

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Manganese Sulfate Monohydrate
- **Article number:** 155336
- **CAS Number:**
10034-96-5
- **EC number:**
232-089-9
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MP Biomedicals Europe
Parc d'Innovation BP 50067
Rue Geiler de Kaysersberg
Illkirch Cedex 67402
France
tel: +33 3.88.67.54.25
www.mpbio.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:** :n° ORFILA" (01-45-42-59-59)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

STOT RE 2

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



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:** Not applicable.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS08 GHS09

- **Signal word** Warning
- **Hazard-determining components of labelling:**
manganese sulfate monohydrate

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.04.2013

Revision: 01.04.2013

Trade name: Manganese Sulfate Monohydrate

(Contd. of page 1)

- **Hazard statements**
 - H373 May cause damage to organs through prolonged or repeated exposure.
 - H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 - P101 If medical advice is needed, have product container or label at hand.
 - P102 Keep out of reach of children.
 - P103 Read label before use.
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P273 Avoid release to the environment.
 - P314 Get medical advice/attention if you feel unwell.
 - P391 Collect spillage.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
 - 10034-96-5 manganese sulfate monohydrate
- **Identification number(s)**
- **EC number:** 232-089-9

4 First aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **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 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.04.2013

Revision: 01.04.2013

Trade name: Manganese Sulfate Monohydrate

(Contd. of page 2)

- **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** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
- This product is hygroscopic.
- 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 facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **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:** Not required.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
- **Form:** Solid
- **Colour:** Not determined.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.04.2013

Revision: 01.04.2013

Trade name: Manganese Sulfate Monohydrate

(Contd. of page 3)

· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	700 °C
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Self-igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not applicable.
· Density at 20 °C:	2,95 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	0,0 %
VOC (EC)	0,00 %
Solids content:	100,0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

EU

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.04.2013

Revision: 01.04.2013

Trade name: Manganese Sulfate Monohydrate

(Contd. of page 4)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|----------------------------------|---|
| · UN-Number | |
| · ADR, IMDG, IATA | UN3077 |
| · UN proper shipping name | |
| · ADR | 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (manganese sulfate monohydrate) |
| · IMDG, IATA | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (manganese sulfate monohydrate) |

(Contd. on page 6)

EU

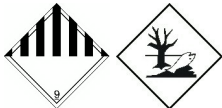
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 01.04.2013

Revision: 01.04.2013

Trade name: Manganese Sulfate Monohydrate

(Contd. of page 5)

· **Transport hazard class(es)**· **ADR, IATA**

· **Class** 9 Miscellaneous dangerous substances and articles.
 · **Label** 9

· **IMDG**

· **Class** 9 Miscellaneous dangerous substances and articles.
 · **Label** 9

· **Packing group**· **ADR, IMDG, IATA** III· **Environmental hazards:**· **Marine pollutant:** No· **Special marking (ADR):** Symbol (fish and tree)· **Special marking (IATA):** Symbol (fish and tree)· **Special precautions for user** Warning: Miscellaneous dangerous substances and articles.· **Danger code (Kemler):** 90

· **Transport in bulk according to Annex II of
 MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)** 5 kg

· **UN "Model Regulation":** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
 SOLID, N.O.S. (manganese sulfate monohydrate), 9, III

15 Regulatory information

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Department issuing MSDS:** Product safety 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)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

(Contd. on page 7)

Safety data sheet
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CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)

(Contd. of page 6)

EU