

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 25.08.2007

Revision: 25.08.2007

1 Identification of substance:

- **Product details:**
- **Trade name:** Copper (II) Sulfate Pentahydrate

· **Article number:** C4756

- **Application of the substance / the preparation**

Chemicals for synthesis

Laboratory chemicals

- **Manufacturer/Supplier:**

Mallinckrodt Baker B.V

P.O.Box 1

7400 AA Deventer

The Netherlands

- **Informing department:**

Quality Systems & Regulatory Affairs

E-mail : sjors.duteweert@covidien.com

- **Emergency information:**

Environment Health & Safety department

during normal opening times (8 am till 5.30 pm) tel: (+31)(0) 570 687500

Tel(+31)(0) 570-687500

Fax(+31)(0) 570-687574

E-mail : jtbaker.nl@covidien.com

2 Hazards identification

- **Hazard designation:**



Xn Harmful

N Dangerous for the environment

- **Information pertaining to particular dangers for man and environment**

R 22 Harmful if swallowed.

R 36/38 Irritating to eyes and skin.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3 Composition/information on ingredients

- **Chemical characterization:**

- **CAS No. Designation:**

7758-99-8 Copper (II) Sulfate Pentahydrate

- **Identification number(s):**

- **EINECS Number:** 23-184-7

- **EC Number:** 029-004-00-0

4 First aid measures

- **General information**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation** In case of unconsciousness bring patient into stable side position for transport.

- **After skin contact** Instantly wash with water and soap and rinse thoroughly.

- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

- **After swallowing**

Rinse out mouth and then drink plenty of water.

Induce vomiting and call for medical help.

(Contd. on page 2)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 25.08.2007

Revision: 25.08.2007

Trade name: Copper (II) Sulfate Pentahydrate

Instantly call for doctor.

(Contd. of page 1)

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **Special hazards caused by the material, its products of combustion or flue gases:** Sulphur dioxide (SO₂)
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.

6 Accidental release measures

- **Person-related safety precautions:** Avoid causing dust.
- **Measures for environmental protection:**
Inform respective authorities in case product reaches water or sewage system.
- **Measures for cleaning/collecting:** Dispose of contaminated material as waste according to item 13.

7 Handling and storage

- **Handling**
- **Information about protection against explosions and fires:** no special requirements
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with critical values that require monitoring at the workplace:**
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
Not necessary if room is well-ventilated.
In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
- **Protection of hands:**
Protective gloves.
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

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 25.08.2007

Revision: 25.08.2007

Trade name: Copper (II) Sulfate Pentahydrate

(Contd. of page 2)

- **Material of gloves**
Nitrile rubber, NBR
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.
- **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed safety glasses.

9 Physical and chemical properties:

· **General Information**

Form: Crystalline powder
Colour: Blue
Smell: Odourless

· **Change in condition**

Melting point/Melting range: 110°C
Boiling point/Boiling range: ? °C
· **Flash point:** -23°C
· **Danger of explosion:** Product is not explosive.
· **Density at 20°C** 2.284 g/cm³

· **Settled apparent density at 20°C** ~900-1200 kg/m³

· **Solubility in / Miscibility with**

Water at 20°C: 317 g/l
· **pH-value (50 g/l) at 20°C:** 3.5-4.5

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** Heat,boiling teperatures.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of composition:** No dangerous decomposition products known

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	960 mg/kg (rat)
	LDLo	50 (anh) mg/kg (Man)
Dermal	LD50	33 mg/kg (mouse)

· **Primary irritant effect:**

· **on the skin:** Irritant for skin and mucous membranes.

· **on the eye:**

irritation
Irritant effect.

· **Sensitization:** No sensitizing effect known.

GB

(Contd. on page 4)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 25.08.2007

Revision: 25.08.2007

Trade name: Copper (II) Sulfate Pentahydrate

(Contd. of page 3)

12 Ecological information:

· **Ecotoxicological effects:**

· **Aquatic toxicity:**

EC50/48h 0.024 mg/l (daphnia magna)

LC50/96h 0.1-2.5 mg/l (Fish)

· **Remark:** Very toxic for fish

· **General notes:**

Water hazard class (D) 2 (Assessment by list): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

Danger to drinking water if even small quantities leak into soil.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

13 Disposal considerations

· **Product:**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**



· **ADR/RID-GGVS/E Class:** 9 Miscellaneous dangerous substances and articles.

· **Kemler Number:** 90

· **UN-Number:** 3077

· **Packaging group:** III

· **Label** 9

· **Designation of goods:** 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper (II) Sulfate Pentahydrate)

· **Limited quantities (LQ)** LQ27

· **Transport category** 3

· **Tunnel restriction code** E

· **Maritime transport IMDG/GGVSea:**



· **IMDG/GGVSea Class:** 9

· **UN Number:** 3077

· **Label** 9

· **Packaging group:** III

(Contd. on page 5)

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 25.08.2007

Revision: 25.08.2007

Trade name: Copper (II) Sulfate Pentahydrate

(Contd. of page 4)

· **Marine pollutant:** Yes (P)
 · **Correct technical name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper (II) Sulfate Pentahydrate)

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 9
 · **UN/ID Number:** 3077
 · **Label:** 9
 · **Packaging group:** III
 · **Correct technical name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper (II) Sulfate Pentahydrate)

15 Regulatory information

- **Designation according to EC guidelines:**
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
- **Code letter and hazard designation of product:**
Xn Harmful
N Dangerous for the environment
- **Risk phrases:**
22 Harmful if swallowed.
36/38 Irritating to eyes and skin.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**
22 Do not breathe dust.
60 This material and its container must be disposed of as hazardous waste.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.

16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing data specification sheet:** Quality Assurance Department
- **Contact:** Sjors duteweert
- *** Data compared to the previous version altered.**