

WTW Safety Data Sheet
According to EC Directives 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking

Product name:

Copper Standard Solution 10 g/l Cu²⁺

Ord. No.: 120 190

Model: ES/Cu

Manufacturer:

WTW Wissenschaftlich-Technische Werkstätten GmbH, KG, Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany, Tel.: (0881) 183-0, Fax.: (0881) 62539

Emergency telephone:
(001)-703-527-3887

2. Composition/information on ingredients

Chemical characterization: Aqueous saline solution

Hazardous ingredients: Copper sulfate

Hazard symbols: Harmful (Xn) and dangerous for the environment (N)

R-phrases: 22-36/38-50/53

Content: 2,4 %

CAS-No.: 7758-99-8

EINECS-No.: 231-847-6

3. Hazards identification

Harmful if swallowed. Irritating to eyes and skin.
Dangerous for the environment.

4. First aid measures

After inhalation: Fresh air

After skin contact: Wash off with plenty of water.

Remove contaminated clothing.

After eye contact: Rinse out with plenty of water with the eyelid held wide open.

After ingestion: Make injured person drink plenty of water.
Induce vomiting. Summon doctor.

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5. Fire-fighting measures

<i>Suitable extinguishing media:</i>	To suit environment.
<i>Unsuitable extinguishing media:</i>	No information available.
<i>Special risks:</i>	Development of hazardous vapours possible in the event of fire. The following may develop in the event of fire: SO_x Use chemical protection clothing and selfcontained breathing apparatus in the dangerous zone.
<i>Other information:</i>	Non combustible

6. Accidental release measures

<i>Personal-related precautionary measures:</i>	Avoid generation of dust.
<i>Environmental-protection measures:</i>	Do not allow to enter sewerage system and drinking water supplies or soil.
<i>Procedures for cleaning/absorption:</i>	Take up with liquid-absorbent material. Forward for disposal. Clean up affected area with water.

7. Handling and storage

<i>Handling:</i>	No further requirements
<i>Storage:</i>	Tightly closed.

8. Exposure control/personal protection

<i>Specific control parameters:</i>	MAK-value (Germany): 1 mg/m^3 for copper sulphate
Personal protective equipment	
<i>Respiratory protection:</i>	Required when dusts are generated.
<i>Eye protection:</i>	Protective glasses
<i>Hand protection:</i>	Gloves
<i>Industrial hygiene:</i>	Wash hands and face after working with solution. Change contaminated clothing.

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9. Physical and chemical properties

<i>Form:</i> Liquid	<i>Colour:</i> Blue	<i>Odour:</i> Odourless
<i>pH-value</i>	°C	
<i>Melting temperature:</i>	°C	
<i>Boiling temperature:</i>	about 100°C	
<i>Ignition temperature:</i>	°C	
<i>Flash point:</i>	°C	
<i>Explosion limite lower:</i>	/	
<i> upper:</i>	/	
<i>Density:</i>	/	
<i>Solubility in water:</i>	miscible	
<i>Thermal decomposition:</i>	/	

10. Stability and reactivity

<i>Conditions to be avoided:</i>	None
<i>Substances to be avoided:</i>	None
<i>Hazardous decomposition products:</i>	Sulfur oxides
<i>Further information:</i>	None

11. Toxicological information

<i>Acute toxicity:</i>	LD 50 (oral, rat): 300 mg/kg (anhydrous substance)
<i>Further toxicological information:</i>	When dust are generated: conjunctivitis. Risk of corneal clouding. After inhalation: irritation of the mucous membranes, coughing and dyspnoea. Metal-fume fever after inhalation of large quantities. After ingestion: gastritic pain, vomiting, diarrhoea, drop in blood pressure, tachycardia, collapse, acidosis. After a latency period: death.

12. Ecological information

<i>Ecotoxic effects:</i>	Biological effect: fungicidal effect. High aquatic toxicity.
	Do not allow to enter drinking water water supplies, waste water, or soil.

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13. Disposal considerations

Products: There are no uniform regulations for the disposal of chemicals or residues. The disposal is regulated through corresponding regional laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

Packaging: Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, noncontaminated packaging may be treated like household waste or recycled.

14. Transport information

Not subject to transport regulations.

15. Regulatory information

Labelling according to EC directives

<i>Symbol:</i>	No hazardous product
<i>R-phrases:</i> 51/53	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
<i>S-phrases:</i> /	

German regulations

Water pollution class; WGK: 1 slightly polluting substance

Regulation on combustible liquids; VbF: Non combustible

Other regulations: None

16. Other information

Date of issue:	12.2.2004
Supersedes edition of	20.8.2001
Reason for alteration :	General update

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.