



## SAFETY DATA SHEET

# Manganese(II) sulfate monohydrate 98 +%, pure

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

<i>Trade name:</i>	Manganese(II) sulfate monohydrate 98 +%, pure
<i>Product no.:</i>	MNS324
<i>Other means of identification:</i>	EC No.: 600-072-9 CAS No.: 10034-96-5

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

<i>Relevant identified uses of the substance or mixture:</i>	Laboratory use
<i>Uses advised against :</i>	None known.

### 1.3. Details of the supplier of the safety data sheet

<i>Company and address:</i>	<b>Laboratoriumdiscounter</b> Zandvoortstraat 75 1976BN IJmuiden Netherlands Tel: +31 255 700 210 <a href="http://www.laboratoriumdiscounter.nl/en/">www.laboratoriumdiscounter.nl/en/</a>
<i>E-mail:</i>	<a href="mailto:info@laboratoriumdiscounter.nl">info@laboratoriumdiscounter.nl</a>
<i>Revision:</i>	13/03/2023
<i>SDS Version:</i>	1.0

### 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).  
See section 4 "First aid measures".

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Eye Dam. 1; H318, Causes serious eye damage.  
STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.  
Aquatic Chronic 2; H411, Toxic to aquatic life with long lasting effects.

### 2.2. Label elements

*Hazard pictogram(s):*



*Signal word:*

Danger

*Hazard statement(s):*

Causes serious eye damage. (H318)  
May cause damage to organs through prolonged or repeated exposure. (H373)



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Toxic to aquatic life with long lasting effects.  
(H411)

*Safety statement(s):*

*General:*

If medical advice is needed, have product container or label at hand. (P101)  
Keep out of reach of children. (P102)

*Prevention:*

Do not breathe dust. (P260)  
Avoid release to the environment. (P273)  
Wear eye protection/protective gloves/protective clothing. (P280)

*Response:*

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)  
Get medical advice/attention if you feel unwell. (P314)

*Storage:*

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*Disposal:*

Dispose of contents/container in accordance with local regulation. (P501)

*Hazardous substances:*

Manganese(II) sulfate monohydrate 98 +%, pure

*Additional labelling:*

Not applicable.

### 2.3. Other hazards

*Additional warnings:*

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.  
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Product/substance	Identifiers	% w/w	Classification	Note
Manganese(II) sulfate monohydrate 98 +%, pure	CAS No.: 10034-96-5 EC No.: 600-072-9 UK-REACH: Index No.:	95-100%	Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Chronic 2, H411	

### 3.2. Mixtures

Not applicable. This product is a substance.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.



## Other information

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## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### *General information:*

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### *Inhalation:*

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

#### *Skin contact:*

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

#### *Eye contact:*

Upon irritation of the eye: Remove contact lenses. Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

#### *Ingestion:*

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

#### *Burns:*

Not applicable.

### 4.2. Most important symptoms and effects, both acute and delayed

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

### 4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:

Get immediate medical advice/attention.

### Information to medics

Bring this safety data sheet or the label from this product.



## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.  
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

### 5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Sulphur oxides

Some metal oxides

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: 2Z

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

### 6.3. Methods and material for containment and cleaning up

Collect spills carefully. Moist the material with water in order to prevent the formation and propagation of dust.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Powder trickling out onto the floor or onto other containers must be prevented.



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*Recommended storage material:* Keep only in original packaging.  
*Storage temperature:* Room temperature 15 to 25°C  
*Incompatible materials:* Keep only in original packaging.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

No substances are listed in the national list of substances with an occupational exposure limit.

#### DNEL

No data available.

#### PNEC

No data available.

### 8.2. Exposure controls

Control is unnecessary if the product is used as intended.

*General recommendations:* Smoking, drinking and consumption of food is not allowed in the work area.

*Exposure scenarios:* There are no exposure scenarios implemented for this product.

*Exposure limits:* Occupational exposure limits have not been defined for the substances in this product.

*Appropriate technical measures:* Airborne gas and dust concentrations must be kept at a minimum. Provide efficient mechanical ventilation. If not possible use suitable respiratory equipment.


*Hygiene measures:* In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

*Measures to avoid environmental exposure:* Keep damming materials near the workplace. If possible, collect spillage during work.


### Individual protection measures, such as personal protective equipment

*Generally:* Use only UKCA marked protective equipment.

#### Respiratory Equipment:

Type	Class	Colour	Standards	
SL	P3	White	EN149	


#### Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	


#### Hand protection:



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Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,3	> 480	EN374-2, EN374-3, EN388	

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Powder
<i>Colour:</i>	Pink
<i>Odour / Odour threshold:</i>	Testing not relevant or not possible due to the nature of the product.
<i>pH:</i>	Testing not relevant or not possible due to the nature of the product.
<i>pH in solution:</i>	3 – 3,5 (5%)
<i>Density (g/cm<sup>3</sup>):</i>	2.95
<i>Kinematic viscosity:</i>	Does not apply to solids.
<i>Particle characteristics:</i>	Testing not relevant or not possible due to the nature of the product.

#### Phase changes

<i>Melting point/Freezing point (°C):</i>	>449
<i>Softening point/range (waxes and pastes) (°C):</i>	Does not apply to solids.
<i>Boiling point (°C):</i>	Does not apply to solids.
<i>Vapour pressure:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Relative vapour density:</i>	Does not apply to solids.
<i>Decomposition temperature (°C):</i>	>400

#### Data on fire and explosion hazards

<i>Flash point (°C):</i>	Does not apply to solids.
<i>Flammability (°C):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Auto-ignition temperature (°C):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Lower and upper explosion limit (% v/v):</i>	Does not apply to solids.

#### Solubility

<i>Solubility in water:</i>	Testing not relevant or not possible due to the nature of the product.
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*n*-octanol/water coefficient:

Testing not relevant or not possible due to the nature of the product.

*Solubility in fat (g/L):*

Testing not relevant or not possible due to the nature of the product.

## 9.2. Other information

*Other physical and chemical parameters:*

No data available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

Keep only in original packaging.

### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

#### Acute toxicity

Based on available data, the classification criteria are not met.

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Serious eye damage/irritation

Causes serious eye damage.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.



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### **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.

### **11.2. Information on other hazards**

#### **Long term effects**

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

#### **Endocrine disrupting properties**

Not applicable.

#### **Other information**

None known.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1. Toxicity**

No data available.

### **12.2. Persistence and degradability**

No data available.

### **12.3. Bioaccumulative potential**

No data available.

### **12.4. Mobility in soil**

No data available.

### **12.5. Results of PBT and vPvB assessment**

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

### **12.6. Endocrine disrupting properties**

Not applicable.

### **12.7. Other adverse effects**

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

### **Waste treatment methods**

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 14 - Ecotoxic

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

### **EWC code**

Not applicable.





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### Specific labelling

Not applicable.

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN3077	ENVIRONMENTAL LY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Class: 9 Labels: 9 Classification code: M7  	III	Yes	Limited quantities: 5 kg Tunnel restriction code: (-) See below for additional information.
IMDG	UN3077	ENVIRONMENTAL LY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Class: 9 Labels: 9 Classification code: M7  	III	Yes	Limited quantities: 5 kg EmS: F-A S-F See below for additional information.
IATA	UN3077	ENVIRONMENTAL LY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Class: 9 Labels: 9 Classification code: M7  	III	Yes	See below for additional information.

\* Packing group

\*\* Environmental hazards

### Additional information

These substances when carried in single or combination packaging's containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR/IMDG/IATA provided the packaging's meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.4 - 4.1.1.8 (ADR, IMDG) / 5.0.2.4.1, 5.0.2.6.1.1, 5.0.2.8 (IATA).

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ADR / See Table A, Section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: 2Z

#### 14.6. Special precautions for user

Not applicable.

#### 14.7. Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: REGULATORY INFORMATION

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

*Restrictions for application:*

People under the age of 18 shall not be exposed to this product.  
Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

*Demands for specific education:*

No specific requirements.

*SEVESO - Categories / dangerous substances:*

E2 - ENVIRONMENTAL HAZARDS, Qualifying quantity (lower-tier): 200 tonnes / (upper-tier): 500 tonnes

*Additional information:*

Tactile warning.

*Sources:*

The Management of Health and Safety at Work Regulations 1999.  
The Health and Safety at Work etc. Act 1974  
Regulations 2013.  
Control of Major Accident Hazards (COMAH) Regulations 2015.  
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.  
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.  
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

### 15.2. Chemical safety assessment

No



## SECTION 16: OTHER INFORMATION

### Full text of H-phrases as mentioned in section 3

H318, Causes serious eye damage.

H373, May cause damage to organs through prolonged or repeated exposure.

H411, Toxic to aquatic life with long lasting effects.

### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

### Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The classification of the substance/mixture in regard of environmental hazards are in



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accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

**The safety data sheet is validated by**

Chris

**Other**

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en