treatment (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification Not controlled**Classification system****HMIS ratings (scale 0-4)****(Hazardous Materials Identification System)**

HEALTH	2
FIRE	0
REACTIVITY	0

Health (acute effects) = 2

Flammability = 0

Physical Hazard = 0

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Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS# Description:
 13446-34-9 Manganese(II) chloride tetrahydrate
Identification number(s):
EC number: 231-869-6

4 First-aid measures

Description of first aid measures
After inhalation
 Supply fresh air. If required, provide artificial respiration. Keep patient warm.
 Seek immediate medical advice.
After skin contact
 Immediately wash with water and soap and rinse thoroughly.
 Seek immediate medical advice.
After eye contact
 Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing Seek medical treatment.
Information for doctor
Most important symptoms and effects, both acute and delayed
 No further relevant information available.
Indication of any immediate medical attention and special treatment needed
 No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents
 Product is not flammable. Use fire fighting measures that suit the surrounding fire.
Special hazards arising from the substance or mixture
 If this product is involved in a fire, the following can be released:
 Hydrogen chloride (HCl)
 Metal oxide fume
Advice for firefighters
Protective equipment:
 Wear self-contained respirator.
 Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
 Wear protective equipment. Keep unprotected persons away.
 Ensure adequate ventilation
Environmental precautions:
 Do not allow material to be released to the environment without proper governmental permits.
 Do not allow product to reach sewage system or any water course.
 Do not allow to penetrate the ground/soil.
Methods and material for containment and cleaning up:
 Dispose contaminated material as waste according to item 13.
Prevention of secondary hazards: No special measures required.
Reference to other sections
 See Section 7 for information on safe handling
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7 Handling and storage

Handling
Precautions for safe handling
 Handle under dry protective gas.
 Keep container tightly sealed.
 Store in cool, dry place in tightly closed containers.
 Ensure good ventilation at the workplace.

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Information about protection against explosions and fires: The product is not flammable**Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:**

Store away from water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

Store away from reducing agents.

Further information about storage conditions:

Store under dry inert gas.

This product is hygroscopic.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and water.

Specific end use(s) No further relevant information available.**8 Exposure controls/personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters**Components with limit values that require monitoring at the workplace:****13446-34-9 Manganese(II) chloride tetrahydrate (100.0%)**

PEL (USA)	Ceiling limit value: 5 mg/m ³ as Mn
REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV (USA)	Long-term value: 0.02* 0.1* mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0.2 mg/m ³ as Mn; R

Additional information: No data**Exposure controls****Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses**Body protection:** Protective work clothing.**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Crystalline or powder
Color:	Pink
Odor:	Odorless
Odor threshold:	Not determined.

pH-value: Not applicable.**Change in condition**

Melting point/Melting range:	58 °C (136 °F)
Boiling point/Boiling range:	106 °C (223 °F) (-H ₂ O)
Sublimation temperature / start:	Not determined

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Flammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
Danger of explosion:	Not determined.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not applicable.
Density at 20 °C (68 °F):	2.01 g/cm ³ (16.773 lbs/gal)
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water at 8 °C (46 °F):	1510 g/l Soluble
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No information known.

Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions Reacts with strong oxidizing agents

Incompatible materials:

- Acids
- Water/moisture
- Oxidizing agents
- Reducing agents
- Zinc
- Potassium
- Sodium

Hazardous decomposition products:

- Hydrogen chloride (HCl)
- Metal oxide fume

11 Toxicological information

Information on toxicological effects

Acute toxicity:
Harmful if swallowed.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effects known.

Germ cell mutagenicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity:
EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.

Reproductive toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

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Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information**Toxicity**

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:**General notes:**

Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations**Waste treatment methods**

Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information**UN-Number**

DOT, ADR, ADN, IMDG, IATA

Not applicable

UN proper shipping name

DOT, ADR, ADN, IMDG, IATA

Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

Not applicable

Packing group

DOT, ADR, IMDG, IATA

Not applicable

Environmental hazards:

Not applicable.

Special precautions for user

Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:**DOT****Marine Pollutant (DOT):**

No

UN "Model Regulation":

-

15 Regulatory information

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

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)

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California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

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Prop 65 - Developmental toxicity Substance is not listed.**Prop 65 - Developmental toxicity, female** Substance is not listed.**Prop 65 - Developmental toxicity, male** Substance is not listed.**Information about limitation of use:**

For use only by technically qualified individuals.

This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

Other regulations, limitations and prohibitive regulations**Substances of very high concern (SVHC) according to REACH, Article 57**

Substance is not listed.

REACH - Pre-registered substances Substance is listed.**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Health, Safety and Environmental Department.**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

DOT: US Department of Transportation

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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