

SAFETY DATA SHEET

1. IDENTIFICATION

Product name: FERROUS SULFATE

CAS No. : 7720-78-7

Brand: Macklin

Company: Shanghai Macklin Biochemical Co.,Ltd.

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Revision date: 2019/12/12

2. HAZARDS IDENTIFICATION

GHS classification

PHYSICAL HAZARDS

no data available

HEALTH HAZARDS

no data available

ENVIRONMENTAL HAZARDS

no data available

GHS label elements, including precautionary statements

Pictograms or hazard symbols

Signal word

no data available

Hazard statements

no data available

Precautionary statements

Prevention

no data available

Response

no data available

Storage

no data available

Disposal

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components:FERROUS SULFATE

CAS No.:7720-78-7

Chemical Formula:FeO₄S

4. FIRST AID MEASURES

4.1

Description of necessary first-aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

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

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2

Most important symptoms/effects, acute and delayed

INGESTION: abdominal pain, retching, diarrhea, dehydration, shock, pallor, cyanosis, rapid or weak pulse, shallow respiration, low blood pressure. (USCG, 1999)

4.3

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

A 19 yr old female patient ingested an estimated 50-60 ferrous sulfate tablets, representing approx 9.8-11.7 g of elemental iron. ...This paper supports the safety and efficacy of a slow iv infusion of deferoxamine in an adult patient, using a regimen recommended for a pediatric patient.

5. FIRE-FIGHTING MEASURES

5.1

Suitable extinguishing media

If material involved in fire: Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn or burns with difficulty.)

5.2

Specific hazards arising from the chemical

no data available

5.3

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

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

Environmental considerations: Water spill: Adjust pH to neutral (pH= 7). Allow to aerate. Neutralize with agricultural lime (CaO), crushed limestone (CaCO₃), or sodium bicarbonate (NaHCO₃). Adjust pH to neutral (pH= 7). Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates.

7. HANDLING AND STORAGE

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.

Conditions for safe storage, including any incompatibilities

Store in tight containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure limit values

Component

Iron sulphate

CAS No.

7720-78-7

Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 1 mg/cu m. /Iron salts (soluble, as Fe)/

Biological limit values

no data available

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

Set up emergency exits and the risk-elimination area.

Personal protective equipment

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flamm resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

no data available

Colour

no data available

Odour

no data available

Melting point/freezing point

Remarks:The atmospheric pressure at which this result was determined is not stated.

Boiling point or initial boiling point and boiling range

316 °C. Remarks:The atmospheric pressure at which this result was determined is not stated.

Flammability

no data available

Lower and upper explosion limit/flammability limit

no data available

Flash point

no data available

Auto-ignition temperature

Remarks:No exothermic reaction; test item temperature exceeded 200 °C (i.e. a rise >60 °C above the oven temperature); thus negative response; After experiment changed appearance; test item considered 'not self-ignitable'.

Decomposition temperature

no data available

pH

1.;1.

Kinematic viscosity

no data available

Solubility

Soluble in water.

Partition coefficient n-octanol/water

no data available

Vapour pressure

no data available
Density and/or relative density
3.65 g/cm³.
Relative vapour density
no data available
Particle characteristics
no data available

10. STABILITY AND REACTIVITY

10.1

Reactivity

no data available

10.2

Chemical stability

In moist air, ferrous sulfate rapidly oxidizes and becomes coated with brownish-yellow ferric sulfate. The rate of oxidation is increased by the addition of alkali or by exposure to light.

10.3

Possibility of hazardous reactions

Weak inorganic reducing agents, such as FERROUS SULFATE, react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive.

10.4

Conditions to avoid

no data available

10.5

Incompatible materials

May ignite on contact with arsenic trioxide and sodium nitrate.

10.6

Hazardous decomposition products

When heated to decomposition it emit toxic fumes of /sulfur oxide/.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 Mouse oral 1,520 mg/kg

Inhalation: TLV - rat - 1 mg/m³ air.

Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

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

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. ECOLOGICAL INFORMATION

12.1

Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: NOEC - activated sludge - ≥ 200 - ca. 500 mg Fe/L in activated sludge in WWTP. Remarks:Iron.

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

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORT INFORMATION

14.1

UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.2

UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.3

Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.4

Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.5

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6

Special precautions for user

no data available

14.7

Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

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

EC number

231-753-5

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

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)

Listed.

16. OTHER INFORMATION

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.