

Safety data sheet

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BASF Safety data sheet
Date / Revised: 09.10.2019
Product: **Librel® Fe-LO**

Version: 3.0

(30483367/SDS_GEN_NZ/EN)

Date of print 06.03.2024

1. Substance/preparation and manufacturer/supplier identification

Librel® Fe-LO

Use: Micronutrient

Manufacturer/supplier:

BASF New Zealand Ltd.
5E City Works Depot
77 Cook Street
Auckland Central, Auckland 1010
NEW ZEALAND
Telephone: +64 9 255-4300
Telefax number: +64 9 255-4307

Emergency information:

National Poisons Centre: 0800 764 766
BASF Emergency Advice Number: 0800 944 955 (24 hour advice in an emergency only)
BASF Emergency Advice Number: +61 3 8855 6666 (If calling from outside New Zealand)

2. Hazard identification

Classification of the substance and mixture:

No need for classification according to GHS criteria for this product.

Label elements and precautionary statement:

The product does not require a hazard warning label in accordance with GHS criteria.

Other hazards which do not result in classification:

Avoid dust development and deposition - dust explosion risk. Take precautionary measures against static discharges.

3. Composition/information on ingredients

Chemical nature

Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-[(carboxy- .kappa.O)methyl]glycinato-.kappa.N,.kappa.O]](4-)]-, sodium, (OC-6-21)-

CAS Number: 15708-41-5

4. First-Aid Measures

General advice:

| Remove contaminated clothing.

If inhaled:

| Keep patient calm, remove to fresh air.

On skin contact:

| Wash thoroughly with soap and water.

On contact with eyes:

| Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

| Rinse mouth and then drink 200-300 ml of water.

Note to physician:

Symptoms: (Further) symptoms and / or effects are not known so far

| Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Suitable extinguishing media:

| dry powder, foam

Unsuitable extinguishing media for safety reasons:

| carbon dioxide

Additional information:

| Avoid whirling up the material/product because of the danger of dust explosion.

Specific hazards:

harmful vapours, carbon oxides, nitrogen oxides

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:

| Wear a self-contained breathing apparatus.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations. Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

6. Accidental Release Measures

Personal precautions:

Avoid dust formation. Use personal protective clothing. Information regarding personal protective measures, see section 8.

Environmental precautions:

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Pick up with suitable appliance and dispose of.

For large amounts: Contain with dust binding material and dispose of.

Avoid raising dust. Dispose of absorbed material in accordance with regulations.

Additional information: Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

7. Handling and Storage

Handling

Provide exhaust ventilation.

Protection against fire and explosion:

Avoid dust formation. The product is capable of dust explosion. Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

Dust explosion class: Dust explosion class 1 (Kst-value >0 up to 200 bar m s-1).

Storage

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Paper/Fibreboard

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

8. Exposure controls and personal protection

Components with occupational exposure limits

No occupational exposure limits known.

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:

Chemical resistant protective gloves

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):

e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:

Wearing of closed work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form: crystalline
 Colour: yellow to brown
 Odour: odourless
 Odour threshold: not determined

pH value: 4.5 - 5.5
 (20 g/l)

Melting point:

not determined

decomposition point:

> 211 °C

(OECD Guideline 102)

Boiling point:

not applicable

Flash point:

not applicable

Evaporation rate:

The product is a non-volatile solid.

Flammability (solid/gas): not highly flammable

Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Ignition temperature:	not applicable	
Thermal decomposition:	not determined	
Self ignition:	not self-igniting	Test type: Spontaneous self-ignition at room-temperature.
Self heating ability:	It is not a substance capable of spontaneous heating.	
Explosion hazard:	Product is not explosive, however a dust explosion could result from an air / dust mixture.	(Directive 92/69/EEC, A.14)
Fire promoting properties:	not fire-propagating	(Directive 92/69/EEC, A.17)
Vapour pressure:	< 0.000001 hPa (25 °C)	
Density:	1.78 g/cm ³ (20 °C)	(OECD Guideline 109)
Relative density:	1.7808 (20 °C)	(OECD Guideline 109)
Bulk density:	900 kg/m ³	
Relative vapour density (air):	The product is a non-volatile solid.	
Solubility in water:	72 g/l (25 °C)	
Hygroscopy:	The product has not been tested.	
Partitioning coefficient n-octanol/water (log Pow):	-8.84 The data refers to the undissociated form of the substance.	(calculated)
Surface tension:	73.7 mN/m (22 °C; 1.02 g/l)	(OECD-Guideline 115, OECD harmonized ring method)
Viscosity, dynamic:	not applicable	
Viscosity, kinematic:	not applicable, the product is a solid	

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

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Conditions to avoid:

Avoid dust formation. Avoid extreme temperatures. Avoid deposition of dust.

| Thermal decomposition: not determined

Substances to avoid:

strong bases, oxidizing agents, strong acids

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:

| Dust explosion hazard.

| Hazardous decomposition products:

| No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Experimental/calculated data:

LD50 rat (oral): > 5,000 mg/kg

Literature data.

LC50 rat (by inhalation): > 2.75 mg/l 4 h (OECD Guideline 403)

An aerosol was tested.

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

No sensitizing effect.

Experimental/calculated data:

rat: Non-sensitizing. (OECD Guideline 429)

Germ cell mutagenicity

Assessment of mutagenicity:

Most of the results from the available studies show no evidence of a mutagenic effect. At high concentrations the chelating properties interfere with the essential cation concentrations in the culture medium and within the cells.

Carcinogenicity**Assessment of carcinogenicity:**

No data available.

Reproductive toxicity**Assessment of reproduction toxicity:**

No data available.

Developmental toxicity**Assessment of teratogenicity:**

No data available.

Specific target organ toxicity (single exposure):**Assessment of STOT single:**

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**Assessment of repeated dose toxicity:**

No adverse effects were observed after repeated exposure in animal studies.

Aspiration hazard

No aspiration hazard expected.

12. Ecological Information**Ecotoxicity****Assessment of aquatic toxicity:**

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 84/449/EEC, C.1, static)
Limit concentration test only (LIMIT test). No mortality was observed. Nominal values (confirmed by concentration control analytics)

Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, Daphnia magna

Aquatic plants:

EC50 (72 h) > 60.6 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
Inhibition of algal growth is due to the complexing properties of the substance and is not ascribed to an intrinsic toxicity.

EC10 (72 h) > 100 mg/l (growth rate), Desmodesmus subspicatus (Guideline 92/69/EEC, C.3, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal concentration.

Microorganisms/Effect on activated sludge:

No observed effect concentration (3 h) 640 mg/l, (OECD Guideline 209, static)

Chronic toxicity to fish:

No observed effect concentration (35 d) > 1 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), > 1 mg/l, Daphnia magna (semistatic)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal values (confirmed by concentration control analytics)

Assessment of terrestrial toxicity:

No data available concerning terrestrial toxicity.

Mobility

Assessment transport between environmental compartments:

Adsorption to solid soil phase is not expected.

Persistence and degradability

Elimination information:

0 - 10 % BOD of the ThOD (30 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, domestic sewage)

Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.

Bioaccumulation potential

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Additional information

Add. remarks environm. fate & pathway:

Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

| Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:

| Uncontaminated packaging can be re-used.

| Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Domestic transport:

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

A certified handler is not required for the handling of this substance.

Tracking requirements do not apply to this substance.

16. Other Information

This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use. This includes the mentioned and recommended usage. Any other intended applications should be discussed with the manufacturer. In particular this concerns the application for products that are the object of special standards and regulations.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.