

Copper Cu

Version 2.2

TW

SDS Number: 300000001260

Revision Date: 2016/12/22

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Copper Cu
Product code : 300000001260
CAS-No. : 7440-50-8
Chemical nature :

Manufacturer or supplier's details

Company : Umicore AG & Co. KG
Address : Rodenbacher Chaussee 4
63457 Hanau
Germany
Telephone : +49 6181 59-5305
E-mail address : info.ipds@umicore.com

Supplier

Emergency telephone number : For transport in Europe, Central- and South America, Israel and Africa (Non-Arabic speaking countries): +32 3 213 15 70
For transport in the Middle East (Israel excluded) & Arabic speaking Africa: +32 3 213 33 79
For transport in the USA and Canada: 1-877 986 4267
For transport in Asian and the Pacific (China excluded): +65 62 64 78 36
For transport in China: 400 88 71 190
Hours of operation : This telephone number is available 24 hours per day, 7 days per week.

Recommended use of the chemical and restrictions on use

Recommended use : wires, sheets metal, tubes
Industrial use

2. HAZARDS IDENTIFICATION**GHS Classification**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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Substance / Mixture : Substance

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
Copper.	7440-50-8	<=100

4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.

First aid measures for different exposure routes

If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.

In case of skin contact : Cover wound with sterile dressing.

In case of eye contact : Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : None known.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Not combustible.

Unsuitable extinguishing media : High volume water jet

Hazardous combustion products : Metal oxides

Specific extinguishing methods : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

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.

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7. HANDLING AND STORAGE

Handling

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Storage

Materials to avoid : No materials to be especially mentioned.
Do not store near acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Copper.	7440-50-8	TWA	0.2 mg/m ³ (Copper)	TW OEL
		TWA	1 mg/m ³ (Copper)	TW OEL
		STEL	0.6 mg/m ³ (Copper)	TW OEL
		STEL	2 mg/m ³ (Copper)	TW OEL
		TWA	1 mg/m ³ (Copper)	ACGIH
		TWA	0.2 mg/m ³ (Copper)	ACGIH
		AGW		DE TRGS 900
Further information: Recommended Limit				
		TWA	1 mg/m ³ (Copper)	ACGIH
		TWA	0.2 mg/m ³ (Copper)	ACGIH
		TWA	1 mg/m ³ (Copper)	ACGIH
		TWA	0.2 mg/m ³ (Copper)	ACGIH

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection
Material : Nitrile rubber

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Break through time : > 240 min
Glove thickness : 0.4 mm

Eye protection : Tightly fitting safety goggles

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : massive form

Colour : light yellow, brown

Odour : odourless

pH : not determined

Melting point/range : 1,082.85 °C

Boiling point/boiling range : 2,323.8 °C

Flash point : Method: closed cup
does not flash

Flammability (solid, gas) : The product is not flammable.

Vapour pressure : not determined

Relative density : 8.92

Density : 8.94 g/cm³

Solubility(ies)
Water solubility : insoluble

Auto-ignition temperature : not determined

Molecular weight : 63.54 g/mol

10. STABILITY AND REACTIVITY

Reactivity : Stable

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.

Conditions to avoid : None known.

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Incompatible materials : Oxidizing agents

Hazardous decomposition products : No decomposition if stored normally.

11. TOXICOLOGICAL INFORMATION

Symptoms of Overexposure : None known.

Acute toxicity**Product:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Components:**Copper.:**

Acute oral toxicity : LD50 (Rat): > 2,500 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on read across from structural related substance:

Acute inhalation toxicity : LC50 (Rat, male and female): > 4.74 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on read across from structural related substance:

Skin corrosion/irritation**Product:**

Remarks: No data available

Components:**Copper.:**

Species: Rabbit
Exposure time: 48 h
Method: OECD Test Guideline 404
Result: No skin irritation

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Serious eye damage/eye irritation**Product:**

Remarks: No data available

Components:**Copper.:**

Species: Rabbit

Result: No eye irritation

Exposure time: 72 h

Method: OECD Test Guideline 405

Remarks: Based on read across from structural related substance:

Respiratory or skin sensitisation**Product:**

Remarks: No data available

Components:**Copper.:**

Exposure routes: Skin contact

Species: Guinea pig

Result: Does not cause skin sensitisation.

Chronic toxicity**Germ cell mutagenicity****Product:**

Genotoxicity in vitro : Remarks: No data available

Components:**Copper.:**

Genotoxicity in vitro : Species: Bacteria
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Species: Mammalian-Animal
Method: OECD Test Guideline 486
Result: negative

Species: Mammalian-Animal
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity**Product:**

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Remarks: No data available

Reproductive toxicity**Product:**

Effects on fertility : Remarks: No data available

STOT - single exposure**Product:**

Remarks: No data available

STOT - repeated exposure**Product:**

Remarks: No data available

Further information**Product:**

Remarks: No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:****Further information**

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 100 %

Components:**Copper.:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.02 mg/l
Exposure time: 48 h
Test Type: flow-through test
Remarks: Based on read across from structural related substance:
Not applicable to the specific form of the product.

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 0.052 mg/l
Exposure time: 48 h
Test Type: static test
Remarks: Fresh water
Not applicable to the specific form of the product.

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.0225 mg/l
Exposure time: 7 d
Remarks: Fresh water
Not applicable to the specific form of the product.

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.122 mg/l
Exposure time: 7 d
Method: OECD Test Guideline 211
Remarks: Not applicable to the specific form of the product.

Ecotoxicology Assessment

Acute aquatic toxicity : No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Additional ecological information : No data available

13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with the European Directives on waste and hazardous waste.
In accordance with local and national regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

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Special precautions for user

Not applicable

15. REGULATORY INFORMATION**National regulatory information**

Regulations on Labelling and Hazard Communication of Hazardous Chemicals
Regulations on Occupational Safety and Health Facilities
Standards for the Storage, Cleanup, Handling and Disposal of Industrial Waste
Standards of Permissible Exposure Limits in Workplace

The components of this product are reported in the following inventories:

CH INV	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

16. OTHER INFORMATION**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Pre-

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vention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date : 2016/12/22

Responsible Department : Corporate Environment, Health and Safety

Prepared by : Product Safety Manager

Date format : yyyy/mm/dd

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