

Sequestered Iron SDS

SDS completed: 25/11/2014

Version: 01 Revision: N/A

Supersedes SDS Dated: N/A

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

1.1 Product Identifier:

Sequestered Iron

1.2 Relevant uses of the substance or mixture and uses advised against:

Supplied for use as a fertiliser

1.3 Details of the supplier of the safety data sheet:

Chempak Products
Thompson & Morgan
Poplar Lane
Ipswich
Suffolk
IP8 3BU

Contact: The Safety Officer

Telephone Number: 01473 588688 (Monday – Friday 8am to 5pm)

Or visit www.chempak.com

1.4 Emergency telephone number:

Emergency Telephone Number: 01473 588688 (Monday – Friday 8am to 5pm)

2. Hazards identification

2.1 Classification of the substance or mixture

CLASSIFICATION according to Regulation (EC) 1272/2008 Classification, Labelling and Packaging

Eye Damage 1; H318: Causes serious eye damage

Aquatic Chronic 3; H412: Harmful to aquatic life with long lasting effects

CLASSIFICATION according to Directive 1999/45/EC based on the substance classification under Regulation (EC) 1272/2008

Xi; R36: Irritating to eyes

N; R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

2.2 Label Elements

Label elements according to Regulation (EC) 1272/2008:

Contains: Manganese Sulphate

Hazard pictogram:



Signal Word: Danger

Hazard statements:

H318: Causes serious eye damage

H412: Harmful to aquatic life with long lasting effects

Precautionary phrases:

P280: Wear eye protection

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 or doctor/physician.

P501: Dispose of contents/container in accordance with national regulations.





2.3 Other Hazards

Mixture not classified as PBT or vPvB.

3. Composition/information on ingredients

3.2 Mixtures

Hazardous components

| Chemical Name | CAS-No./ EINECS-No. | Annex Index or REACH number | Symbol(s) | Phrase(s) | Concentration [%] |
|--------------------|--------------------------|---|--|--|-------------------|
| Manganese Sulphate | 10034-96-5/ 232-089-9 | 025-003-00-4/ 01- 2119456624- 35 | <p>According to 1272/2008: GHS05</p>  <p>GHS09</p>  <p>GHS08</p>  <p>According to 1999/45/EC:  Xi; IRRITANT</p> | <p>According to 1272/2008: H318: Causes serious eye damage H373: May cause damage to organs (Brain) through prolonged or repeated exposure if inhaled. H411: Toxic to aquatic life with long lasting effects.</p> <p>According to 1999/45/EC: R36: Irritating to eyes. R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> | 9% |

4. First aid measures

4.1 Description of first aid measures

4.1.1 Inhalation

Keep patient calm, remove to fresh air and seek medical attention. If unconscious place in recovery position and seek medical advice.

4.1.2 Skin & Eye exposure

Skin: Wash off with soap and water.

Eyes: Seek medical attention immediately. Rinse immediately with plenty of water for at least 15 minutes.

4.1.3 Ingestion

Wash out mouth with water and give water to drink. Do not induce vomiting. Seek medical attention if symptoms persist or develop.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye damage.

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

In case of contact with eyes, rinse immediately with water and seek medical attention.

5. Firefighting measures

5.1 Extinguishing media

This product is not classified as flammable. Use extinguishing media appropriate for surrounding material, i.e. Water; Water spray; Foam; Carbon Dioxide (CO₂); Dry powder.

5.2 Special Hazards arising from the substance or mixture

No information specified.

5.3 Advice for fire-fighters

In the event of fire, wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear protective goggles. Avoid dust formation. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

6.2 Environmental precautions

Do not empty into drains.

Retain and dispose of contaminated wash water.

6.3 Methods and material for containment and cleaning up

Clean up promptly by sweeping or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

6.4 Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1 Precaution for safe handling

Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry place in original container.

7.3 Specific end use(s)

Always read the label and product information before use.

8. Exposure controls and personal protection

8.1 Control Parameters

Workplace exposure limit for Manganese and its inorganic compounds (as Mn) according to eh40/2005:

| Substance | Long-term exposure limit (8-hr TWA reference period) |
|--|---|
| Manganese and its inorganic compounds (as Mn) | 0.5 mg.m ⁻³ |

DNEL

| | | | |
|----------|------------|-----------|-------------------------|
| Industry | Dermal | Long Term | 4.14 µg/kg/day |
| Industry | Inhalation | Long Term | 0.2 mg/m ³ |
| Consumer | Dermal | Long Term | 2.1 µg/kg/day |
| Consumer | Inhalation | Long Term | 0.043 mg/m ³ |

PNEC

| | |
|------------------------|-------------|
| Freshwater | 0.0128 mg/l |
| Marinewater | 0.4 µg/l |
| Spills(freshwater) | 30 µg/l |
| Sediment (Freshwater) | 11.4 µg/kg |
| Sediment (Marinewater) | 1.4 µg/kg |
| Soil | 25.1 mg/kg |
| STP | 56 mg/l |

Soil & sediment PNEC values are mg/kg wet weight.

8.2 Exposure controls

Engineering controls:

Use local exhaust if dusting occurs. Natural ventilation is adequate in absence of dusts.

Personal protective equipment:

Goggles – Eye Protection: goggles/face shield to BS EN166.

Gloves – BS EN374 – chemical protection: physical barrier protection only.

Dust safety masks recommended where working powder concentration is more than 10mg/m³. Do not wear contact lenses where this product is used. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance; Powder

Colour; Brown

Odour; Information not available

Odour threshold; Information not available

pH; Information not available

Melting point/freezing; Not applicable

Initial boiling point and boiling range; Not applicable

Flash point; Not applicable

Evaporation rate; Not applicable

Flammability (solid, gas); The product is not flammable

Upper /lower flammability or explosive limits; Not applicable

Vapour Pressure; Not applicable

Vapour density; Not applicable

Specific gravity; Information not available

Solubility (ies); Information not available

Partition coefficient: n-octanol/water; Not applicable

Auto ignition temperature: Not applicable

Decomposition temperature: Information not available

9.2 Other Information

No information specified

10. Stability and reactivity

10.1 Reactivity

Information not available.

10.2 Chemical Stability

Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

Information not available.

10.4 Conditions to avoid

Avoid dust generation and extremes of temperature.

10.5 Incompatible materials

Information not available.

10.6 Hazardous decomposition products

Information not available.

11. Toxicological information

11.1 Information on toxicological effects

The mixture has not been assessed for toxicological effects, the mixture classification is given in section 2 based on individual component contents. Individual component hazards if any are given in section 3.

Toxicological information on hazardous ingredients:

Manganese Sulphate

| | |
|---|--|
| Acute Toxicity (Oral LD50) | 2150 mg/kg Rat |
| Acute Toxicity (Dermal LD50) | Not determined. |
| Dermal absorption is unlikely due to the physical-chemical properties of the substance. | |
| Acute Toxicity (Inhalation LC50) | > 4.45 mg/l (dust/mist) Rat 4 hours, Test method(s): OECD 403. |
| Skin Corrosion/Irritation: | |
| Erythema\eschar score | No erythema (0). |
| Oedema score | No oedema (0). |
| Test method(s): | OECD 404. |
| Not irritating. | |
| Serious eye damage/irritation: | Irritating. Test method(s): OECD 405. Irritation score: 36 / 110 |
| Respiratory or skin sensitisation: | |
| Skin sensitisation | |
| Patch Test: Mouse | Not Sensitising. |
| Germ cell mutagenicity: | |
| Genotoxicity - In Vitro | |
| Gene Mutation: | |
| REACH dossier information - A surrogate substance (Manganese chloride) was used. Test method(s): OECD 476. + 471. | |
| Negative. | |
| Genotoxicity - In Vivo | |
| Chromosome aberration: | |
| REACH dossier information - A surrogate substance (Manganese chloride) was used. Test method(s): OECD 474. | |
| Negative. | |
| Carcinogenicity: | |
| Carcinogenicity | |
| NOAEL (♂) 615 mg/kg Oral Rat | |
| NOAEL (♀) 715 mg/kg Oral Rat | |

Sequestered Iron SDS

SDS completed: 25/11/2014

Version: 01 Revision: N/A

Supersedes SDS Dated: N/A

Reproductive Toxicity:

Reproductive Toxicity – Fertility

Suspected reproductive toxicant based on limited evidence.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure Not determined.

Target Organs Brain

MnSO₄ is already classified under Directive 67/548/EEC as R48/20/22 and under GHS as STOT RE2.

Data exists showing some neurochemical changes at low levels after inhalation exposure for 90-days, together with locomotor changes, around 3 mg/m³ concentration, suggesting that significant toxicity could occur at the 20-200 mg/m³ concentration level, which supports the current classification of STOT RE 2 for the inhalation route.

12. Ecological information

12.1 Toxicity

Mixture is not classified as hazardous to the environment.

Ecological information on hazardous ingredients:

Manganese Sulphate

Acute Toxicity Fish LC50 96 hours 14.5 mg/l Onchorhynchus mykiss (Rainbow trout)

Acute Toxicity Aquatic Invertebrates EC50 48 hours 9.8 mg/l Daphnia magna
A surrogate substance (Manganese chloride) was used. The units are expressed in 'mg/µg' of: Manganese.

Acute Toxicity Aquatic Plants EC50 72 hours 61 mg/l Desmodesmus subspicatus (algae).
Test method(s): OECD 201.

Chronic Toxicity Aquatic Invertebrates, Not applicable.

12.2 Persistence and degradability

Information not available

12.3 Bioaccumulative potential

Information not available

12.4 Mobility in soil

Information not available

12.5 Results of PBT and vPvB

Information not available

12.6 Other adverse effects

Information not specified.

13. Disposal considerations

13.1 Waste Treatment Methods

Dispose of contents/container in accordance with local and national regulations.

14. Transport information

14.1 UN number: No information available

14.2 UN proper shipping name: No information available

14.3 Transport hazard: No information available

14.4 Packing group: -

14.5 Environmental hazards: No information available

14.6 Special precautions for user: No Information available

14.8 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: No information available

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture. This substance/mixture is classified and labelled in accordance with Regulation EC 1272/2008, Directive 1999/45/EC, the statutory instrument No.716 2009 Chemicals (Hazard Information and Packaging) regulations and the EC Fertiliser Regulations 2003, Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2 Chemical Safety Assessment

CSA not undertaken for this product

16. Other information

SDS information:

This Safety data sheet is compiled using data submitted for raw materials and practical experience.

This Safety Data Sheet is prepared in compliance with Directive 1999/45/EC, Regulation 1272/2008 and Annex I of the REACH Regulation 453/2010.

The information given herein is, to the best of our knowledge, correct and is presented in good faith but no warranty, expressed or implied is given.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty of quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.