



### 3. Composition/information on ingredients

Substance/Mixture: Substance

#### 3.1 Substances

Hazardous components

Component	Classification	Concentration
Copper (II) chloride dihydrate	6.1 D; 6.3 A; 6.4 A; 9.1 A; H302, H315, H319, H400 M-Factor - Aquatic Acute: 10	<=100%

### 4. First aid measures

#### 4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue., symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to haemolytic anaemia and accelerates arteriosclerosis., symptoms observed shortly before death were: shock, renal failure.

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

### 5. Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

No data available

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

### 6. Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

## 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

### 7.3 Specific end use(s)

No data available

## 8. Exposure controls/personal protection

### Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

#### Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

#### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

#### Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### a) Appearance

Form: solid  
Colour: dark blue  
b) Odour  
No data available  
c) Odour Threshold  
No data available  
d) pH  
3.0 - 3.8  
e) Melting point/freezing point  
Melting point/range: 100 °C - dec.  
f) Initial boiling point and boiling range  
No data available  
g) Flash point  
No data available  
h) Evaporation rate  
No data available  
i) Flammability (solid, gas)  
No data available  
j) Upper/lower flammability or explosive limits  
No data available  
k) Vapour pressure  
No data available  
l) Vapour density  
No data available  
m) Relative density  
2.51 g/cm<sup>3</sup>  
n) Water solubility  
No data available  
o) Partition coefficient: n-octanol/water  
No data available  
p) Auto-ignition temperature  
No data available  
q) Decomposition temperature  
No data available  
r) Viscosity  
No data available

## **10. Stability and reactivity**

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat Exposure to moisture

### 10.5 Incompatible materials

Alkali metals

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions

Hydrogen chloride gas, copper oxides.

Other decomposition products  
No data available

## **11. Toxicological information**

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 336 mg/kg

Inhalation: No data available

LD50 Dermal - Rat - male - > 2,000 mg/kg

LD50 Dermal - Rat - female - 1,224 mg/kg

Skin corrosion/irritation

Skin - Rabbit - Irritating to skin.

Serious eye damage/eye irritation

Eyes - Rabbit - Risk of serious damage to eyes.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation

May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion

Harmful if swallowed.

Skin

Harmful if absorbed through skin. Causes skin irritation.

Eyes

Causes eye burns.

Signs and Symptoms of Exposure

Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue., symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to haemolytic anaemia and accelerates arteriosclerosis., symptoms observed shortly before death were: shock, renal failure.

Additional Information

RTECS: GL7030000

## **12. Ecological information**

### 12.1 Toxicity

Toxicity to fish

LC50 - Cyprinus carpio (Carp) - 0.12 - 0.23 mg/l - 96.0 h

LC50 - Lepomis macrochirus - 0.9 mg/l - 96.0 h

NOEC - Ictalurus punctatus - 0.013 mg/l - 60 d

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

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

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

### 13. Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

### 14. Transport Information Table

		<b>ADR/RID – European packaging certification</b>	<b>IMDG International Maritime Dangerous Goods Code</b>	<b>IATA – DGR International Air Travel Association – Dangerous Goods Regulations</b>
<b>14.1</b>	<b>UN Number</b>	2802	2802	2802
<b>14.2</b>	<b>UN Proper Shipping name</b>	COPPER CHLORIDE	COPPER CHLORIDE	Copper Chloride
<b>14.3</b>	<b>Transport Hazard Class</b>	8	8	8
<b>14.4</b>	<b>Packaging group</b>	III	III	III
<b>14.5</b>	<b>Environmental Hazards</b>	Yes	Yes	No
<b>14.6</b>	<b>Special precautions for user</b>	No data available.		

### 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Approval Code: HSR003637

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group  
Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

### 16. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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