

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

revised on: 10.11.2021

Version number 5

Creation Date: 24.05.2016

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

- **1.1 Product identifier**
- **Trade name: ferrous sulfate heptahydrate**
- **Article number: 2276**
- **CAS Number:**
7782-63-0
- **EC number:**
231-753-5
- **Index number:**
026-003-01-4
- **Registration number 01-2119513203-57-XXXX**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Life cycle stages**
F Formulation or re-packing
IS Use at industrial Sites
- **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU24 Scientific research and development
- **Product category**
PC19 Intermediate
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21 Laboratory chemicals
PC29 Pharmaceuticals
PC39 Cosmetics, personal care products
PC40 Extraction agents
- **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
- **Environmental release category**
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC6a Use of intermediate
- **Application of the substance / the mixture**
Industrial use
lab chemicals
Reagent for analysis
Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Th. Geyer GmbH & Co. KG
Dornierstr. 4 – 6
D-71272 Renningen

(Contd. on page 2)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 10.11.2021

Version number 5

Creation Date: 24.05.2016

Trade name: ferrous sulfate heptahydrate

(Contd. of page 1)

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417
 www.thgeyer.de
 sicherheitsdatenblaetter@thgeyer.de

· **Further information obtainable from:** Product management department

· **1.4 Emergency telephone number:**

National Poisons Information Service
 (Birmingham Centre)
 City Hospital
 Dudley Road
 Birmingham B18 7QH
 Tel.:Emergency: (00 44) 87 06 00 62 66

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard statements**

H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
 · **vPvB:** Not applicable.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

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Version number 5

Creation Date: 24.05.2016

Trade name: ferrous sulfate heptahydrate

(Contd. of page 2)

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
CAS: 7782-63-0 ferrous sulfate heptahydrate
- **Identification number(s)**
- **EC number:** 231-753-5
- **Index number:** 026-003-01-4

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
First aider needs to protect himself.
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Remove person from danger area.
Supply fresh air.
Seek immediate medical advice.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Flush contaminated skin with soap and plenty of water.
Call a doctor immediately.
take care of a Possibility of inhalation at the same time
- **After eye contact:**
Protect unharmed eye.
Rinse out opened eye for several minutes under running water.
Seek medical treatment.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Administer medicinal carbon.
Induce vomiting and call for medical help.
A person vomiting while laying on their back should be turned onto their side.
- **Information for doctor:** Please observe safety data sheet/label.
- **4.2 Most important symptoms and effects, both acute and delayed**
Gastric or intestinal disorders
Cramp
Unconsciousness
- **Hazards**
Danger of circulatory collapse.
Danger of gastric perforation.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Give Glucocorticoid-Aerosol in case of lung irritation.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
Medical supervision for at least 48 hours.
Symptomatic treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:

(Contd. on page 4)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 10.11.2021

Version number 5

Creation Date: 24.05.2016

Trade name: ferrous sulfate heptahydrate

(Contd. of page 3)

Sulphur dioxide (SO₂)

Carbon monoxide (CO)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

- **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Do not inhale dust.

Avoid contact with eyes and skin.

Avoid formation of dust.

Ensure adequate ventilation.

- **6.2 Environmental precautions:** Do not allow to enter sewers/surface or ground water.

- **6.3 Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Dispose of the material collected according to regulations.

- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Apply the general protection and hygiene measures for the handling with chemicals.

- **Information about fire - and explosion protection:**

Substance itself does not burn, tuning measures to environment

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

- **Information about storage in one common storage facility:**

Store away from oxidising agents.

Store away from water.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Store in dry conditions.

Protect from humidity and water.

- **Storage class:** 13

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 5)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 10.11.2021

Version number 5

Creation Date: 24.05.2016

Trade name: ferrous sulfate heptahydrate

(Contd. of page 4)

· Ingredients with limit values that require monitoring at the workplace:	
CAS: 7782-63-0 ferrous sulfate heptahydrate	
WEL	Short-term value: 2 mg/m ³ Long-term value: 1 mg/m ³ as Fe

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Not necessary if room is well-ventilated.

· **Protection of hands:**



Protective gloves

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:**



Tightly sealed goggles

· **Body protection:**



Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Solid material

Colour: Green

· **Odour:** Odourless

· **pH-value:** 3–4

· **Change in condition**

Melting point/freezing point: >60 °C

Initial boiling point and boiling range: Undetermined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

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Version number 5

Creation Date: 24.05.2016

Trade name: ferrous sulfate heptahydrate

(Contd. of page 5)

· Flash point:	Not applicable.
· Flammability (solid, gas):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Not determined.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not applicable.
· Density at 20 °C:	1.89 g/cm ³ Not determined.
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water at 20 °C:	400 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable with proper storage and handling.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Violent reactions with strong alkalis and oxidising agents.
- **10.4 Conditions to avoid**
Heat, flames and sparks
Protect from humidity.
- **10.5 Incompatible materials:** Avoid contact with other chemicals.
- **10.6 Hazardous decomposition products:**
Sulphur dioxide
Hydrogen sulphide
Sulphur trioxide (SO₃) or SO₃-mist

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

Oral	LD50	319 mg/kg (rat)
		Anhydrous

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.

(Contd. on page 7)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 10.11.2021

Version number 5

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Trade name: ferrous sulfate heptahydrate

(Contd. of page 6)

- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:** -
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
Observe local (country-specific) regulations and laws
This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Chemicals must be disposed of in compliance with the respective national regulations.

· European waste catalogue

06 00 00	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 06 00	wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes
06 06 99	wastes not otherwise specified
HP4	Irritant - skin irritation and eye damage
HP6	Acute Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, ADN, IMDG, IATA** not regulated

(Contd. on page 8)

E

Safety data sheet

according to 1907/2006/EC, Article 31

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Version number 5

Creation Date: 24.05.2016

Trade name: ferrous sulfate heptahydrate

(Contd. of page 7)

<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class 	not regulated
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · 14.5 Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · 14.6 Special precautions for user 	Not applicable.
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · UN "Model Regulation": 	not regulated

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.
- **National regulations:**
- **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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. Application, use and handling of our products take place out of our control and are solely your responsibility.

- **Department issuing SDS:** Product management
- **Contact:** Product management
- **Abbreviations and acronyms:**
ADR: Accord relatif au transport international 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 Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

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Version number 5

Creation Date: 24.05.2016

Trade name: ferrous sulfate heptahydrate

(Contd. of page 8)

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· *** Data compared to the previous version altered.**

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