

According to directive 1907/2006/EC, 2020/878  
Version 4.0 Revision date: 27-01-2023  
Trade name: Copper powder natural

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

### 1.1 Product identification:

Product name: Copper powder natural.  
CAS: 7440-50-8  
EINECS: 231-159-6

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

Usage: Additional component.  
Intermediate.  
Uses advised against: No further relevant information available.

### 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 telephone number:

For Belgium: Call the **Poison Control Center (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.**

Aquatic Acute 1 - H400 Very toxic to aquatic organisms.  
Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

### 2.2 Label elements:

The product is classified and labelled according to GHS (Globally Harmonised System).  
The product is classified and labelled according to the CLP regulation.



#### **Hazard pictograms:**

GHS09  
Warning

#### **Signal word:**

#### **Hazard warnings**

H400 Very toxic to aquatic organisms.  
H411 Toxic to aquatic life with long lasting effects.

#### **Safety advice**

P273 Avoid release to the environment.  
P391 Absorb spillages.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 Other hazards:

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Inhalation of dust or fumes will cause irritation of the respiratory tract. Inhalation of higher concentrations may cause fever.

**Results of PBT and vPvB assessment:**

PBT: Not applicable.

vPvB: Not applicable.

**Determination of endocrine-disrupting properties:**

None

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

**3.1 Substances:**

**Description:**

Chemical Name	Cas No. EC No/List Registration number	Layout (Regulation (EC) No 1272/008)	Concentration (%)
Copper	CAS: 7440-50-8 EINECS: 231-159-6 Index number: 029-024-00-X	Aquatic Acute 1, H400; Aquatic Chronic 2, H411  M = 1	100 %

Full text of abbreviations can be found in section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures:**

**General information:**

No special measures required.

**After inhalation:**

Supply fresh air, consult a doctor in case of complaints.

**After skin contact:**

Wash skin with water/shower.

In general, the product is not irritating to the skin.

**After eye contact:**

Rinse the opened eye with running water for several minutes.

Consult a doctor if the symptoms persist.

**After ingestion:**

Consult a doctor if the symptoms persist.

**4.2 Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

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

No further relevant information available.

**SECTION 5: Fire-fighting measures**

**5.1 Extinguishing media:**

**Suitable extinguishing media:**

Special powder for metal fires.

Dry sand.

**Unsuitable extinguishing media:**

Do not use water.

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

**Specific firefighting hazards:**

No further relevant information available.

**5.3 Advice for firefighters:**

**Special protective equipment:**

No special measures required.

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**SECTION 6: Accidental release measures for the substance or mixture**

6.1 Personal precautions, protective equipment and emergency procedures:

**Personal precautions :**

Prevent dust formation.  
 Wear personal protective clothing.  
 Do not breathe dust/fume/mist.

6.2 Environmental precautions:

**Environmental precautions:**

Do not allow to enter sewers/surface water/groundwater.

6.3 Methods and material for containment and cleaning up

**Cleaning methods:**

Mechanical pick-up.

6.4 Reference to other sections:

See chapter 7 for information on safe use.  
 See section 8 for information on personal protective equipment.

**SECTION 7: Handling and storage:**

7.1 Precautions for safe handling

**Advice on safe handling:**

Avoid dust formation.

**Advice on fire and explosion protection :**

No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

**Requirements for storage rooms and containers:**

Store in a cool, dry place in tightly closed containers.

**Advice for mixed storage:**

Do not store together with oxidising and acidic substances.

**Further information on storage conditions:**

None.

7.3 Specific end use:

No further relevant information available.

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

**Additional information on the design of technical systems:**

No further information, see section 7.

8.1 Control parameters:

**Components with limit values that require monitoring at the workplace:**

**7440-50-8 copper**

WEL	Short-term value: 2** mg/m <sup>3</sup>
	Long-term value: 0.2* 1** mg/m <sup>3</sup>
	*fume **dusts and mists (as Cu)

**DNEL-value**

Copper:

Short-term DNEL (man, systemic effects): 0.082 mg Cu/kg B wt/d  
 DNEL long-term (human, systemic effects): 0.041 mg Cu/kg B wt/d  
 Short-term NOAEL (human, oral, drinking water): 4 mg/l

**PNEC Value**

Copper:

PNEC aqua (freshwater): 7,8 µg/l  
 PNEC aqua (marine water): 5,2 µg/l  
 PNEC sediment (freshwater): 87 mg Cu/kg dry weight

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PNEC sediment (seawater): 676 mg Cu/kg dry weight

**Additional information:**

The lists that were valid at the time of drafting were used as a basis.

8.2 Exposure controls:

**Appropriate engineering controls No further data:**

see item 7.

**Individual protection measures, such as personal protective equipment:**

**General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

**Respiratory protection:**

Respiratory protection recommended.

Filter P1 / P2 / P3

**Hand protection:**

Preventive protection of the skin by using a skin protection product is recommended.

**Eye protection:**

Goggles recommended during refilling.

**Body protection:**

Protective work clothing.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties:

**General Information**

**Appearance:**

Form:	Powder
Physical state:	Solid
Colour:	Copper coloured
Odour:	Odourless
Melting point/freezing point:	1083°C
Boiling point or initial boiling point and boiling range:	2597°C
Flammability:	Product is not flammable.
Lower and upper explosion limit:	Not applicable
Flash point:	Not applicable.
Ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
pH:	Not applicable
Viscosity:	Not applicable

**Solubility**

Water:	Insoluble.
Partition coefficient n-octanol/water (log value):	Not applicable
Vapour pressure:	Not applicable

**Density and/or relative density**

Density at 20°C:	8.9 g/cm <sup>3</sup>
Bulk density at 20°C:	0.5 - 5.5 g/cm <sup>3</sup>
Relative gas density:	Not applicable

**Particle characteristics**

Particle size::	1 - 500 µm
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9.2 Other information

**Information with regard to physical hazard classes**

Explosives :	Void
Flammable gases :	Void
Aerosols :	Void
Oxidising gases:	Void

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Gases under pressure:	Void
Flammable liquids:	Void
Flammable solids:	Void
Self-reactive substances and mixtures:	Void
Pyrophoric liquids:	Void
Pyrophoric solids:	Void
Self-heating substances and mixtures:	Void
Substances and mixtures, which emit flammable gases in contact with water:	Void
Oxidising liquids:	Void
Oxidising solids:	Void
Organic peroxides:	Void
Corrosive to metals:	Void
Desensitised explosives:	Void

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

### 10.1 Reactivity:

No further relevant information available.

### 10.2 Chemical Stability:

**Thermal decomposition / conditions to be avoided:**  
No decomposition if stored and handled as directed.

### 10.3 Potentially hazardous reactions:

#### **Hazardous reactions:**

Reacts with acids, alkalis and oxidising agents.

### 10.4 Conditions to avoid

No further relevant information available.

### 10.5 Chemically Interacting Materials:

No further relevant information available.

### 10.6 Hazardous decomposition products:

No dangerous decomposition products known.

## **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects:

#### **Acute toxicity**

Based on the available data, the classification criteria are not met.

#### **LD/LC50 values relevant for classification:**

None.

#### **Skin corrosion/irritation.**

Based on the available data, the classification criteria are not met.

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

Based on the available data, the classification criteria are not met.

#### **Respiratory or skin sensitisation**

Based on the available data, the classification criteria are not met.

#### **Mutagenicity in germ cells**

Based on the available data, the classification criteria are not met.

#### **Carcinogenicity**

Based on the available data, the classification criteria are not met.

#### **Toxicity for reproduction**

Based on the available data, the classification criteria are not met.

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

Based on the available data, the classification criteria are not met.

#### **Specific target organ toxicity by repeated exposure:**

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Based on the available data, the classification criteria are not met.

**Aspiration hazard:**

Based on the available data, the classification criteria are not met.

**Additional toxicological information:**

Inhalation of dust or smoke causes irritation of the respiratory tract. Inhalation of higher concentrations may cause fever.

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

No further relevant information available.

11.2 Information on other hazards

**Endocrine disrupting properties:**

Substance is not listed.

**SECTION 12: Ecological information**

12.1 Toxicity:

**Aquatic toxicity:**

No further relevant information available.

12.2 Persistence and Degradability:

No further relevant information available.

12.3 Bioaccumulation:

No further relevant information available.

12.4 Mobility in Soil:

No further relevant information available.

12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

**Additional ecological information:**

**General notes:**

Do not allow product to reach ground water, water course or sewage system.

**SECTION 13: Instructions for disposal**

13.1 Waste treatment methods:

**Recommendation:**

Contact the manufacturer for recycling.

Must not be disposed of together with household rubbish.

Do not allow to enter the sewage system.

**Uncleaned packaging:**

**Recommendation:**

Dispose of in accordance with official regulations.

**SECTION 14: Information relating to carriage**

14.1 UN number

**ADR, IMDG, IATA :** UN3077

14.2 Proper load name according to UN Model Regulations

**ADR :** ENVIRONMENTALLY DANGEROUS SUBSTANCE, SOLID, N.O.S (copper)

**IMDG :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)

**IATA :** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)

14.3 Transport hazard class(es)

**ADR, IMDG, IATA:** Class 9 Miscellaneous dangerous substances and articles

**Danger label :** 9

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#### 14.4 Packing group

**ADR, IMDG, IATA :** III

#### 14.5 Environmental hazards

**Marine pollutant:** Yes  
Symbol (fish and tree)

**Special labelling (ADR):** Symbol (fish and tree)

**Special labelling (IATA):** Symbol (fish and tree)

#### 14.6 Special precautions for the user

**User warning:** Miscellaneous dangerous substances and articles.

**Kemler code:** 90

**EMS number:** F-A,S-F

**Segregation groups :** void

**Stowage room :** Category A

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

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

#### **Transport/ further information:**

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

#### **ADR**

Exempted quantities (EQ): E1  
Limited quantity (LQ) : 5 kg  
Exceptional Quantity (EQ) Code: E1  
Maximum net quantity per inner packaging : 30 g  
Maximum net quantity per outer packaging: 1000 g  
Transport category : 3  
Tunnel restriction code : void

#### **IMDG**

Limited quantities (LQ) : 5 kg  
Exceptional Quantity (EQ) Code: E1  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 1000 g  
UN "Model Regulation": 3077 ENVIRONMENTALLY DANGEROUS SUBSTANCES, SOLID, N.O.S. (COPPER), 9, III

### **SECTION 15: Legally required information**

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

##### **Directive 2012/18/EU**

##### **Qualifying quantity (tonnes) for the application of lower-tier requirements:**

100 t

##### **Qualifying quantity (tonnes) for the application of upper-tier requirements:**

200 t.

##### **National regulations:**

##### **Water hazard class:**

Water hazard class 2 (Assessment by list): hazardous for water.

#### 15.2 Chemical safety assessment:

A chemical safety assessment has not been carried out.

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

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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## Relevant phrases

(only for the explanation of H phrases mentioned in the safety data sheet, e.g. in chapter 3)

H400 : Very toxic to aquatic organisms.  
H411: Toxic to aquatic life with long lasting effects.

## Data sheet issue area:

Management of safety data sheets  
Telephone: +49 (0) 9152 / 9211 -846  
E-Mail: [sdb@kymerainternational.com](mailto:sdb@kymerainternational.com)

## Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: European Agreement on the Transport of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 per cent

LD50: Lethal dose, 50 per cent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Aquatic Acute 1: Hazardous to the aquatic environment - Acute 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Hazardous to long waters - Category 2

\* Data compared to the previous version altered.