

# Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: September 24, 2020

## 1 Identification

- **Product identifier**
- **Trade name: Manganous Sulfate Solution**
- **Product code:** MN5175SS
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
AquaPhoenix Scientific, Inc.  
860 Gitts Run Road  
Hanover, PA 17331 USA  
Tel +1 (717)632-1291  
Toll-Free: (866)632-1291  
info@aquaphoenixsci.com
- **Distributor:**  
AquaPhoenix Scientific  
860 Gitts Run Road,  
Hanover, PA 17331  
(717) 632-1291
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Eye Dam. 1 H318 Causes serious eye damage.  
STOT RE 2 H373 May cause damage to the brain through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**  


GHS05 GHS08
- **Signal word:** Danger
- **Hazard statements:**  
H318 Causes serious eye damage.  
H373 May cause damage to the brain through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Precautionary statements:**  
P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
P280 Wear protective gloves and eye protection.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a poison center/doctor.  
 P314 Get medical advice/attention if you feel unwell.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

10034-96-5	manganese (II) sulfate monohydrate	 STOT RE 2, H373 Eye Dam. 1, H318	36.40%
7732-18-5	Water		63.60%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.  
 For the wording of the listed Hazard Statements, refer to section 16.

## 4 First-aid measures

· **Description of first aid measures**

· **General information:**

No special measures required.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately rinse with water.

If skin irritation is experienced, consult a doctor.

· **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for 15 to 20 minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Nausea in case of ingestion.

Strong irritant with the danger of severe eye injury.

Gastric or intestinal disorders when ingested.

· **Danger:**

Causes serious eye damage.

May cause damage to the brain through prolonged or repeated exposure. Route of exposure: Inhalation.

· **Indication of any immediate medical attention and special treatment needed:**

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

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## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation.  
For large spills, wear protective clothing.  
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**  
Do not allow to enter sewers/ surface or ground water.  
Prevent from spreading (e.g. by damming-in or oil barriers).
- **Methods and material for containment and cleaning up**  
Wipe up small spills with paper towel and discard.  
For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.  
Send for recovery or disposal in suitable receptacles.
- **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:**  
Prevent formation of aerosols.  
Use only in well ventilated areas.  
Avoid splashes or spray in enclosed areas.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Do not store together with alkalis (caustic solutions).  
Store away from oxidizing agents.
- **Further information about storage conditions:** Keep containers tightly sealed.
- **Specific end use(s)** No relevant information available.

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## 8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Exposure controls**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.
- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:**  
Not required under normal conditions of use.  
Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands:**



Protective gloves

- **Material of gloves**  
Butyl rubber, BR  
Fluorocarbon rubber (Viton)  
Natural rubber, NR  
Neoprene gloves  
Nitrile rubber, NBR  
Sensibilization by the components in the glove materials is possible.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Safety glasses

- Follow relevant national guidelines concerning the use of protective eyewear.
- **Body protection:** Protection may be required for spills.
- **Limitation and supervision of exposure into the environment** No special requirements.
- **Risk management measures** No special requirements.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Colorless

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· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Melting point/Melting range:</b>	Not determined.
· <b>Boiling point/Boiling range:</b>	Not determined.
· <b>Flash point:</b>	The product is not flammable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Oxidizing properties:</b>	Non-oxidizing.
· <b>Vapor pressure:</b>	Not determined.
· <b>Density:</b>	
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not determined.
· <b>Evaporation rate:</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Other information</b>	No relevant information available.

## 10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**  
Reacts with strong alkali.  
Reacts with strong oxidizing agents.  
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials**  
Oxidizers  
Alkalis
- **Hazardous decomposition products**

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Under fire conditions only:  
Sulfur oxides (SOx)

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## 11 Toxicological information

### · Information on toxicological effects

- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Based on available data, the classification criteria are not met.

### · IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

### · NTP (National Toxicology Program):

None of the ingredients are listed.

### · OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

### · Probable route(s) of exposure:

Ingestion.  
Inhalation.  
Eye contact.  
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** Causes serious eye damage.
- **Repeated dose toxicity:** Possible risk of irreversible effects.
- **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.
- **STOT-repeated exposure:**  
May cause damage to the brain through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12 Ecological information

### · Toxicity

- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.

### · Additional ecological information

#### · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Other adverse effects** No relevant information available.

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## 13 Disposal considerations

### · Waste treatment methods

#### · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

### · 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/RID/ADN, IMDG, IATA UN3082

### · UN proper shipping name

· DOT, ADR/RID/ADN, IMDG, IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MANGANESE SULPHATE SOLUTION)

### · Transport hazard class(es)

· DOT, IMDG



· Class 9  
· Label 9

· ADR/RID/ADN



· Class 9 (M6)  
· Label 9

· IATA



· Class 9  
· Label 9

### · Packing group

· DOT, ADR/RID/ADN, IMDG, IATA III

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- |  |  |
|--|--|
| · <b>Environmental hazards</b>   | Not applicable.  |
| · <b>Special precautions for user</b>  | Warning: Miscellaneous dangerous substances and articles |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.  |

## 15 Regulatory information

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

- **United States (USA)**

- **SARA**

- **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

10034-96-5 | manganese (II) sulfate monohydrate

- **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

- **Proposition 65 (California)**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **EPA (Environmental Protection Agency):**

10034-96-5 | manganese (II) sulfate monohydrate

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- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

- **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**

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

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IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
OSHA: Occupational Safety & Health Administration  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

**Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))  
Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))  
Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))  
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6  
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.  
Safety Data Sheets, Individual Manufacturers

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