

## Material Safety Data Sheet (MSDS)

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE

#### 1.1 Product identifiers

Product name : CU-EP-  
Product Number : CU-EP-  
Brand : CU-EP-  
CAS-No. 7440-50-8

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : LINBRAZE S.r.l.  
Contrada Torre Chimera  
93019 Sommatino (ITALY)  
Telephone : +39 0922 871694  
Fax: +39 0922 709064  
E-mail address : info@linbraze.com

#### 1.4 Emergency telephone number

Emergency Phone : +39 02 6610 1029 (Centro Antiveleni Niguarda Milano)

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Aquatic toxicity (Category 1)  
Aquatic chronicity (Category 3)

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

Toxic to aquatic organisms.

#### 2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram:



GHS09

Danger

Signal word:

Hazard statement(s)

H400

Very toxic to aquatic life



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H412	Harmful to aquatic life with long-lasting effects
<i>Precautionary statement(s)</i>	
P273	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P391	Avoid release to the environment.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation

Supplemental Hazard Statements None

### According to European Directive 67/548/EEC as amended.

Hazard symbol(s)	
R-phrases(s)	
R50	Very toxic to aquatic organisms
S-phrases(s)	
S61	Avoid release to the environment. Refer to special instructions/ Safety data sheets.

### 2.3 Other hazards

none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula : **Copper 99,9** CAS-No. 7440-50-8 EC-No. 231-159-6

## 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

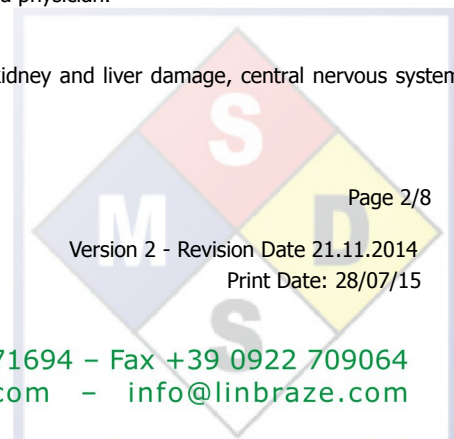
Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. 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

Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system



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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 lead to hemolytic anemia and accelerates arteriosclerosis., Damage to the lungs., Vomiting, Diarrhoea, Abdominal pain, Blood disorders ,

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

no data available

## 5. FIRE-FIGHTING 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

Copper oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

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

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

### 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

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

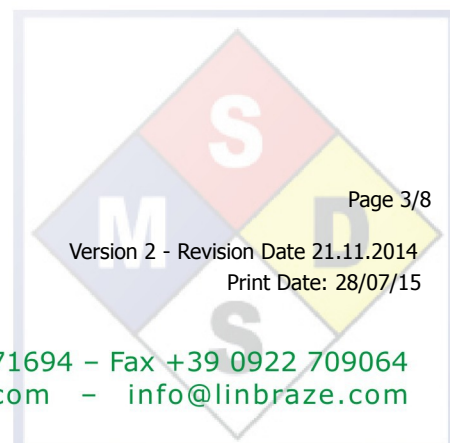
For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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



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

### 7.3 Specific end uses

no data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

#### 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

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### Body Protection

Flame retardant antistatic protective clothing, 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 N100 (US) or type P3 (EN 143) 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 such as NIOSH (US) or CEN (EU).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form:	Powder, Colour light red
b) Odour:	no data available
c) Odour Threshold:	no data available
d) pH:	no data available
e) Melting point/freezing point:	Melting point/range: 1083 °C
f) Initial boiling point and boiling range:	2.567 °C - lit.
g) Flash point:	no data available
h) Evaporation rate:	no data available
i) Flammability (solid, gas):	The substance or mixture is a flammable solid with the subcategory 1.
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure:	no data available



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l) Vapour density:	no data available
m) Relative density:	8,94 g/cm <sup>3</sup> at 25 °C
n) Water solubility:	no data available
o) Partition coefficient: noctanol/water	no data available
p) Autoignition temperature:	no data available
q) Decomposition temperature:	no data available
r) Viscosity:	no data available
s) Explosive properties:	no data available
t) Oxidizing properties:	no data available

### 9.2 Other safety information

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, flames and sparks. Extremes of temperature and direct sunlight.

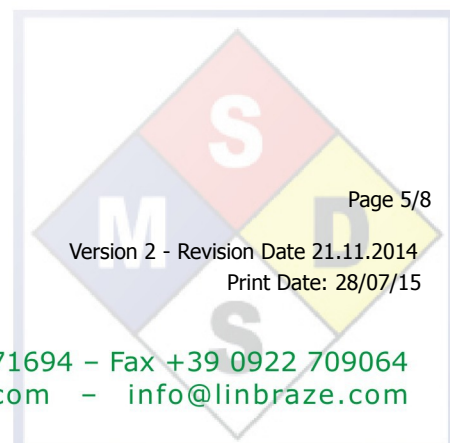
### 10.5 Incompatible materials

Strong acids, Strong oxidizing agents, Acid chlorides, Halogens

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

## 11. TOXICOLOGICAL INFORMATION



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### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Intraperitoneal - mouse - 3,5 mg/kg

#### Skin corrosion/irritation

May irritate skin.

#### Serious eye damage/eye irritation

May irritate eyes.

#### Respiratory or skin sensitization

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

May cause respiratory irritation.

#### Specific target organ toxicity - repeated exposure

no data available

#### Aspiration hazard

no data available

#### Potential health effects

##### Inhalation:

May be harmful if inhaled. May cause respiratory tract irritation.

##### Ingestion:

May be harmful if swallowed.

##### Skin:

May be harmful if absorbed through skin. May cause skin irritation.

##### Eyes:

May cause eye irritation.

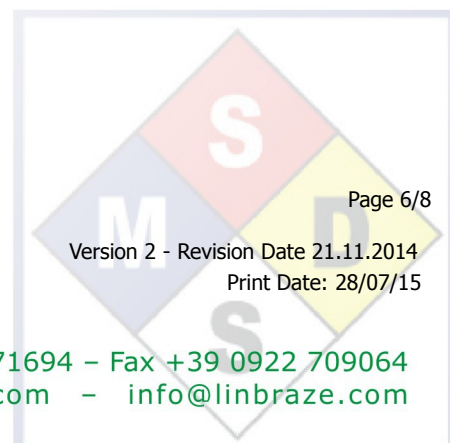
#### Signs and Symptoms of Exposure

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 lead to hemolytic anemia and accelerates arteriosclerosis., Damage to the lungs., Vomiting, Diarrhoea, Abdominal pain, Blood disorders,

#### Additional Information

RTECS: GL5325000

### 12. ECOLOGICAL INFORMATION



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### 12.1 Toxicity

Toxicity to fish	mortality LOEC - Oncorhynchus mykiss (rainbow trout) - 0,022 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	mortality NOEC - Daphnia - 0,004 mg/l - 24 h
	EC50 - Daphnia magna (Water flea) - 0,04 - 0,05 mg/l - 48 h

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

Bioaccumulation	Cyprinus carpio (Carp) - 40 d -200 mg/l
	Bioconcentration factor (BCF): 108

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.  
Avoid release to the environment.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: 3077	IMDG: 3077	IATA: 3077
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### 14.2 UN proper shipping name

ADR/RID:	Environmentally hazardous substance, solid, n.o.s (copper)
IMDG:	Environmentally hazardous substance, solid, n.o.s (copper)
IATA:	Environmentally hazardous substance, solid, n.o.s (copper)

