Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision date: 24.07.2023	*Version: 6.2*	*Print date: 24.07.2023*

SECTION 1: Identification

Product identifier

Trade name/designation:	Manganese chloride tetrahydrate ACS
Product No.:	E107
Synonyms:	none
CAS No.:	13446-34-9

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

Recommended use	For Further Manufacturing Use Only
Uses advised against	Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Supplier

VWR International LLC

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/City	Radnor, PA 19087
Telephone	+1-800-932-5000 toll-free within US/Canada +1-610-386-1700
Telefax	+1-610-728-2103

Emergency phone number

Telephone +1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA)

Preparation Information

VWR International - Product Information Compliance

E-mail SDS@avantorsciences.com

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard classes and hazard categories	Hazard statements
Acute toxicity, category 4, oral	H302

2.2 Label elements

Labelling in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard pictograms

Signal word: Warning

Hazard statements	
H302	Harmful if swallowed.

Precautionary statements	
P264	Wash … thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/…/if you feel unwell.
P501	Dispose of contents/container to …

Hazard(s) not otherwise classified (HNOC)

none

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name	Manganese (II) chloride tetrahydrate
Molecular formula	MnCl2.4H2O
Molecular weight	197.91 g/mol
CAS No.	13446-34-9

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Change contaminated, saturated clothing. Wash contaminated clothing before reuse. Do not leave affected person unattended.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

In case of skin contact

Take off immediately all contaminated clothing. Wash off any skin contamination immediately. Call a POISON CENTER/doctor.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist. Immediately call a POISON CENTER.

In case of ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Never give anything by mouth to an unconscious person or a person with cramps.

Self-protection of the first aider

First aider: Pay attention to self-protection!

4.2 Most important symptoms/effects, acute and delayed

Abdominal pain. Nausea. Vomiting. Risk of serious damage to eyes. Risk of blindness. Ingestion causes nausea, weakness and central nervous system effects.

4.3 Indication of any immediate medical attention and special treatment needed

No special information on medical attention and special treatment available.

SECTION 5: Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media

The product itself does not burn.
Co-ordinate fire-fighting measures to the fire surroundings.
Water spray.
Dry extinguishing powder.
Alcohol resistant foam.
Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons

Full water jet.

5.2 Specific hazards arising from the chemical

In case of fire and/or explosion do not breathe fumes.
Do not allow run-off from fire-fighting to enter drains or water courses.
In case of fire: Evacuate area.

In case of fire may be liberated:
Hydrogen chloride (HCl)

5.3 Advice for firefighters

Non-combustible corrosive substances (liquid).
Do not breathe gas/fume/vapor/spray.
Fight fire with normal precautions from a reasonable distance.
Protective equipment and precautions for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear personal protection equipment (refer to section 8). Avoid contact with eyes. Avoid breathing dust/mist. Provide adequate ventilation. Remove victim out of the danger area. First Aid, decontamination, treatment of symptoms.

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Dispose according to legislation.

6.4 Reference to other sections

Personal protection equipment (PPE): see section 8 Disposal information: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling
Use extractor hood (laboratory).
Use only in well-ventilated areas.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Avoid contact with eyes and skin.
Use personal protective equipment as required.
Measures to prevent fire, aerosol and dust generation
Usual measures for fire prevention.
Use only in well-ventilated areas.
Measures required to protect the environment
Do not empty into drains.
Collect spillage.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: Store between 15 °C and 30 °C.
Storage: Store in a dry place. Store in a closed container. Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity. Hygroscopic. Packaging materials: Polyethylene Unsuitable materials and coatings of containers/equipment: Aluminium Zinc

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

<u>By short-term hand contact</u>	
Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time	> 480 min

<u>By long-term hand contact</u>	
Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time	> 480 min

Respiratory protection

Usually no personal respirative protection necessary. Required when dusts are generated. Wear respiratory protection.

Additional information

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	solid
Color:	pink
Odor:	no data available

Safety relevant basic data

pH:	3.5-6 (50 g/l; H2O; 20 °C)
Melting point/freezing point:	58-59 °C
Initial boiling point and boiling range:	1190 °C (1013 hPa)
Flash point:	no data available
Flammability:	not applicable
Lower and upper explosion limit	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Vapor pressure:	no data available
Relative vapour density:	no data available
Density and/or relative density	
Density:	2.01 g/cm³ (20 °C)
Solubility(ies)	
Water solubility:	1,980 g/l (20 °C)
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	not applicable
Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
Particle characteristics:	no nanoform

9.2 Other information

Evaporation rate:	no data available
Explosive properties:	no data available
Oxidising properties:	not applicable
Bulk density:	no data available
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is non-reactive under normal conditions.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reaction with:
Oxidizing agent, strong.
Strong acid
Explosion hazard with:
Alkali metals
Zinc

10.4 Conditions to avoid

Protect from moisture.
Keep away from heat.
Possible decomposition might be provoken.

10.5 Incompatible materials:

Light metal
Metal.

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects
Acute oral toxicity:
LD50: > 1484 mg/kg - Rat - (RTECS)

Acute dermal toxicity:
no data available

Acute inhalation toxicity:
no data available

Irritant and corrosive effects:
Primary irritation to the skin:
not applicable

Irritation to eyes:
not applicable

Irritation to respiratory tract:
not applicable

Respiratory or skin sensitization
In case of skin contact: not sensitizing
In case of inhalation: not sensitizing

STOT-single exposure
not applicable

STOT-repeated exposure
not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity
No indication of human carcinogenicity.

Germ cell mutagenicity
No indications of human germ cell mutagenicity exist.

Reproductive toxicity
No indications of human reproductive toxicity exist.

Aspiration hazard
not applicable

Other adverse effects
no data available

Additional information
no data available

SECTION 12: Ecological information

12.1 Toxicity

Fish toxicity:
no data available

Daphnia toxicity:
no data available

Algae toxicity:
no data available

Bacteria toxicity:
no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

12.4 Mobility in soil:

no data available

12.5 Results of PBT/vPvB assessment

not applicable

12.6 Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to the environment.

12.7 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Waste requires monitoring. Send to a hazardous waste incinerator facility under observation of official regulations.

Waste code product: no data available

Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

Additional information

Directive 2008/98/EC (Waste Framework Directive)

No further relevant information available.

SECTION 14: Transport information

Land transport (DOT)

No dangerous good in sense of this transport regulation.

Sea transport (IMDG)

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not relevant

Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

National regulations

Toxic Substances Control Act (TSCA)
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

SARA 313 Components
Not listed.

US State Regulations

Massachusetts Right To Know Components
Not listed.

Pennsylvania Right To Know Components
Not listed.

New Jersey Right To Know Components
Not listed.

California Prop. 65 Components

Not listed.

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygiensts
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TDG - Transport of Dangerous Goods
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative

Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

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24.07.2023	6.2	24.07.2023

Additional information

Indication of changes	Section 2 If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safty precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.