

Safety data sheet

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BASF Safety data sheet
Date / Revised: 18.11.2014
Product: **Libfer® SP**

Version: 2.0

(50112165/SDS_GEN_AU/EN)

Date of print 20.11.2014

1. Substance/preparation and company identification

Libfer® SP

Use: Micronutrient

Manufacturer/supplier:

BASF Australia Limited (ABN 62 008 437 867)
Level 12, 28 Freshwater Place Southbank
Victoria 3006, AUSTRALIA
Telephone: +61 3 8855-6600
Telefax number: +61 3 8855-6511

Emergency information:

BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia]
BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

2. Hazard identification

No specific dangers known, if the regulations/notes for storage and handling are considered.

NON-HAZARDOUS SUBSTANCE, NON-DANGEROUS GOODS

3. Composition/information on ingredients

Chemical nature

Ferrate(1-), [[.alpha.,.alpha.'-[1,2-ethanediyldi(imino-.kappa.N)]bis[2- (hydroxy-.kappa.O)benzeneacetato-.kappa.O]](4-)]-, sodium

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CAS Number: 16455-61-1
EC-Number: 240-505-5

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 plenty of water.

Note to physician:

Symptoms: No significant symptoms are expected due to the non-classification of the product.

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

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, foam, dry powder

Unsuitable extinguishing media for safety reasons:

water jet, carbon dioxide

Specific hazards:

harmful vapours

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

carbon oxides

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.

6. Accidental Release Measures

Personal precautions:

| 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.

Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:

Avoid dust formation. Take precautionary measures against static discharges.

Dust explosion class: none.

Storage

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 exposure standard allocated

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:	free flowing fine granules	
Colour:	red to black	
Odour:	mild	
pH value:	8 - 9 (10 g/l)	
Melting point:	> 500 °C (1,013 hPa)	(OECD Guideline 102)
Boiling point:	not applicable	
Flash point:	not applicable	
Flammability:	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:	460 °C	(BAM)
Self ignition:	Temperature: 331 °C Pressure: 1,013 hPa	Test type: Self-ignition at high temperatures. (Method: Directive 92/69/EEC, A.16)
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	
Vapour pressure:	0.000001 hPa (20 °C)	(OECD Guideline 104)
Density:	1.5892 g/cm ³ (20 °C)	(OECD Guideline 109)
Relative density:	1.5892 (20 °C)	(OECD Guideline 109)
Bulk density:	600 - 800 kg/m ³	
Relative vapour density (air):	The product is a non-volatile solid.	

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Solubility in water:

> 150 - < 203 g/l
(23 °C)

Hygroscopy: The product has not been tested.

Partitioning coefficient n-octanol/water (log Pow): -4.2
(23 °C)

Surface tension:

Based on chemical structure, surface activity is not to be expected.

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

Conditions to avoid:

Avoid extreme temperatures.

Avoid dust formation. Avoid deposition of dust.

Thermal decomposition: 270 °C (VDI 2263, sheet 1, 1.4.1)

Substances to avoid:

strong bases, oxidizing agents

Corrosion to metals: Corrosive effects to metal are not anticipated.

Hazardous reactions:

The product is not a dust explosion risk as supplied; however the build-up of fine dust can lead to a risk of dust explosions.

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.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

LD50 rat (oral): > 2,000 mg/kg (OECD Guideline 401)

Limit concentration test only (LIMIT test). No mortality was observed.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

LC50 rat (by inhalation): > 4.2 mg/l 4 h (OECD Guideline 403)

Limit concentration test only (LIMIT test). No mortality was observed. An aerosol was tested.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

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

Limit concentration test only (LIMIT test). No mortality was observed.

Irritation

Assessment of irritating effects:

Not irritating to eyes and skin.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Primary skin irritation rabbit: non-irritant (OECD Guideline 404)

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Primary irritations of the mucous membrane rabbit: non-irritant (OECD Guideline 405)

Assessment other acute effects

Remarks: No data available.

Sensitization

Assessment of sensitization:

Based on available Data, the classification criteria are not met.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment of sensitization:

Animal studies do not exclude a sensitizing potential. Human data are not available.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Mouse Local Lymph Node Assay (LLNA) mouse: ambiguous (OECD Guideline 429)

Repeated dose toxicity

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment of repeated dose toxicity:

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Repeated oral uptake of the substance did not cause substance-related effects. Repeated dermal uptake of the substance did not cause substance-related effects.

Genetic toxicity

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment of mutagenicity:

The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment of carcinogenicity:

Study scientifically not justified.

Reproductive toxicity

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment of reproduction toxicity:

Animal studies gave no indication of a fertility impairing effect at doses which were not toxic to the parental animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Developmental toxicity

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment of teratogenicity:

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

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.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Toxicity to fish:

LC50 (96 h) > 120 mg/l, *Brachydanio rerio* (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

Nominal concentration.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol,
iron sodium salts

Aquatic invertebrates:

EC50 (48 h) > 120 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Nominal concentration.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol,
iron sodium salts

Aquatic plants:

EC50 (72 h) > 294 mg/l (growth rate), Desmodosmus subspicatus (OECD Guideline 201, static)

The statement of the toxic effect relates to the analytically determined concentration.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol,
iron sodium salts

Microorganisms/Effect on activated sludge:

EC10 (3 h) 450 mg/l, activated sludge, domestic (OECD Guideline 209, aquatic)

Nominal concentration.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol,
iron sodium salts

Chronic toxicity to fish:

Study scientifically not justified.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol,
iron sodium salts

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), 320 mg/l, Daphnia magna (OECD Guideline 211,
semistatic)

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

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol,
iron sodium salts

Soil living organisms:

No observed effect concentration (14 d) 1,600 mg/kg, Eisenia foetida (OECD Guideline 207, artificial
soil)

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

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol,
iron sodium salts

Terrestrial plants:

Study does not need to be conducted.

Mobility

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment transport between environmental compartments:

Adsorption to solid soil phase is not expected.

Persistence and degradability

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria). Poorly biodegradable.

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

Elimination information:

10 - 20 % DOC reduction (28 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic)

Assessment of stability in water:

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

Bioaccumulation potential

Information on: Acetic acid, oxo-, sodium salt, reaction products with ethylenediamine and phenol, iron sodium salts

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.

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

Poisons Schedule: Not scheduled

Regulations of the European union (Labelling)

EC-Number: 240-505-5

Regulation 1272/2008/EC on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation 1907/2006/EC:

The product does not require a hazard warning label in accordance with EC Directives.

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.

Registration status:

AICS, AU released / listed

16. Other Information

Information on intended use: 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.

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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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.