


<p>Page 1 of 5</p> <p>Print Date 26.11.2018</p>	<p>Material Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Kupfer(II)-sulfat-Pentahydrat cryst.</p>	 <p>Revision Date 26.11.2018</p>
---	---	---

1 Identification of the substance/mixture and of the company/undertaking

• **Informations to product No. 2204**

• **Product name:**

Kupfer(II)-sulfat-Pentahydrat cryst.

Cupri sulphas pentahydricus
Copper(II)-sulfate pentahydrate

• **Supplier of the Product / responsible Company:**

Caesar & Loretz GmbH
Herderstr. 31
40721 Hilden
Tel.: 02103/4994-0
Fax: 02103/32360
e-mail: info@caelo.de

• **Emergency telephone:**

Giftinformationszentrum Mainz
Langenbeckstr. 1, 55131 Mainz
Tel.: 06131/19240

• **Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

• **Application of the substance / mixture:**

Ingredient for pharmaceutical drugs or active pharmaceutical ingredient.

2 Hazards identification

• **GHS-Labeling Elements:**




• **Signal word:** Warning

• **H-Phrases:**

H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H410 Very toxic to aquatic life with long lasting effects

• **P-Phrases:**

P280 Wear protective gloves/protective clothing/eye protection/face protection
P302 IF ON SKIN:
P352 Wash with soap and water
P305 IF IN EYES:
P351 Rinse continuously with water for several minutes
P273 Avoid release to the environment

<p>Page 2 of 5</p> <p>Print Date 26.11.2018</p>	<p>Material Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Kupfer(II)-sulfat-Pentahydrat cryst.</p>	 <p>Revision Date 26.11.2018</p>
---	---	---

Acute Tox. 4
Eye Irrit. 2
Skin Irrit. 2
Aquatic Acute 1
Aquatic chronic 1

3 Composition / information on ingredients

• **Chemical characterization:**

CAS-No. Substance name

7758-99-8 Copper sulphate pentahydrate

- **EINECS-No.:** 231-847-6
- **Index-No.:** 029-004-00-0
- **REACH-Reg.-No.:** 01-2119520566-40-0000
- **INCI-Name:** Copper Sulfate

4 First aid measures

- **after inhalation:** Bring the person out of the contaminated area to fresh air, Seek medical help immediately. Show product-label or this MSDS.
- **after skin contact:** Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.
- **after eye contact:** Rinse out with plenty of water with the eyelid wide open , seek medical advice, even if no immediate symptoms are observed.
- **after swallowing:** Drink water. Induce vomiting. Seek medical advice.
- **Medical advice:**
- **The following symptoms might occur:** After swallowing: Abdominal pain, Vomiting, Diarrhea, Drop in blood pressure, Tachycardia, Collapse, Acidosis.

5 Fire-fighting measures


- **Suitable extinguishing media:** Not combustible. All regular extinguishing media can be used. Select fire fighting measures suitable to environment

6 Accidental release measures

- **Personal protective measures:** Avoid dust formation.
- **Environmental protective measures:** Prevent from entering into surface water, the ground water system or soil.
- **Methods for cleaning:** Take up dry. Disposal according to Chapter 13 of this MSDS. Clean up with water.

7 Handling and storage

- **Handling:**
- **Advice on safe handling:** Avoid dust formation.
- **Storage:**

<p>Page 3 of 5</p> <p>Print Date 26.11.2018</p>	<p>Material Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Kupfer(II)-sulfat-Pentahydrat cryst.</p>	 <p>Revision Date 26.11.2018</p>
---	---	---

• **Requirements for storage areas and containers:** Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).

8 Exposure controls / personal protective equipment

- **Personal protective equipment:**
- **Respiratory protection:** If dust is generated: Dust protection mask.
- **Hand protection:** Protection gloves of latex or rubber
- **Eye protection:** Safety glasses.

9 Physical and chemical properties

- **Form:** solid
- **Colour:** blue
- **Odour:** odourless
- **Melting point / melting range:** not determined
- **Decomposition temperature:** 88 – 245 °C (release of crystal water)
- **Density:** (20 °C) 2,248 g/cm³
- **Bulk density:** (20 °C) 900 - 1200 kg/m³
- **Solubility in / Miscibility with Water:** (20 °C) 317 g/l
- **pH-range:** (50 g/l, 20 °C) 3,5 – 4,5

10 Stability and reactivity


- **Thermal decomposition / conditions to avoid:**
Thermische Decomposition > 560 °C.
- **Materials to avoid:** Reaction with Hydroxylamine is likely (Analogy conclusion).
- **Hazardous decomposition products:** Sulphur oxides.

11 Toxicological information

- **Acute toxicity:**
LD/LD50-data relevant for hazard classification:
7758-99-8 Copper sulfate
Oral: LD50: 300 mg/kg (rat)
LDLo oral 50 mg/kg man
LC50 0,8 mg/l fish
- **Primary irritant effect:**
 - **on skin:** Irritant effect on skin and mucous membranes.
 - **on eyes:** If dust is generated: Conjunctivitis. Danger of corneal clouding.
 - **on respiratory organs:** Irritations of mucous membranes, causing an respiratory insufficiency.
- After respiration of big quantities: Metal fume fever.
- **after swallowing:** Irritations.

12 Ecological information

- **Aquatic toxicity:** Generally for copper compounds: High aquatic toxicity. Toxic for water organisms,

<p>Page 4 of 5</p> <p>Print Date 26.11.2018</p>	<p>Material Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Kupfer(II)-sulfat-Pentahydrat cryst.</p>	 <p>Revision Date 26.11.2018</p>
---	---	---

LC50 Oncorhynchus mykiss: 0,11 mg/l; 96 h

EC50 Daphnia magna: 0,02 mg/l; 48 h

- **General advices:** Prevent from leaking into ground water, environment waters or drainage.
- **Water hazard class:** 2 (VwVwS): hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation:** Disposal as inorganic laboratory chemical waste.
- **Empty contaminated packaging:**
- **Recommendation:** Disposal according to the local regulations.

14 Transport informations

- **Land transport according to ADR:**
- **Proper shipping name:** Environmentally hazardous substance, solid, n.o.s., Copper sulfate
- **Class:** 9
- **UN-number:** 3077
- **Packing group:** III
- **Classification code:** M7
- **Limited quantities (Table 3.4.6. ADR):** 5 kg
- **Hazard classification number:** 90
- **Special provisions (Chapter 3.3 ADR):** 274
- **Additional informations for sea transport IMDG:**
- **EMS-No.:** F-A, S-F
- **Properties:** m.p.

15 Regulatory information

- **Labelling according to actual legislation (GHS, Globally Harmonized System of Classification and Labelling of Chemicals):**

The product is classified and labelled according to GHS-regulations.

- **Hazard symbols:** GHS07, GHS09

- **Signal word:** Warning

- **H-Phrases:**

H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H410 Very toxic to aquatic life with long lasting effects

- **P-Phrases:**

P280 Wear protective gloves/protective clothing/eye protection/face protection

P302 IF ON SKIN:

P352 Wash with soap and water

P305 IF IN EYES:


P351 Rinse continuously with water for several minutes

P273 Avoid release to the environment

- **National regulations (Germany):**

- **Water hazard class:** see chapter 12

- **Storage class TRGS 510:** 13

<p>Page 5 of 5</p> <p>Print Date 26.11.2018</p>	<p>Material Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)</p> <p>Kupfer(II)-sulfat-Pentahydrat cryst.</p>	 <p>Revision Date 26.11.2018</p>
---	---	---

16 Other Information

The information provided in this MSDS is correct to the best of our knowledge at the date of edition.

· **Reason for last revision:** Adjustment to regulation (EC) 1907/2006 (REACH) and GHS-labelling system.