

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 07.06.2021

Version number 1.0

Revision: 02.06.2021

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

- **1.1 Product identifier**
- **Trade name:** o-Phenanthroline monohydrate, redox indicator, for analysis, ExpertQ®, ACS
- **Article number:** FE0100
- **CAS Number:**  
5144-89-8
- **EC number:**  
200-629-2
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation:** Laboratory reagent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Scharlab, S.L.  
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa  
08181 Sentmenat (Barcelona) SPAIN  
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65  
email: scharlab@scharlab.com  
Internet Web Site: www.scharlab.com
- **Regional representation:**  
Scharlab, S.L.  
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa  
08181 Sentmenat (Barcelona) SPAIN  
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65  
email: scharlab@scharlab.com  
Internet Web Site: www.scharlab.com
- **Further information obtainable from:** technical department
- **1.4 Emergency telephone number:**  
Please contact the regional Scharlab distributor/dealer in your country  
During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3      H301 Toxic if swallowed.



GHS09 environment

Aquatic Acute 1      H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.

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**· Hazard pictograms**

GHS06 GHS09

**· Signal word** Danger**· Hazard statements**

H301 Toxic if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

**· Precautionary statements**

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**· 2.3 Other hazards****· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****· 3.1 Chemical characterisation: Substances****· CAS No. Description**

5144-89-8 o-Fenantrolina monohidrato

**· Identification number(s)****· EC number:** 200-629-2**SECTION 4: First aid measures****· 4.1 Description of first aid measures****· General information:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

**· After inhalation:** In case of unconsciousness place patient stably in side position for transportation.**· After skin contact:** Immediately wash with water and soap and rinse thoroughly.**· After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**· After swallowing:** Do not induce vomiting; call for medical help immediately.**· 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**· 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Firefighting measures****· 5.1 Extinguishing media****· Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **5.2 Special hazards arising from the substance or mixture**  
No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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**• Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**• Eye protection:** Not required.**SECTION 9: Physical and chemical properties****• 9.1 Information on basic physical and chemical properties****• General Information****• Appearance:****Form:**

Solid

**Colour:**

White

**• Odour:**

Odourless

**• Odour threshold:**

Not determined.

**• pH-value:**

Not applicable.

**• Change in condition****Melting point/freezing point:**

Undetermined.

**Initial boiling point and boiling range:** Undetermined.**• Flash point:**

Not applicable.

**• Flammability (solid, gas):**

Product is not flammable.

**• Decomposition temperature:**

Not determined.

**• Auto-ignition temperature:**

Not determined.

**• Explosive properties:**

Product does not present an explosion hazard.

**• Explosion limits:****Lower:**

Not determined.

**Upper:**

Not determined.

**• Vapour pressure:**

Not applicable.

**• Density:**

Not determined.

**• Relative density**

Not determined.

**• Vapour density**

Not applicable.

**• Evaporation rate**

Not applicable.

**• Solubility in / Miscibility with water at 20 °C:**

3.3 g/l

**• Partition coefficient: n-octanol/water:** Not determined.**• Viscosity:****Dynamic:**

Not applicable.

**Kinematic:**

Not applicable.

**• 9.2 Other information**

No further relevant information available.

**SECTION 10: Stability and reactivity****• 10.1 Reactivity** No further relevant information available.**• 10.2 Chemical stability****• Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**• 10.3 Possibility of hazardous reactions** No dangerous reactions known.**• 10.4 Conditions to avoid** No further relevant information available.

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- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Toxic if swallowed.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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### SECTION 14: Transport information

<ul style="list-style-type: none"> <li>14.1 UN-Number</li> <li>ADR, IMDG, IATA</li> <li>14.2 UN proper shipping name</li> <li>ADR</li> </ul>	UN2811  2811 TOXIC SOLID, ORGANIC, N.O.S. (o-Fenantrolina monohidrato), ENVIRONMENTALLY HAZARDOUS TOXIC SOLID, ORGANIC, N.O.S. (o-Fenantrolina monohidrato)
<ul style="list-style-type: none"> <li>IMDG, IATA</li> <li>14.3 Transport hazard class(es)</li> <li>ADR</li> </ul>	
 	
<ul style="list-style-type: none"> <li>Class</li> <li>Label</li> </ul>	6.1 Toxic substances. 6.1
<ul style="list-style-type: none"> <li>IMDG, IATA</li> </ul>	
	
<ul style="list-style-type: none"> <li>Class</li> <li>Label</li> <li>14.4 Packing group</li> <li>ADR, IMDG, IATA</li> <li>14.5 Environmental hazards:</li> <li>Marine pollutant:</li> <li>Special marking (ADR):</li> <li>14.6 Special precautions for user</li> <li>Hazard identification number (Kemler code):</li> <li>EMS Number:</li> <li>Stowage Category</li> <li>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</li> </ul>	6.1 Toxic substances. 6.1  III Environmentally hazardous substance, solid No Symbol (fish and tree) Warning: Toxic substances. 60 F-A,S-A A  Not applicable.
<ul style="list-style-type: none"> <li>Transport/Additional information:</li> </ul>	
<ul style="list-style-type: none"> <li>ADR</li> <li>Limited quantities (LQ)</li> <li>Transport category</li> <li>Tunnel restriction code</li> <li>UN "Model Regulation":</li> </ul>	5 kg 2 E UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (O-FENANTROLINA MONOHIDRATO), 6.1, III, ENVIRONMENTALLY HAZARDOUS

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I -

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- **Seveso category**  
H2 ACUTE TOXIC  
E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Classification according to Regulation (EC) No 1272/2008**  
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
- **Department issuing SDS:** product safety department
- **Contact:** msds@scharlab.com
- **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organisation  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 3: Acute toxicity – Category 3  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1