

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Copper(II) sulfate pentahydrate, 100 g**

Print date: 14.04.2015

Product code: 9991541

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Copper(II) sulfate pentahydrate, 100 g

CAS No: 7758-99-8  
Index No: 029-004-00-0  
EC No: 231-847-6

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: Xn - Harmful, Xi - Irritant, N - Dangerous for the environment

R phrases:

Harmful if swallowed.

Irritating to eyes and skin.

Very toxic to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Skin corrosion/irritation: Skin Irrit. 2

Hazardous to the aquatic environment: Aquatic Acute 1 (M-Factor = 1)

Hazardous to the aquatic environment: Aquatic Chronic 1 (M-Factor = 1)

Hazard Statements:

Harmful if swallowed.

Causes serious eye irritation.

Causes skin irritation.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

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#### 2.2. Label elements

**Hazardous components which must be listed on the label**  
copper sulphate

Signal word:

Danger

Pictograms:

GHS06-GHS09



#### Hazard statements

H301	Toxic if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P273	Avoid release to the environment.
P501	Dispose of contents/container to Waste management.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula:	CuO4S · 5H2O
Molecular weight:	249,69

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
231-847-6	copper sulphate	100 %
7758-98-7	Xn - Harmful, Xi - Irritant, N - Dangerous for the environment R22-36/38-50-53	
029-004-00-0	Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1; H302 H319 H315 H400 H410	

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Provide fresh air.

##### After contact with skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

##### After contact with eyes

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

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**After ingestion**

Rinse mouth immediately and drink plenty of water. Medical treatment necessary.

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

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

The product itself does not burn.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up**

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Advice on protection against fire and explosion**

Only use the material in places where open light, fire and other flammable sources can be kept away.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****8.2. Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

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#### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

#### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

#### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

#### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

### SECTION 9: Physical and chemical properties

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

Physical state:	solid
Colour:	light blue
Odour:	No data available

#### Test method

pH-Value (at 25 °C):	4,2 50 g/l
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#### Changes in the physical state

Melting point:	110 °C
Initial boiling point and boiling range:	No data available
Sublimation point:	No data available
Softening point:	No data available
Flash point:	No data available

#### Flammability

Solid:	No data available
Gas:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available

#### Auto-ignition temperature

Solid:	No data available
Gas:	No data available

Vapour pressure: (at 25 °C)	9,7 hPa
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Vapour pressure:	No data available
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Density:	2,284 g/cm <sup>3</sup>
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Water solubility:	No data available
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Partition coefficient:	No data available
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Viscosity / dynamic:	No data available
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Viscosity / kinematic:	No data available
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Flow time:	No data available
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Vapour density:	No data available
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Evaporation rate: No data available  
Solvent separation test: No data available  
Solvent content: No data available

#### **9.2. Other information**

Solid content: No data available

### SECTION 10: Stability and reactivity

#### **10.1. Reactivity**

No data available

#### **10.3. Possibility of hazardous reactions**

No data available

#### **10.4. Conditions to avoid**

No data available

#### **10.5. Incompatible materials**

Oxidizing agents, strong.

#### **10.6. Hazardous decomposition products**

No data available

### SECTION 11: Toxicological information

#### **11.1. Information on toxicological effects**

##### **Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

##### **Acute toxicity**

Acute toxicity, dermal.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
7758-98-7	copper sulphate				
	oral	LD50	300 mg/kg	Ratte	

##### **Irritation and corrosivity**

Irritating to eyes. After skin contact: Irritant.

##### **Sensitising effects**

No data available

##### **Severe effects after repeated or prolonged exposure**

No data available

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

##### **Specific effects in experiment on an animal**

No data available

##### **Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

##### **Practical experience**

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#### Observations relevant to classification

No data available

### SECTION 12: Ecological information

#### 12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h]   [d]	Species	Source
7758-98-7	copper sulphate					
	Acute fish toxicity	LC50	0,11 mg/l	96 h	Onchorhynchus mykiss	

#### 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. Other adverse effects

No data available

#### Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

##### Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

##### Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

##### Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

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#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN3077
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Classification code:	M7
Special Provisions:	274 335 601
Limited quantity:	5 kg
Transport category:	3
Hazard No:	90
Tunnel restriction code:	E

#### Other applicable information (land transport)

E1

#### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	UN3077
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Classification code:	M7
Special Provisions:	274 335 601
Limited quantity:	5 kg

#### Other applicable information (inland waterways transport)

E1

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	UN3077
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Special Provisions:	274, 335
Limited quantity:	5 kg
EmS:	F-A, S-F

#### Other applicable information (marine transport)

E1

#### Air transport (ICAO)

<b>14.1. UN number:</b>	UN3077
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	III
Hazard label:	9
Special Provisions:	A97 A158 A179
Limited quantity Passenger:	30 kg G
IATA-packing instructions - Passenger:	956
IATA-max. quantity - Passenger:	400 kg

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IATA-packing instructions - Cargo:

956

IATA-max. quantity - Cargo:

400 kg

**Other applicable information (air transport)**

E1

: Y956

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information****Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): 3 - highly water contaminating

**SECTION 16: Other information****Relevant R-phrases (Number and full text)**

- |       |   |
|-------|---|
| 22    | Harmful if swallowed.   |
| 36/38 | Irritating to eyes and skin.                                    |
| 50    | Very toxic to aquatic organisms.                                |
| 53    | May cause long-term adverse effects in the aquatic environment. |

**Relevant H- and EUH-phrases (Number and full text)**

- |      |   |
|------|---|
| H301 | Toxic if swallowed.                                   |
| H302 | Harmful if swallowed.                                 |
| H315 | Causes skin irritation.                               |
| H319 | Causes serious eye irritation.                        |
| H400 | Very toxic to aquatic life.                           |
| H410 | Very toxic to aquatic life with long lasting effects. |