



# Safety Data Sheet

according to 1907/2006/EC, Article 31  
Printing date 18.06.2007 Revision: 01.06.2007



## 1 Identification of substance

· Product details:

· **Trade name: FERROGRANUL 20**

· Application of the substance / the preparation \*

Precipitant and flocculant

Municipal sewage treatment

Water treatment

Chromate reduction in cement

Chlorosis control

Fertiliser production

## 2 Hazards identification:

· Hazard designation:

Xn Harmful

· Information pertaining to particular hazards for man and environment:

R 22 Harmful if swallowed.

R 36/38 Irritating to eyes and skin.

· Classification system:

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

## 3 Composition/information on ingredients:

· Chemical characterization:

· Description: Ferrous sulfate ( $\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$ )

· D a n g e r o u s c o m p o n e n t s :

7782-63-0 Ferrous sulfate heptahydrate ( $\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$ )

Xn, Xi; R 22-36/38

53.0%

## 4 First aid measures:

· After inhalation: Supply fresh air; consult doctor in case of symptoms.

· After skin contact: Instantly wash with water and soap and rinse thoroughly.

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- After eye contact:  
Rinse opened eye for several minutes under running water. Then consult doctor.
- After swallowing:  
Call a doctor immediately.  
Rinse out mouth and then drink plenty of water.

#### 5 Fire fighting measures:

- Suitable extinguishing agents:  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet.
- Special hazards caused by the material, its products of combustion or resulting vapours:  
Sulphur dioxide (SO<sub>2</sub>)
- Protective equipment:  
Put on breathing apparatus.  
Wear full protective suit.

#### 6 Accidental release measures:

- Person-related safety precautions: Wear protective clothing.
- Measures for environmental protection:  
Inform respective authorities in case product reaches water or sewage system.  
Do not allow to enter the ground/soil.
- Measures for cleaning/collecting:  
Collect mechanically.  
Dispose of contaminated material as waste according to item 13.  
Rinse off scraps with plenty of water.
- Additional information:  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

#### 7 Handling and storage:

- Handling:
- Information for safe handling:  
No special precautions necessary if used correctly.  
Prevent formation of dust.
- Information about protection against explosions and fires:  
The product is not inflammable.
- Storage:
  - Requirements to be met by storerooms and containers: No special requirements.
  - Information about storage in one common storage facility:  
Do not store together with alkalis (caustic solutions).
  - Further information about storage conditions:

Protect from contamination  
Protect from heat and direct sunlight.  
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## 8 Exposure controls and personal protection:

- Additional information about design of technical systems:  
No further data; see item 7.
- Components with critical values that require monitoring at the workplace:
- Additional information:  
The lists that were valid during the compilation were used as basis.
- Personal protective equipment:
- General protective and hygienic measures:  
The usual precautionary measures should be adhered to in handling the chemicals.  
Avoid contact with the eyes and skin.
- Breathing equipment: \*  
Use breathing protection with high concentrations.  
EN 149: FFP2
- Protection of hands: \*  
Requirements according to EN 420  
Check protective gloves prior to each use for their proper condition.  
Preventive skin protection by use of skin-protecting agents is recommended.
- Material of gloves \*  
Polychloroprene  
Mechanical resistance: Level 1,2,2,2 (EN 388)
- Penetration time of glove material \*  
Value for the permeation: Level  $\geq 4$  (EN 374)  
Sulphuric acid
- Eye protection: Safety glasses
- Body protection: Protective work clothing.

## 9 Physical and chemical properties:

- General Information
- Form: Crystalline powder
- Colour: Light green
- Smell: Recognizable
- Melting point/Melting range: ca. 64°C
- Boiling point/Boiling range: Not applicable
- Flash point: Not applicable
- Self-flammability: Product is not selfigniting.
- Danger of explosion: Product is not explosive.
- Density:
- Apparent density at 20°C: 0.8-0.9 kg/l
- Solubility in / Miscibility with  
Water at 10°C: 365 g/l  
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- pH-value at 20°C: ca. 2
- Viscosity:  
dynamic at 20°C: 3 mPas
- Solvent content:
- Solids content: 100 %

#### 10 Stability and reactivity:

- Thermal decomposition / Conditions to be avoided:  
No decomposition if used and stored according to specifications.  
Loss of constitutional water on heating
- Dangerous reactions: No dangerous reactions known
- Dangerous products of decomposition: No dangerous decomposition products known

#### 11 Toxicological information:

- Acute toxicity:
- LD / LC 50 values that are relevant for classification:  
7720-78-7 iron sulphate  
Oral LD50 1480 mg/kg (rat)
- Primary irritant effect:
  - on the skin: Moderate skin irritation
  - on the eye: Irritant effect.
- Sensitization: No sensitizing effect known.
- Additional toxicological information:  
Larger amounts of ferrous sulphate can be resorbed through the intestines and may induce a paralysis similar to magnesium narcosis.  
Ingestion of toxic amounts of iron sulphate leads to sanguinolent vomiting,  
hypotonia, hyporeflexia, tarry stool.  
Gastric strictures may develop.

#### 12 Ecological information:

- Additional ecological information:
- AOX-indication: <2mg/kg
- General notes:  
Ferrous sulphate hydrolyzes forming iron hydroxide and diluted sulfuric acid. When diluted, both substances are ecologically harmless.  
Water Hazard class 1: slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to penetrate into ground  
water, water bodies or sewage system.  
At present there are no ecotoxicological assessments available.  
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### 13 Disposal considerations:

- Product:
- European waste catalogue Waste code number according to origin of waste
- Uncleaned packagings:
- Recommendation: Disposal according to official regulations

### 14 Transport information:

- Transport/Additional information:  
Not dangerous according to transport specifications.

### 15 Regulatory information

- Designation according to EC guidelines:  
The product has been labelled in accordance with EC Directives / relevant national laws.
- Code letter and hazard designation of product:  
Xn Harmful
- Hazard-determining components for labelling:  
Ferrous sulfate heptahydrate ( $\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$ )
- Risk phrases:  
22 Harmful if swallowed.  
36/38 Irritating to eyes and skin.
- Safety phrases:  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
46 If swallowed, seek medical advice immediately and show this container or label.
- National regulations:  
· Water hazard class: Water hazard class 1: slightly hazardous for water  
· to observe:

### 16 Other information

- These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
- Relevant R-phrases  
22 Harmful if swallowed.