

# SAFETY DATA SHEET

According to directive 1907/2006/EC, 2020/878  
Version 9.0 Revision date: 03-05-2022  
Trade name: Bronze powder copper gold

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identification:

Product name: Bronze powder copper gold  
Chemical name: Copper  
Product form: Fabric  
EC No: 231-159-6  
CAS No: 7440-50-8  
REACH registration number: 01-2119480154-42-XXXX  
UFI code: E1S2-904R-100U-N2AA

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

Main use: Industrial use, Professional use.  
Specific use: Coatings and paints.  
Printing inks

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

Responsible distributor : ASSYST bvba / A.S.O.W. bvba  
Hellegatstraat 13a  
2590 Berlaar  
Belgium  
Tel: +32 495 50 61 14 / +32 496 83 70 27  
Website: [www.assyst.org](http://www.assyst.org) / [www.artsuppliesonweb.com](http://www.artsuppliesonweb.com)  
Email: [ao@assyst.org](mailto:ao@assyst.org) / [vera.opsommer@assyst.org](mailto:vera.opsommer@assyst.org)

### 1.4 Emergency phone number:

For Belgium: Call the **Poison Control Centre (070 245 245 - free)**, if not available: **02 264 96 30** (normal rate) or your doctor. In life-threatening situations, always call the European emergency number **112**.

NHS 24 Direct For help from a GP, visit your GP surgery's website, use an online service to contact your GP, or call the surgery. **For urgent medical help**, use the NHS 111 online service, or **call 111** if you are unable to get help online. **For life-threatening emergencies, call 999** for an ambulance. There is more information about getting medical help on the NHS website.

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture:

**Classification according to directive (EC) No 1272/2008 and its amendments.**

CLP classification : The product is classified as dangerous according to Regulation 1272/2008/EC

Aquatic Acute 1 - H400

Aquatic Chronic 2 - H411

Full text of H-Statements: see section 16

### 2.2 Labelling elements:

**Labelling according to regulation (EC) No 1272/2008 [CLP/GHS]:**



**Hazard pictograms:**

**Signal word:** Warning

**Hazard statements:**

H410 - Very toxic to aquatic organisms, with long-lasting effects.

**Safety recommendations:**

P273 - Avoid discharge into the environment.

P391 - Clean up any leaks/spills.

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P501 - Dispose of contents/container to an authorised waste disposal company.

**Additional information:**

Specified in Annex VI: EU Identification-No. 029-024-00-X

2.3 Other hazards:

This substance/mixture does not meet the PBT criteria of the REACH Regulation, Annex XIII.

This substance/mixture does not meet the vPvB criteria of the REACH regulation, annex XIII.

Contains no PBT or vPvB substances  $\geq 0.1\%$  assessed according to REACH Annex XIII.

The substance is not included in the list established according to Article 59(1) of REACH for having endocrine-disrupting properties, or is identified as having endocrine-disrupting properties according to the criteria set out in Delegated Regulation (EU) 2017/2100 of Regulation (EU) 2018/605.

**SECTION 3: Composition and information on ingredients**

**3.1 Substances:**

Substance name:	Product identification	%	Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP].
Copper	CAS no. : 7440-50-8 EC No : 231-159-6 Index No: 029-024-00 REACH-nr: 01-2119480154-42-XXXX	100 %	Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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

**SECTION 4: First aid measures**

**4.1 Description of first-aid measures:**

**Additional advice:**

Emergency workers: take care of your own protection too!  
 See section 8 regarding the use of personal protective equipment.  
 Never administer anything by mouth to an unconscious person.  
 If in doubt or if symptoms persist, always consult a doctor.  
 Show this safety data sheet to the doctor on duty.

**Inhalation:**

Bring the victim into fresh air; keep warm and let rest.  
 Administer oxygen or artificial respiration if necessary.  
 If in doubt or if symptoms persist, always consult a doctor.

**Skin contact:**

Remove contaminated clothing and shoes.  
 Wash carefully with plenty of soap and water.  
 If in doubt or if symptoms persist, always consult a doctor.

**Eye contact:**

Immediately flush gently and thoroughly with eye wash or water.  
 Remove contact lenses, if possible.  
 Keep rinsing.  
 If in doubt or if symptoms persist, always consult a doctor.

**After swallowing:**

Rinse mouth thoroughly with water.  
 Consult a doctor.

**4.2 Main acute and delayed symptoms and effects:**

**Inhalation:**

Inhaling dust can cause respiratory irritation.

**Skin contact:**

Contact with dust may cause mechanical irritation or dryness of the skin.

**Eye contact:**

Dust can cause painful eye irritation and tearing eyes.

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#### **Ingestion:**

May cause gastrointestinal tract irritation, nausea, vomiting and diarrhoea.

#### **4.3 Indication of immediate medical attention and special treatment required:**

Symptomatic treatment.

#### **SECTION 5: Fire-fighting measures**

##### **5.1 Extinguishing media:**

##### **Suitable extinguishing agents:**

Foam, ABC powder, Carbon dioxide, Dry sand

##### **Unsuitable extinguishing media:**

Full water jet.

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

##### **Specific risks:**

Not flammable.

Dust explosion hazard.

##### **Hazardous decomposition products in case of fire:**

Metal oxides.

##### **5.3 Advice for firefighters:**

##### **Extinguishing instructions:**

Evacuate.

Cool exposed vessels with a water spray or mist.

Prevent spread of extinguishing fluids by containing them.

Avoid releasing extinguishing water into the environment.

Avoid the formation of dust.

##### **Protection during firefighting:**

Do not intervene without appropriate safety equipment.

Self-contained breathing apparatus.

##### **Other information:**

Do not let firewater run off into sewers or watercourses.

Dispose of waste according to environmental legislation.

#### **SECTION 6: Measures in case of accidental release of the substance or mixture**

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

##### **For persons other than emergency services:**

Getting rid of redundant staff.

Stay on the side where the wind is coming from.

Ensure adequate ventilation.

Do not inhale dust.

Avoid contact with skin, eyes or clothing.

Wear recommended, personal safety equipment.

See section 8 regarding the use of personal protective equipment.

Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition.

No smoking.

Make sure the equipment is properly earthed.

Use explosion-proof equipment.

Only use non-sparking tools.

##### **For emergency services:**

Ensure that procedures and training for emergency decontamination and disposal are in place.

See section 8 regarding the use of personal protective equipment.

##### **6.2 Environmental precautions:**

##### **Environmental precautions:**

Do not drain into surface water or sewers.

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Alert the authorities, if the product gets into the sewage system or open water.

#### 6.3 Methods and materials for containment and cleaning:

##### **Cleaning methods:**

Plug the leak if it can be done safely.

Spill containment.

Collect mechanically (by sweeping or shovelling together) and place in a suitable container for disposal.

Large releases: scoop up spilled solids and deposit in sealable containers.

This product and its packaging should be disposed of safely in accordance with local regulations.

Avoid the formation of dust.

Do not wash away with water.

#### 6.4 Reference to other sections:

See section 8 regarding the use of personal protective equipment.

See section 13 regarding waste disposal after cleaning.

### **SECTION 7: Handling and storage:**

#### 7.1 Precautions for safe handling of the substance or mixture:

##### **Handling :**

Ensure adequate ventilation.

Do not inhale dust.

Avoid contact with skin, eyes or clothing.

Use the necessary personal protective equipment.

See section 8 regarding the use of personal protective equipment.

See section 10 on incompatible materials.

Ensure good process control to minimise emissions (temperature, concentration, pH, time).

Avoid discharge into the environment.

Avoid the formation of dust.

Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition.

No smoking.

Ground storage and collection tank.

Use explosion-proof equipment.

Only use non-sparking tools.

##### **Hygiene measures:**

Maintain good industrial hygiene.

Wash hands and other exposed parts with mild soap and water before eating, drinking, smoking or leaving work.

Do not eat, drink or smoke while using this product.

Keep away from food, drink and animal feed.

Remove contaminated clothing.

Keep work clothes and regular clothes separate.

Wash the clothes separately.

Wash contaminated clothes before reusing them.

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

##### **Storage conditions:**

Store in a dry, cool and very well-ventilated place.

Do not store near or together with any of the incompatible substances listed in section 10.

Embank the storage facilities to prevent pollution of soil and water in case of discharge.

Take precautions against static electricity discharges.

Protect against moisture.

##### **Heat and ignition sources:**

Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition.

No smoking.

##### **Special packaging requirements:**

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Opened packages should be carefully sealed and stored upright to prevent leakage.

**Packaging material:**

Keep only in the original packaging.

**7.3 Specific end use:**

Coatings and paint.

Printing inks.

**SECTION 8: Exposure controls/personal protection measures**

**8.1 Control parameters:**

**Exposure limits**

<b>Copper (7440-50-8)</b>		
Austria	MAK (OEL/TWA)	1 mg/m <sup>3</sup> (inhalable fraction) 0.1 mg/m <sup>3</sup> (respirable fraction, smoke)
Austria	MAK (OEL/STEL)	4 mg/m <sup>3</sup> (inhalable fraction) 0.4 mg/m <sup>3</sup> (respirable fraction, smoke)
Belgium	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
Bulgaria	OEL TWA	0.1 mg/m <sup>3</sup> (metal vapour)
Croatia	GVI (OEL/TWA) [1].	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
Croatia	KGV (OEL/TWA)	2 mg/m <sup>3</sup> (dust and fumes)
Czech Republic	PEL (OEL/TWA)	1 mg/m <sup>3</sup> (dust) 0.1 mg/m <sup>3</sup> (fume)
Denmark	OEL TWA [1]	1 mg/m <sup>3</sup> (dust and powder) 0.1 mg/m <sup>3</sup> (fume)
Estonia	OEL TWA	1 mg/m <sup>3</sup> (total dust) 0.2 mg/m <sup>3</sup> (respirable dust)
Finland	HTP (OEL/TWA) [1].	0.2 mg/m <sup>3</sup> (respirable dust)
France	VLE (OEL C/STEL)	2 mg/m <sup>3</sup> (dust)
France	VME (OEL/TWA)	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
Greece	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
Greece	OEL STEL	2 mg/m <sup>3</sup> (dust)
Hungary	AK (OEL/TWA)	0.1 mg/m <sup>3</sup> 0.01 mg/m <sup>3</sup> (fume)
Hungary	CK (OEL/STEL)	0.2 mg/m <sup>3</sup>
Ireland	OEL TWA [1]	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dusts and mists)
Ireland	OEL STEL	2 mg/m <sup>3</sup> (dusts and mists) 0.6 mg/m <sup>3</sup> (calculated fume)
Latvia	OEL TWA	0.5 mg/m <sup>3</sup>
Lithuania	IPRV (OEL TWA)	1 mg/m <sup>3</sup> (inhalable fraction) 0.2 mg/m <sup>3</sup> (respirable fraction)
Netherlands]	TGG-8h (OEL TWA)	0.1 mg/m <sup>3</sup> (inhalable dust)
Poland	NDS (OEL TWA)	0.2 mg/m <sup>3</sup>
Portugal	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
Romania	OEL TWA	0.5 mg/m <sup>3</sup> (dust)
Romania	OEL STEL	0.2 mg/m <sup>3</sup> (fume) 1.5 mg/m <sup>3</sup> (dust)
Slovakia	NPHV (OEL TWA) [1]	1 mg/m <sup>3</sup> (inhalable fraction) 0.2 mg/m <sup>3</sup> (respirable fraction)
Spain	VLA-ED (OEL/TWA) [1]	0.1 mg/m <sup>3</sup> (see UNE EN 481 :1995 on workplace atmospheres - respirable fraction)
Sweden	NGV (OEL TWA)	0.01 mg/m <sup>3</sup> (respirable fraction)
United Kingdom	WEL TWA (OEL TWA) [1]	1 mg/m <sup>3</sup> (dust and mists) 0.2 mg/m <sup>3</sup> (fume)
United Kingdom	WEL STEL (OEL STEL)	0.6 mg/m <sup>3</sup> (calculated-fume) 2 mg/m <sup>3</sup> (dust and mist)

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Norway]	Grenseverdi (OEL TWA) [1].	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
Norway	Korttidsverdi (OEL STEL)	3 mg/m <sup>3</sup> (value calculated-dust) 0.3 mg/m <sup>3</sup> (value calculated-fume)
Switzerland	MAK (OEL TWA) [1]	0.1 mg/m <sup>3</sup> (inhalable dust)
Switzerland	KZGW (OEL COUPLE)	0.2 mg/m <sup>3</sup> (inhalable dust)
Australia	OES TWA [1]	1 mg/m <sup>3</sup> (dust and mist) 0.2 mg/m <sup>3</sup> (fume)
Canada (Quebec)	VEMP (OEL TWA)	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
USA - ACGIH	ACGIH OEL TWA	0.2 mg/m <sup>3</sup> (fume)
USA - IDLH	IDLH	100 mg/m <sup>3</sup> (dust, fume and mist)
USA - NIOSH	NIOSH REL (TWA)	1 mg/m <sup>3</sup> (dust and mist) 0.1 mg/m <sup>3</sup> (fume)
USA - OSHA	OSHA PEL (TWA) [1]	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)

<b>Bronze powder copper gold (7440-50-8)</b>	
<b>DNEL/DMEL (workers)</b>	
Acute - systemic effects, dermal	273 mg/kg bw/day
Long-term - systemic effects, dermal	137 mg/kg bw/day
Long-term - local effects, inhalation	1 mg/m <sup>3</sup>
<b>DNEL/DMEL (general population)</b>	
Acute - systemic effects, dermal	273 mg/kg body weight
Long-term - systemic effects, oral	0.041 mg/kg bw/day
Long-term - systemic effects, inhalation	1 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	137 mg/kg bw/day
<b>PNEC (water)</b>	
PNEC aqua (freshwater)	7.8 µg/L
PNEC aqua (seawater)	5.2 µg/L
PNEC sediment (soft water)	87 mg/kg dry weight
PNEC sediment (seawater)	676 mg/kg dry weight
PNEC water treatment plant	230 g/l

## Additional information:

Recommended monitoring procedures:

- ✓ Passenger air control.
- ✓ Room ventilation control.

## 8.2 Exposure control measures:

### Technical measures:

Ensure adequate ventilation.

Organisational measures to avoid/limit discharges, spread and exposure.

See section 7 for information on safe handling.

Apply measures to prevent dust explosions.

Make sure the equipment is properly earthed.

### Personal protection equipment:

The type of protective equipment depends on the concentration and quantity of hazardous substances at the relevant workplace.

### Hand protection:

Chemical-resistant gloves (tested in accordance with EN 374).

Suitable material: not determined.

Breakthrough time: not established.

Thickness: not determined.

Protective gloves against chemicals should be selected specifically for the workplace in their design depending on the concentration of the hazardous and quantity.

### Eye protection:

Use suitable eye protection (EN 166): Safety glasses with side-shields.

### Body protection:

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Wear suitable protective clothing.

**Respiratory protection :**

Not required under normal operating conditions.  
If ventilation is inadequate, use a suitable respirator.  
Effective dust mask (EN 149).  
Half-mask (DIN EN 140).  
Full face mask (DIN EN 136).  
Filter type: P (EN 143).

**Protection against thermal hazards:**

Not required under normal operating conditions.  
Use appropriate equipment.

**Environmental exposure limitation and control:**

Avoid discharge into the environment.  
Comply with applicable community environmental protection legislation.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties:**

Appearance :	Solid, Powder
Colour :	Copper
Odour :	odourless
Odour threshold :	No data available
pH :	Not applicable
pH solution:	Not available
Relative evaporation rate (butyl acetate = 1):	No data available
Melting/freezing point :	1083°C
Freezing point:	No data available
Initial boiling point and boiling range :	2597°C
Flash point :	No data available
Auto-ignition temperature :	No data available
Decomposition temperature :	No data available
Flammability (solid, gas) :	Not flammable
Vapour pressure :	No data available
Vapour density:	No data available
Relative density :	No data available
Density :	8.96 g/cm <sup>3</sup> (20°C)
Solubility in water :	Not soluble
Solubility of other substances :	No data available
n-Octanol/Water partition coefficient :	No data available
Viscosity, kinematic :	Not applicable
Viscosity, dynamic:	Not applicable
Explosive properties :	Not applicable. The test should not be carried out as the molecule does not contain any chemical groups on the basis of which possible explosive properties can be suspected.
Oxidising properties :	Not applicable. The classification process need not be used because there are no chemical groups in the molecule with oxidising properties.
Explosion limits:	No data available
Particle size:	Not available
Particle size distribution:	Not available
Form of particles:	Not available

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Aspect ratio particles: Not available  
 Particulate aggregation state: Not available  
 Particle agglomeration state: Not available  
 Specific surface particles: Not available  
 Particle dusting: Not available

## 9.2 Other information

Information on physical hazard classes : No additional information available.  
 Other safety features: No additional information available.  
 Additional information: (Apparent) Density: 0.6-1.3 g/cm<sup>3</sup> (20°C).

## **SECTION 10: Stability and reactivity**

### 10.1 Reactivity:

None with normal editing.  
 Reference to other sections 10.4 and 10.5.

### 10.2 Chemical Stability:

Stable under normal conditions.

### 10.3 Potential Hazardous Reactions:

No hazardous reactions known under normal conditions of use.

### 10.4 Conditions to avoid:

Avoid the accumulation of electrostatic charges.  
 Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition.  
 No smoking.  
 Avoid the formation of dust.  
 Protect against moisture.

See section 7 for information on safe handling.

### 10.5 Chemically Interacting Materials:

Oxidising agents, acids and bases.  
 Halogens, halogen compounds.  
 See section 7 for information on safe handling.

### 10.6 Hazardous Decomposition Products:

Reference to section 5.2.

## **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects:

#### **Acute toxicity :**

Not classified (Based on available data; classification criteria not met)

<b>Copper (7440-50-8)</b>	
LD50/oral/rat	300-500 mg/kg
LD50/dermal/rat	> 2000 mg/kg
LC50/inhalation/4 hours/rat	≥ 5.11 mg/l

#### **Skin corrosion/irritation:**

Not classified (Based on available data; classification criteria not met)  
 pH: not applicable

#### **Serious eye damage/eye irritation:**

Not classified (Based on available data; classification criteria not met)  
 pH: not applicable

#### **Respiratory / skin sensitisation:**

Not classified (Based on available data; classification criteria not met)

#### **Mutagenicity in gametes:**

Not classified (Based on available data; classification criteria not met)

#### **Carcinogenicity:**

Not classified (Based on available data; classification criteria not met)

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**Reproductive toxicity:**

Not classified (Based on available data; classification criteria not met)

**Specific target organ toxicity (single exposure):**

Not classified (Based on available data; classification criteria not met)

**Specific target organ toxicity (repeated exposure):**

Not classified (Based on available data; classification criteria not met)

<b>Copper (7440-50-8)</b>	
NOAEL, sub chronic, oral, rat	16.7 mg/kg bw/day

**Inhalation hazard:**

Not classified (Based on available data; classification criteria not met)

<b>Product: Bronze powders (pale gold and rich pale gold) (zinc &lt;25%)</b>	
Viscosity, kinematic	Not applicable

**Other information:**

Symptoms related to physical, chemical and toxicological properties.

For more information, see section 4.

11.2 Information on other hazards**Endocrine-disrupting properties:**

The mixture does not contain substances included in the list predetermined according to Article 59(1) of REACH for having endocrine-disrupting properties, or identified as having endocrine-disrupting properties according to criteria set out in Delegated Regulation (EU) 2017/2100 or Delegated Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1%.

**Other information :**

Symptoms related to physical, chemical and toxicological properties.

Reference to section 4.

**SECTION 12: Ecological information**12.1 Toxicity:**Environmental properties:**

Highly toxic to aquatic organisms.

**Short-term hazard to the aquatic environment (acute):**

Highly toxic to aquatic organisms.

**Long-term hazard to the aquatic environment (chronic).**

Toxic to aquatic organisms, with long-term effects.

<b>copper (7440-50-8)</b>	
LC50 fish [1]	190-210 µg/l
LC50 Fish [2]	< 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Crustaceans [1]	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 72h algae [1]	0.0426 - 0.0535 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h algae [2]	0.031 - 0.054 mg/l (Species: Pseudokirchneriella subcapitata [static])
NOEC Chronic fish	11.4 µg/l

12.2 Persistence and Degradability:

<b>Product: Bronze powders (pale gold and rich pale gold) (zinc &lt;25%)</b>	
Persistence and degradability	Non-biodegradable.

12.3 Bioaccumulation:

<b>Product: Bronze powders (pale gold and rich pale gold) (zinc &lt;25%)</b>	
n-Octanol/water partition coefficient	No data available
Bioaccumulation	No additional information available
<b>Copper (7440-50-8)</b>	
n-Octanol/water partition coefficient	Not applicable

12.4 Mobility in soil:

<b>Product: Bronze powders (pale gold and rich pale gold) (zinc &lt;25%)</b>	
Mobility in soil	No data available

12.5 Results of PBT and vPvB assessment:**Bronze powder copper gold (7440-50-8)**

This substance/mixture does not meet the PBT criteria of the REACH Regulation, Annex XIII.

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This substance/mixture does not meet the vPvB criteria of the REACH regulation, annex XIII.

12.6 Endocrine disrupting properties:

**Endocrine-disrupting properties:**

The mixture does not contain substances included in the list predetermined according to Article 59(1) of REACH for having endocrine-disrupting properties, or identified as having endocrine-disrupting properties according to criteria set out in Delegated Regulation (EU) 2017/2100 or Delegated Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1%.

12.7 Other Harmful Effects:

No data available.

**SECTION 13: Disposal instructions**

13.1 Waste treatment methods:

**Recommendations for disposal of products/packaging:**

Avoid discharge into the environment.

Dispose of empty containers and waste safely.

See section 7 for information on safe handling.

Consult manufacturer/supplier for information on recovery/recycling.

Recycling is preferable to disposal or incineration.

If recycling is not possible, dispose of in accordance with local waste disposal regulations.

Contaminated containers should be treated as the original contents. Dispose of contaminated substances in accordance with applicable legislation.

**European waste list (2001/573/EC, 75/442/EEC, 91/689/EEC):**

Dispose of this substance and its packaging as hazardous waste.

Waste codes should be assigned by the user, preferably in consultation with the waste management authorities.

**SECTION 14: Information relating to transport**

14.1 UN number

**ADR, IMDG, IATA** UN3077

14.2 Designation of appropriate cargo according to UN model regulations

<b>ADR</b>	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper)
<b>IMDG</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper), MARINE POLLUTANT
<b>IATA</b>	Environmentally hazardous substance, solid, N.O.S. (copper),

14.3 Transport hazard class(es)

<b>ADR, IMDG, IATA Class</b>	9 Miscellaneous dangerous goods and articles
<b>Hazard label</b>	9

14.4 Packing group

<b>ADR, IMDG, IATA</b>	III
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14.5 Environmental hazards

<b>Marine pollutant:</b>	Yes
<b>Special labelling (ADR):</b>	Symbol (fish and tree)
<b>Special labelling (IMDG):</b>	Symbol (fish and tree)
<b>Special labelling (IATA):</b>	Symbol (fish and tree)

14.6 Special precautions for the user

<b>User warning:</b>	Various hazardous substances and objects
<b>Hazard identification number (Kemler code):</b>	90
<b>EMS number:</b>	F-A,S-F
<b>Segregation groups</b>	not applicable
<b>Storage category:</b>	A

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**Stewage code** SW23 For transport in bulk container BK3, see 7.6.2.12 and 7.7.3.9.

**Transport/ further information:**

These substances, when contained in individual or combination packaging with a net mass not exceeding 5 kg each or within a package, are not subject to the other provisions of ADR/RID/IMDG provided that the packaging complies with the general requirements of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**ADR**

Exempt quantities (EQ) E1  
 Limited quantity (LQ) 5 kg  
 Code exceptional quantity (EQ): E1  
 Maximum net quantity per inner packaging : 30 g  
 Maximum net quantity per outer packaging 1000 g  
 Transport category 3  
 Tunnel restriction code -

**IMDG**

Limited quantities (LQ) 5 kg  
 Code exceptional quantity (EQ): E1  
 Maximum net quantity per inner packaging 30 g  
 Maximum net quantity per outer packaging 1000 g  
 UN Model Regulations: UN 3077 DANGEROUS ENVIRONMENTAL SUBSTANCES, LIQUID, N.O.S., 9, III

14.7 Transport in bulk in accordance with Annex II to MARPOL 73/78 and the IBC Code  
 Not applicable.

**SECTION 15: Statutory information**

15.1 Safety, health and environmental regulations and legislation specific to the substance or mixture:

**EU regulations**

**The following restrictions apply in accordance with Annex XVII of REACH Regulation (EC) No 1907/2006:**

40. Substances classified as flammable gases category 1 or 2, flammable liquids category 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, evolve flammable gases category 1, 2 or 3, pyrophoric liquids category 1, whether or not listed in Part 3 of Annex VI to Regulation (EC) No 1272/2008.	copper
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Does not contain REACH candidate list substances.

Does not contain any substance listed in Annex XIV of REACH.

**National regulations:**

France:

No. ICPE	Installations classés Désignation de la rubrique	Code Régime	Rayon
4510.texte	Dangereux pour l'environnement aquatique de catégorie aiguë 1 ou chronique 1		
4510.1	La quantité totale susceptible d'être présente dans l'installation étant : 1. Supérieure ou égale à 100 t Quantité seuil bas au sens de l'article R.511-10 : 100 t Quantité seuil haut au sens de l'article R.511-10 : 200 t	A	1
4510.2	La quantité totale susceptible d'être présente dans l'installation étant : 2. Supérieure ou égale à 20 t mais inférieure à 100 t Quantité seuil bas au sens de l'article R.511-10 : 100 t Quantité seuil haut au sens de l'article R.511-10 : 200 t	DC	

Germany :

**Reference legislation :**

WGK 2, Significantly hazardous to water (classification according to AwSV, Annex 1)

**German storage classification (LGK):**

LGK 13 - non-combustible solids

**Hazardous incident resolution (12. BImSchV):**

Mentioned in the 12<sup>e</sup> BImSchV (Emission Protection Order) (Annex I) under 1.3.1

Threshold quantities for the activity sector in accordance with § 1 paragraph 1

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Sentence 1: 100,000 kg

Sentence 2: 200,000 kg

#### **TA Luft (technical directive on air protection):**

Total dust

Netherlands

#### **Water heaviness:**

A (1) - very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

#### **SSW list of carcinogenic substances:**

The substance is not present.

#### **SZW list of mutagenic substances:**

The substance is not present.

#### **SZW list of reprotoxic substances - breastfeeding:**

The substance is not present.

#### **SZW list of reprotoxic substances - fertility:**

The substance is not present.

#### **SSW list of reprotoxic substances - development:**

The substance is not present.

#### 15.2 Chemical safety assessment:

Not applicable.

#### **A chemical safety assessment has been carried out for this substance:**

Copper

#### **SECTION 16: Other information**

##### **Indication of changes:**

2.3	HO text	Added
4.2	Skin/eye contact	Modified
5.2	Hazardous decomposition products	Added
7.2	Storage conditions	Amended
7.2	Heat and ignition sources	Added
10.4	Conditions to avoid	Modified
11.2	Endocrine disrupting properties	Added
12.6	Endocrine disrupting properties	Added

##### **Full content of R-, H- and EUH-phrases:**

Aquatic Acute 1:	Harmful to surface water - Aquat. acute 1
Aquatic Chronic 2:	Hazardous to the aquatic environment - Chronic aquatic hazard 2
H400:	Very toxic to aquatic organisms.
H411:	Toxic to aquatic organisms with long-lasting effects.

##### **Key literature references and data sources:**

ECHA (European Chemicals Agency).

##### **Further information**

Training advice:

Provide proper information, instruction and training for users.

##### **Classification of the preparation:**

Aquatic Acute 1	H400
Aquatic Chronic 2	H411

##### **Classification procedure:**

Calculation method
Calculation method

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## Abbreviations and acronyms:

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road (ADR Agreement); AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Association for the Testing of Materials; bw - Body Weight; CLP - Regulation on Classification, Labelling and Packaging; Regulation (EC) No 1272/2008; CMR - Carcinogenic, mutagenic or toxic to reproduction; DIN - Standard or the German Institute for Standardisation; DSL - List of substances used indoors (Canada); ECHA - European Chemicals Agency; EC-Number - EINECS number; ECx - Concentration associated with x% response; ELx - Charge capacity associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemicals (Japan); ErCx - Concentration associated with x% growth response; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - IMO International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk; IC50 - Half-Maximum Inhibitory Concentration; ICAO - International Civil Aviation Organisation; IECSC - Inventory List of Existing Chemicals in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korean Inventory of Existing Chemicals; LC50 - Lethal concentration for 50% of a test population; LD50 - Lethal dose for 50% of a test population (lethal dose median); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not otherwise specified; NO(A)EC - No discernible (negative) effect on concentration; NO(A)EL - No discernible (negative) effect on Level; NOELR - No discernible effect on cargo capacity; NZIoC - New Zealand inventory of chemicals; OECD - Organisation for Economic Co-operation and Development OECD; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, bioaccumulative and toxic substance; PICCS - Philippine inventory of chemicals and chemical substances; (Q)SAR - (Quantitative) structure-activity relationships; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH); RID - Regulations concerning the International Carriage of Dangerous Goods by Rail (RID); SADT - Self-accelerating decomposition temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwanese Inventory of Chemical Substances; TECL - Inventory of Chemical Substances Existing in Thailand; TRGS - Technical Regulation on Hazardous Substances; TSCA - Toxic Substances Control Act (USA); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

The content and format of this safety data sheet (SDS) are in accordance with Regulation 1907/2006/EC (REACH) with its supplementary Regulation (EU) 2020/878.

## REJECTION OF LIABILITY

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