

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Mangan(II)-sulfat-1-Wasser

### 1.2 Other means of identification

**Product number** -  
**Other names** Manganese sulfate monohydrate;Manganese Sulphate Monohydrate;Manfanous sulfate monohydrate

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yansheng Internet Technology Co., Ltd  
**Address** 513, A3 / F, green space future center, Fengxian District, Shanghai, 201400, China  
**Telephone** +86-4000-6969-66

### 1.5 Emergency phone number

**Emergency phone number** +86-4000-6969-66  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Specific target organ toxicity – repeated exposure, Category 2  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Warning  
**Hazard statement(s)** H411 Toxic to aquatic life with long lasting effects  
**Precautionary statement(s)**  
**Prevention** P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
**Response** P319 Get medical help if you feel unwell.  
P391 Collect spillage.

|                 |                                                                                                                                                                                           |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage</b>  | none                                                                                                                                                                                      |
| <b>Disposal</b> | P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |

### 2.3 Other hazards which do not result in classification

no data available

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name              | Common names and synonyms  | CAS number | EC number | Concentration |
|----------------------------|----------------------------|------------|-----------|---------------|
| Mangan(II)-sulfat-1-Wasser | Mangan(II)-sulfat-1-Wasser | 10034-96-5 | 600-072-9 | 100%          |

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Fresh air, rest.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with plenty of water for several minutes (remove contact lenses if easily possible).

#### Following ingestion

Rinse mouth. Seek medical attention if you feel unwell.

### 4.2 Most important symptoms/effects, acute and delayed

no data available

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

no data available

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

### 5.2 Specific hazards arising from the chemical

Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.

### 5.3 Special protective actions for fire-fighters

In case of fire in the surroundings, use appropriate extinguishing media.

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## SECTION 6: Accidental release measures

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

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water. Store and dispose of according to local regulations.

## 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Dry. Well closed. Store in an area without drain or sewer access.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

TLV: (as Mn, respirable fraction): 0.02 mg/m<sup>3</sup>, as TWA; (as Mn, inhalable fraction): 0.1 mg/m<sup>3</sup>, as TWA; A4 (not classifiable as a human carcinogen).EU-OEL: (as Mn, respirable fraction): 0.05 mg/m<sup>3</sup> as TWA; (as Mn, inhalable fraction): 0.2 mg/m<sup>3</sup> as TWA.MAK: (as Mn, respirable fraction): 0.02 mg/m<sup>3</sup>; (as Mn, inhalable fraction): 0.2 mg/m<sup>3</sup>; peak limitation category: II(8); pregnancy risk group: C

#### Biological limit values

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

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

#### Eye/face protection

Wear safety spectacles or eye protection in combination with breathing protection if powder.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use local exhaust or breathing protection.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

|                       |                      |
|-----------------------|----------------------|
| <b>Physical state</b> | Solid. Powder.       |
| <b>Colour</b>         | Extremely pale pink. |
| <b>Odour</b>          | no data available    |

|                                                                 |                                                                      |
|-----------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Melting point/freezing point</b>                             | > 449.85°C. Remarks:± 0.5.                                           |
| <b>Boiling point or initial boiling point and boiling range</b> | 850°C                                                                |
| <b>Flammability</b>                                             | no data available                                                    |
| <b>Lower and upper explosion limit/flammability limit</b>       | no data available                                                    |
| <b>Flash point</b>                                              | no data available                                                    |
| <b>Auto-ignition temperature</b>                                | no data available                                                    |
| <b>Decomposition temperature</b>                                | no data available                                                    |
| <b>pH</b>                                                       | no data available                                                    |
| <b>Kinematic viscosity</b>                                      | no data available                                                    |
| <b>Solubility</b>                                               | In water: >= 42.5 - <= 45 %w/w. Temperature:20 °C. pH:>= 6 - <= 6.5. |
| <b>Partition coefficient n-octanol/water</b>                    | no data available                                                    |
| <b>Vapour pressure</b>                                          | 3.35E-05mmHg at 25°C                                                 |
| <b>Density and/or relative density</b>                          | 2.93. Temperature:22 °C.                                             |
| <b>Relative vapour density</b>                                  | no data available                                                    |
| <b>Particle characteristics</b>                                 | no data available                                                    |

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Decomposes on heating. This produces sulfur oxides and manganese oxides. This generates toxic hazard.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (male/female) - 2 150 mg/kg bw. Remarks:MnSO4.
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT-single exposure**

The substance is irritating to the eyes.

**STOT-repeated exposure**

The substance may have effects on the central nervous system. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

**Aspiration hazard**

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed, especially if powdered.

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**SECTION 12: Ecological information****12.1 Toxicity**

- Toxicity to fish: LC50 - Salmo trutta - 49.9 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: LC50 - other aquatic crustacea: H.azteca - 3 mg Mn/L - 96 h.
- Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 61 mg/L - 72 h.
- Toxicity to microorganisms: EC50 - activated sludge of a predominantly domestic sewage - > 1 000 mg/L - 3 h. Remarks:Respiration rate.

**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 Other adverse effects**

no data available

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**SECTION 13: Disposal considerations****13.1 Disposal methods****Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

**Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and

then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: UN3077 (For reference only, please check.)      IMDG: UN3077 (For reference only, please check.)      IATA: UN3077 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)      IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)      IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.)      IMDG: 9 (For reference only, please check.)      IATA: 9 (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: III (For reference only, please check.)      IMDG: III (For reference only, please check.)      IATA: III (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: Yes      IMDG: Yes      IATA: Yes

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## SECTION 15: Regulatory information

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

| Chemical name                                                            | Common names and synonyms  | CAS number | EC number   |
|--------------------------------------------------------------------------|----------------------------|------------|-------------|
| Mangan(II)-sulfat-1-Wasser                                               | Mangan(II)-sulfat-1-Wasser | 10034-96-5 | 600-072-9   |
| European Inventory of Existing Commercial Chemical Substances (EINECS)   |                            |            | Not Listed. |
| EC Inventory                                                             |                            |            | Not Listed. |
| United States Toxic Substances Control Act (TSCA) Inventory              |                            |            | Not Listed. |
| China Catalog of Hazardous chemicals 2015                                |                            |            | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC)                               |                            |            | Listed.     |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS)       |                            |            | Listed.     |
| Vietnam National Chemical Inventory                                      |                            |            | Listed.     |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) |                            |            | Listed.     |
| Korea Existing Chemicals List (KECL)                                     |                            |            | Not Listed. |

## SECTION 16: Other information

### Information on revision

**Creation Date** July 15, 2019

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### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

The apparent melting point caused by loss of crystal water is given.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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*Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*