

## Ferromel 20

Version number: 3.0  
Replaces version of: 2020-09-24 (2)

Revision: 2020-11-24  
First version: 2020-04-27

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

#### 1.1 Product identifier

<b>Trade name</b>	<b>Ferromel 20</b>
<b>Registration number (REACH)</b>	01-2119513203-57-xxxx
<b>EC number</b>	231-753-5
<b>Index number in CLP Annex VI</b>	026-003-01-4
<b>CAS number</b>	7782-63-0

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

<b>Relevant identified uses</b>	Wastewater treatment Chromate reduction in cement Precipitant Flocculant Water treatment Fertiliser Abatement of chlorose Country refurbishment
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#### 1.3 Details of the supplier of the safety data sheet

Olmix B.V. Telephone: ++31 (0) 26 - 38420 - 00  
Arnhemsestraatweg 8 e-mail: info-nl@olmix.com  
6881 NG Velp  
Netherlands

**e-mail (competent person)** sdb@csb-online.de

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact Olmix B.V.

#### 1.4 Emergency telephone number

As above or nearest toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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## Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

For full text of abbreviations: see SECTION 16

Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008 (CLP)

**Signal word** warning

### Pictograms

**GHS07**



### Hazard statements

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

### Precautionary statements

**P264** Wash thoroughly after handling.  
**P270** Do not eat, drink or smoke when using this product.  
**P280** Wear protective gloves/protective clothing/eye protection/face protection.  
**P302+P352** IF ON SKIN: Wash with plenty of soap and 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.  
**P337+P313** If eye irritation persists: Get medical advice/attention.

## 2.3 Other hazards

There is no additional information.

### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

<b>Name of substance</b>	iron(II) sulfate heptahydrate
<b>Identifiers</b>	
REACH Reg. No	01-2119513203-57-xxxx
CAS No	7782-63-0
EC No	231-753-5
Index No	026-003-01-4
<b>Molecular formula</b>	FeSO <sub>4</sub> .(H <sub>2</sub> O) <sub>7</sub>
<b>Molar mass</b>	278 g/mol

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

Self-protection of the first aider.  
Remove affected person from the danger area and lay down.  
Do not leave affected person unattended.  
Take off immediately all contaminated clothing.  
In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.  
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.  
If skin irritation occurs: Get medical advice/attention.

#### Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

#### Following ingestion

Rinse mouth immediately and drink plenty of water.  
Call a physician in any case.

#### Notes for the doctor

None.

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

These information are not available.

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

None.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)  
(Co-ordinate firefighting measures to the fire surroundings)

### 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

#### Hazardous combustion products

sulphur oxides (SO<sub>x</sub>)

### 5.3 Advice for firefighters

Non-combustible.

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### Special protective equipment for firefighters

chemical protection suit, Wear self-contained breathing apparatus

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Do not breathe dust.

Control of dust.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

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## 6.3 Methods and material for containment and cleaning up

### Advice on how to contain a spill

Take up mechanically.

### Advice on how to clean up a spill

Take up mechanically.

Collect spillage.

### Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

## 6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Do not breathe dust.

### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Removal of dust deposits.

### Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

### Measures to protect the environment

Avoid release to the environment.

### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Flammability hazards

None.

#### Incompatible substances or mixtures

Incompatible materials: see section 10.

#### Protect against external exposure, such as

heat, humidity, sunlight

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## Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

## Ventilation requirements

Provision of sufficient ventilation.

## Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Keep cool.

Store in a dry place.

## Storage temperature

recommended storage temperature: <30 °C

## Packaging compatibilities

Keep only in original container. (Plastic, Steel barrel)

## 7.3 Specific end use(s)

Wastewater treatment.

Chromate reduction in cement.

Precipitant.

Flocculant.

Water treatment.

Fertiliser.

Abatement of chlorose.

Country refurbishment.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Notation	Source
GB	iron salts		WEL		1		2	Fe	EH40/2005
GB	dust		WEL		10			i	EH40/2005
GB	dust		WEL		4			r	EH40/2005

#### Notation

Fe calculated as Fe (iron)

i inhalable fraction

r respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

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## Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	2.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
DNEL	1.4 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
DNEL	0.28 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection. (EN 166).

#### Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
NBR: acrylonitrile-butadiene rubber	no information available	no information available
IIR: isobutene-isoprene (butyl) rubber	no information available	no information available
PVC: polyvinyl chloride	no information available	no information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Other protection measures

Protective clothing for use against solid particulates.

### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

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## Environmental exposure controls

Use appropriate container to avoid environmental contamination.  
Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	Solid
Form	crystalline
Colour	Greenish
Odour	Odourless
Odour threshold	not determined

#### Other safety parameters

pH (value)	3.6 (water: 400 g/l, 20 °C)
Melting point/freezing point	~64 °C
Initial boiling point and boiling range	not applicable
Flash point	Not applicable
Evaporation rate	not applicable
Flammability (solid, gas)	Non-combustible
Explosion limits of dust clouds	Not determined
Vapour pressure	not applicable
Density	1.89 g/cm <sup>3</sup>
Vapour density	not applicable
Bulk density	0.8 – 0.9 kg/l
Relative density	3.1 at 18 °C (water = 1) (Anhydrous, ECHA)

#### Solubility(ies)

**Water solubility** 365 g/l at 10 °C

#### Partition coefficient

n-octanol/water (log KOW)	not applicable
Auto-ignition temperature	Not relevant (Solid matter)
Relative self-ignition temperature for solids	These information are not available



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Decomposition temperature	480 °C (ECHA)
<b>Viscosity</b>	
<b>Kinematic viscosity</b>	these information are not available
<b>Dynamic viscosity</b>	3 mPa s at 20 °C (Solution 365 g/l)
Explosive properties	Not explosive
Oxidising properties	Shall not be classified as oxidising

### 9.2 Other information

None

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

Humidity.  
High temperatures (> 30°C)

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.  
Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).

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## Classification according to GHS (1272/2008/EC, CLP)

### Acute toxicity

Shall not be classified as acutely toxic (dermal).

Harmful if swallowed.

### Inhalation:

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Exposure route	Endpoint	Value	Species	Method	Source
dermal	LD0	>2,000 mg/kg	rat	OECD Guideline 402	ECHA
oral	LD50	500 mg/kg	rat, female	OECD Guideline 423	ECHA

### Skin corrosion/irritation

Causes skin irritation.

(ECHA, OECD Guideline 404)

### Serious eye damage/eye irritation

Causes serious eye irritation.

(1272/2008/EC, Annex VI)

### Respiratory or skin sensitisation

#### Skin sensitisation

Shall not be classified as a skin sensitiser.

(ECHA, OECD Guideline 429, EU method B.42, EPA OPPTS 870.2600,

#### Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

(ECHA, OECD Guideline 476)

### Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

No data available.

#### Aquatic toxicity (chronic)

No data available.

### 12.2 Persistence and degradability

#### Biodegradation

The study does not need to be conducted because the substance is inorganic.

#### Persistence

The study does not need to be conducted because the substance is inorganic.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

### 12.6 Other adverse effects

Data are not available.

#### Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

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

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions.

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## SECTION 14: Transport information

14.1	UN number	not subject to transport regulations
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	-
14.4	Packing group	-
14.5	Environmental hazards	-
14.6	Special precautions for user	-
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	-

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Relevant provisions of the European Union (EU)

#### Restrictions according to REACH, Annex XVII

Not listed.

#### List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

Not listed.

#### Seveso Directive

Not assigned.

#### Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

Not listed.

#### Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Not listed.

#### Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
iron(II) sulfate heptahydrate	Substances which contribute to eutrophication (in particular, nitrates and phosphates)		A)	
iron(II) sulfate heptahydrate	Metals and their compounds		A)	

#### Legend

A) Indicative list of the main pollutants

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## Regulation 98/2013/EU on the marketing and use of explosives precursors

Not listed.

## Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)

Not listed.

## Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)

Not listed.

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance by the supplier.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
1.2	Relevant identified uses: Wastewater treatment Chromate reduction in cement Precipitant Flocculant Water treatment Abatement of chlorose Raw material for: Pigment Country refurbishment	Relevant identified uses: Wastewater treatment Chromate reduction in cement Precipitant Flocculant Water treatment Fertiliser Abatement of chlorose Country refurbishment

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
1272/2008/EC, Annex VI	Harmonised classification and labelling for certain hazardous substances
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )

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Abbr.	Descriptions of used abbreviations
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. 2018 - ATP 13 2018/1480.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

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### List of relevant phrases (code and full text as stated in chapter 2 and 3)

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

### Responsible for the safety data sheet

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### Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.