



## Ferriin indicator solution

46270-50ML

Version 1.2

Revision Date 16.12.2022

Long-term (chronic) aquatic hazard Category 3  
H412 Harmful to aquatic life with long lasting effects.

### 2.2. Label elements

#### REGULATION (EC) No 1272/2008

Hazard statements : H412 Harmful to aquatic life with long lasting effects.  
Precautionary statements : P273 Avoid release to the environment.

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Tris(1,10-phenanthroline-N1,N10)iron sulphate	14634-91-4 238-676-6	Acute Tox. 3; H301; Oral Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 3 %	

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

*General advice:*

Show this safety data sheet to the doctor in attendance. First aider needs to protect himself. Move out of dangerous area.

*Inhalation:*

If inhaled, remove to fresh air. Call a physician immediately.

*Skin contact:*

Wash off with warm water and soap. If symptoms persist, call a physician.

*Eye contact:*

Protect unharmed eye. Rinse thoroughly with plenty of water, also under the eyelids. Call a physician immediately.

*Ingestion:*

A person suspected to have swallowed the substance who is conscious should be given water to drink. Take to a doctor immediately together with this card

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

*Suitable extinguishing media:*

Water spray jet  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder

*Extinguishing media which shall not be used for safety reasons:*

Do not use a solid water stream as it may scatter and spread fire.

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

The product itself does not burn.  
Fire may cause evolution of:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides  
Sulphur oxides

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.  
No unprotected exposed skin areas.

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### SECTION 6: Accidental release measures

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

Wear personal protective equipment. Unprotected persons must be kept away.

#### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so.

#### 6.3. Methods and materials for containment and cleaning up

Pick up with liquid binding materials and if necessary fill in containers capable of being locked.  
Dispose of absorbed material in accordance with the regulations.

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### 6.4. Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Wear personal protective equipment. Never return unused material to storage receptacle. Exhaust ventilation at the object is necessary.

*Advice on protection against fire and explosion:*

Normal measures for preventive fire protection. The product is not flammable.

*Hygiene measures:*

Keep working clothes separately. Separate rooms are required for washing, showering and changing clothes. When using, do not eat, drink or smoke.

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

*Requirements for storage areas and containers:*

Keep in original packaging, tightly closed.

*Further information on storage conditions:*

Do not leave vessels/containers open. Avoid product residues in/on containers. Store in a cool and shaded area.

### 7.3. Specific end use(s)

no additional data available

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### DNEL/ PNEC-Values

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No DNEL-data available.

No PNEC data available.

### 8.2. Exposure controls

#### Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

#### Engineering measures

Use with local exhaust ventilation.

#### Personal protective equipment

##### *Respiratory protection:*

In the case of vapour formation use a respirator with an approved filter.

##### *Hand protection:*

Glove material: Nitrile rubber

Break through time: > 480 min

Glove thickness: 0,11 mm

Dermatril®740

Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

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

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

##### *Eye protection:*

Tightly fitting safety goggles

##### *Skin and body protection:*

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Wear suitable protective equipment.

Lab coat

Protective suit

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	dark red
Odour	:	odourless
molecular weight	:	692,52 g/mol
Melting point/range	:	ca. 0 °C
Boiling point/boiling range	:	ca. 100 °C The information regarding the boiling point is that of the solvent.
Flammability	:	Not applicable
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Flash point	:	does not flash
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Hazardous decomposition products formed under fire conditions.
pH	:	No data available
Auto-ignition temperature	:	not auto-flammable

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Viscosity, kinematic	:	No data available
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	similar to water
Density	:	1,006 g/cm <sup>3</sup>
Bulk density	:	Not applicable

### 9.2 Other Information

Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Viscosity, dynamic	:	No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under recommended storage conditions.

### 10.2. Chemical stability

Hazardous decomposition products formed under fire conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4. Conditions to avoid

Protect from extreme heat and cold.

### 10.5. Incompatible materials



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Oxidizing agents

### 10.6. Hazardous decomposition products

carbon oxides (CO, CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).  
Sulphur oxides

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

*Acute oral toxicity:*

Acute toxicity estimate

Value: > 2.000 mg/kg

Method: Calculation method

*Acute dermal toxicity:*

No data available

*Acute inhalation toxicity:*

No data available

*Skin irritation:*

No data available

*Eye irritation:*

No data available

*Respiratory or skin sensitisation:*

No data available

*Carcinogenicity:*

Note: No data available

*Aspiration hazard:*

No data available

### 11.2. Information on other hazards

Endocrine disrupting properties

No data available

*Other information:*

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No data available

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### SECTION 12: Ecological information

#### 12.1. Toxicity

*Toxicity to fish:*

No data available

*Toxicity to aquatic plants:*

No data available

*Toxicity to aquatic invertebrates:*

No data available

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

No data available

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

No data available

#### 12.6. Endocrine disrupting properties

No data available

#### 12.7. Other adverse effects

No data available

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

*Product:*

Dispose according to legal requirements.

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*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

*Further information:*

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

### SECTION 14: Transport information

**14.1 UN number**

ADR/RID:Not dangerous goods    IMDG:Not dangerous goods    IATA:Not dangerous goods

**14.2 UN proper shipping name**

ADR/RID:Not dangerous goods

IMDG:Not dangerous goods

IATA:Not dangerous goods

**14.3 Transport hazard class(es)**

**14.4 Packaging group**

**14.5 Environmental hazards**

ADR/RID:no

Marine pollutant: no

**14.6 Special precautions for user**

No data available

**14.7 Maritime transport in bulk according to IMO instruments**

No data available

### SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC		Not applicable

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Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).
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**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
Homburg : 06841/19240	

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

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	Mainz : 06131/19240
	Munich : 089/19240
Latvia	+37167042473

### Other inventory information

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
Not in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List  
Not in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)  
Not in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)  
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)  
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand  
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)  
On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

Text of H-statements referred to under heading 3

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Tris(1,10-phenanthroline- : H301 Toxic if swallowed.  
N1,N10)iron sulphate H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

### Further information

All directives and regulations refer to amended versions.  
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

#### Abbreviations:

EC European Community  
CAS Chemical Abstracts Service  
DNEL Derived no effect level  
PNEC Predicted no effect level  
vPvB Very persistent and very bioaccumulative substance  
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.

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