

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

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

#### 1.1 Product identifier

· Trade name: **Iron-II-sulphate 12%**

· Substance name: iron(II) sulfate

· Article number: 6080500

· CAS Number:

7720-78-7

· EC number:

231-753-5

· Index number:

026-003-00-7

· Registration number: 01-21195113203-57-xxxx

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

· Application of the substance / the preparation: Fertiliser

· Uses advised against -

#### 1.3 Details of the supplier of the safety data sheet

· Supplier/Manufacturer:

agron GmbH & Co. KG

Industriestr. 23

49751 Sögel

Germany

Tel.: +49-5952-202-0

Fax: +49-5952-202-32

· Email competent person: sds@kft.de

· Information department: See supplier/manufacturer

#### 1.4 Emergency telephone number:

National Poison Information Service (NPIS)

24 hour national number                      professionals only

0844 892 0111

National Health Service (NHS)

24 hour national number                      consumer

England and Scotland: 111

Wales: 0845 46 47

Northern Ireland: call your local General Practitioner

Call 999 if there is a life-threatening incident.

### 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.

(Contd. on page 2)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

Trade name: Iron-II-sulphate 12%

(Contd. of page 1)

#### · 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.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P362 Take off contaminated clothing.

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 due to data· **vPvB:** Not applicable due to data

### SECTION 3: Composition/information on ingredients

#### · 3.1 Chemical characterisation: Substances

##### · CAS No. Description:

7720-78-7 iron(II) sulfate

##### · Identification number(s):

· **EC number:** 231-753-5· **Index number:** 026-003-00-7

### SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

##### · General information:

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

Remove affected persons from danger area and lay them down.

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

##### · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment.

· **After eye contact:** Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor (eye specialist).

##### · After swallowing:

Rinse out mouth and then drink plenty of water.

Never give anything by mouth to an unconscious person.

Do not induce vomiting; call medical help immediately.

#### · 4.2 Most important symptoms and effects, both acute and delayed

Irritation of mucuous membranes

After the uptake of large quantities:

Gastric or intestinal disorders.

(Contd. on page 3)

— GB —

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

Trade name: Iron-II-sulphate 12%

(Contd. of page 2)

- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not combustible and does not support any combustion.  
Use fire fighting measures suiting the environment.
- **For safety reasons unsuitable extinguishing agents:** High volume water jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide (CO)  
Sulphur oxides (SOx)  
Ferric oxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information:**  
Cool endangered receptacles with water spray.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation.  
Avoid formation of dust.  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Do not allow to penetrate the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Avoid any dust formation. Pick up with a tested and approved industrial vacuum cleaner if necessary.  
Make sure to recycle or dispose of in suitable receptacles.
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.  
Provide suction extractors if dust is formed.  
Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.  
Avoid inhalation of dust.  
Avoid contact with eyes and skin.  
Keep the working area dry and clean.
- **Information about protection against explosions and fires:**  
The product is not flammable.  
Select fire and explosion prevention measures according to the other substances stored/used.

(Contd. on page 4)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

---

**Trade name: Iron-II-sulphate 12%**


---

(Contd. of page 3)

- **7.2 Conditions for safe storage, including any incompatibilities**
  - **Storage:**
  - **Requirements to be met by storerooms and receptacles:**  
Store container tightly sealed at a cool and dry place with sufficient ventilation.  
Store only in the original receptacle.
  - **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Store away from feed.  
Store away from oxidising agents.  
Refer to national regulations for storing hazardous chemicals.
  - **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Protect from contamination.
  - **Storage class:** 13 Non combustible solid
  - **7.3 Specific end use(s)** No further relevant information available
- 

### SECTION 8: Exposure controls/personal protection

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

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**

#### 7720-78-7 iron(II) sulfate

WEL (Great Britain) Short-term value: 2 mg/m<sup>3</sup>  
 Long-term value: 1 mg/m<sup>3</sup>  
 as Fe

- **DNELs**

Abbreviations:

In = Industrial

Prof = Professional

Cons = Consumer

LLE = Long term, local effects

LSE = Long term, systemic effects

SLE = Short term, local effects

SSE = Short term, systemic effects

Oral DNEL/Cons/LSE 0.28 mg/kg bw/day (man)

DNEL/Cons/SLE 20 mg/kg bw/day (man)

Dermal DNEL/In/LSE 2.8 mg/kg bw/day (man)

0.29 mg/kg bw/day (human)

DNEL/In/SSE 0.57 mg/kg bw/day (human)

DNEL/Cons/LSE 1.4 mg/kg bw/day (man)

Inhalative DNEL/In/LSE 0.5 mg/m<sup>3</sup> (human)DNEL/In/SSE 2.01 mg/m<sup>3</sup> (human)

- **PNECs**

Abbreviations:

aq = aqua

sed = sediment

PNEC/Aq 500 mg/l (sewage treatment plant)

PNEC/sed 49.5 mg/kg (fresh water)

sediment dw

49.5 mg/kg (marine water)

sediment dw

PNEC/soil 55.5 mg/kg (soil)

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

Trade name: Iron-II-sulphate 12%

(Contd. of page 4)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Wash hands before breaks and at the end of work.
  - Vacuum contaminated clothing. Do not blow or brush off contamination.
  - Do not inhale dust/smoke/mist.
  - Avoid contact with eyes and skin.
  - Do not eat or drink while working.
  - Be sure to clean skin thoroughly after work and before breaks.
  - Use skin protection cream for skin protection.
  - Provide eye bath.
- **Breathing equipment:**
  - Use a suitable respiratory protective device in case of insufficient ventilation.
  - Short term filter device:
    - Filter P2
- **Protection of hands:**
  - Protective gloves
  - Check the permeability before using the gloves again.
  - The glove material has to be impermeable and resistant to the product/substance/preparation.
  - Selection of the glove material in 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 penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

- |  |   |
|--|---|
| · <b>9.1 Information on basic physical and chemical properties</b> |   |
| · <b>General Information:</b>                                      |   |
| · <b>Appearance:</b>   |   |
| Form:  | Granulate                                     |
| Colour:  | Grey  |
| Odour:   | Characteristic                                |
| Odour threshold:   | Not determined                                |
| pH-value (100 g/l) at 22 °C:                                       | 1.4   |
| · <b>Change in condition:</b>                                      |   |
| Melting point/Melting range:                                       | Not determined                                |
| Boiling point/Boiling range:                                       | Not determined                                |
| Flash point:   | Not applicable                                |
| Flammability (solid, gaseous):                                     | Product is not flammable.                     |
| Ignition temperature:  | Not determined                                |
| Decomposition temperature:   | >300 °C                                       |
| Self ignition temperature:   | Not determined                                |
| Danger of explosion:   | Product does not present an explosion hazard. |
| · <b>Explosion limits:</b>   |   |
| Lower:   | Not determined                                |

(Contd. on page 6)

— GB —

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

Trade name: Iron-II-sulphate 12%

(Contd. of page 5)

· <b>Upper:</b>	Not determined
· <b>Oxidizing properties:</b>	None
· <b>Vapour pressure:</b>	Not determined
· <b>Density at 25 °C:</b>	3.65 g/cm <sup>3</sup>
· <b>Bulk density at 20 °C:</b>	1.1-1.3 kg/l
· <b>Relative density:</b>	Not determined
· <b>Vapour density:</b>	Not applicable
· <b>Solubility in / Miscibility with Water at 25 °C:</b>	228 g/l
· <b>Viscosity:</b>	
· <b>dynamic:</b>	Not applicable
· <b>kinematic:</b>	Not applicable
· <b>9.2 Other information</b>	No further relevant information available

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Decomposes without melting.  
No decomposition if used and stored according to specifications
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available
- **10.5 Incompatible materials:** No further relevant information available
- **10.6 Hazardous decomposition products:**  
No hazardous decomposition products if instructions for storage and handling are followed

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Harmful if swallowed.
- **LD/LC50 values that are relevant for classification:**  
Oral LD<sub>50</sub> 1025 mg/kg (mouse)  
Dermal LD<sub>50</sub> >559 mg/kg (rabbit)
- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

Trade name: Iron-II-sulphate 12%

(Contd. of page 6)

#### SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

Presently there are no ecotoxicological values available.

LC<sub>50</sub>/96h 0.41->28 mg/l (fish)

E<sub>1</sub>C<sub>50</sub> 18 mg/l (Algae)

EC<sub>50</sub> 40 mg/l (Bacteriae)

15 Min.

EC<sub>50</sub>/48h 1-10 mg/l (Daphnia magna)

- **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) (Assessment by list): slightly hazardous to water

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

Danger to drinking water is possible if large quantities leak into the ground or into water course.

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable due to data

- **vPvB:** Not applicable due to data

- **12.6 Other adverse effects** No further relevant information available

#### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation:**

Must be recycled or disposed of according to the regulations. Waste has to be classified according to the European Waste Catalogue based on the identification of the waste generating source.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

- **European waste catalogue:**

06 00 00 WASTES FROM INORGANIC CHEMICAL PROCESSES

06 03 00 wastes from the MFSU of salts and their solutions and metallic oxides

06 03 99 wastes not otherwise specified

- **Uncleaned packagings:**

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

- **Recommended cleansing agent:** Water; if necessary, with cleansing agents

#### SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, ADN, IMDG, IATA**

Void

- **14.2 UN proper shipping name**

- **ADR, ADN, IMDG, IATA**

Void

- **14.3 Transport hazard class(es)**

- **ADR, ADN, IMDG, IATA**

- **Class**

Void

(Contd. on page 8)

— GB —

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

Trade name: Iron-II-sulphate 12%

(Contd. of page 7)

· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	Not applicable
· <b>14.6 Special precautions for user</b>	Not applicable
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable
· <b>Transport/Additional information:</b>	Not dangerous according to the above regulations
· <b>UN "Model Regulation":</b>	Void

### 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.
- **National regulations**
- **Water hazard class:**  
Water hazard class 1 (Assessment by list): slightly hazardous for water  
Ident number.: 514
- **15.2 Chemical safety assessment:**  
A Chemical safety Assessment has been carried out.  
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.

- **Department issuing SDS:**  
KFT Chemieservice GmbH  
Marienstr. 3 D-64347 Griesheim  
Postfach 1451 D-64345 Griesheim
- Tel.: +49-6155-823241  
Fax: +49-6155-823246
- **Contact:** Barbara Stark
- **Abbreviations and acronyms:**  
ICAO: International Civil Aviation Organisation  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
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)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
SVHC: Substances of Very High Concern  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2

(Contd. on page 9)

— GB —



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

Printing date: 27.04.2016

Version: 1.00

Revision: 27.04.2016

---

**Trade name: Iron-II-sulphate 12%**

---

(Contd. of page 8)

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

· **Sources:** MSDS of the supplier

---

— GB —