

Globally Harmonized System of Classification and Labelling of  
Chemicals (GHS)

## KU F 280 Copper Powder

Version 2.1

Revision Date 22.04.2020

Print Date 28.12.2020

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

#### 1.1 Product identifier

Trade name : KU F 280 Copper Powder  
Material number : 060504VZ0

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

This information is not available.

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

Company :  
  
Telephone :  
Telefax :  
E-mail address : msds.eckart@altana.com  
Responsible/issuing person

#### 1.4 Emergency telephone number

**NCEC:**

(contract no.: ECKART29003-NCEC)

+44 1235 239671 (Middle East/Africa, call and response in your language)

+1 215 207 0061 (Americas, call and response in your language)

+65 3158 1074 (Asia-Pacific, call and response in your language)

### SECTION 2: Hazards identification

#### GHS Classification

: Acute toxicity, Category 4, Oral, H302  
Serious eye damage/eye irritation, Category 2A, H319  
Short-term (acute) aquatic hazard, Category 1, H400

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Long-term (chronic) aquatic hazard, Category 1, H410  
Flammable solids, Category 1, H228

### GHS-Labeling

Symbol(s)



Signal word

: Warning

Hazard statements

: H228: Flammable solid.  
H302: Harmful if swallowed.  
H319: Causes serious eye irritation.  
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements

: **Prevention:**  
P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear eye protection/ face protection.  
**Response:**  
P370 + P378 In case of fire: Use for extinction: Special powder for metal fires.  
P370 + P378 In case of fire: Use for extinction: Dry sand.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P391 Collect spillage.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Hazardous components which must be listed on the label

Identification  
copper

CAS-No.

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### SECTION 3: Composition/information on ingredients

Substance name : copper flakes (coated with aliphatic acid)

Substance No. :

#### Hazardous components

Chemical name	CAS-No. EINECS-No.	Classification and labelling	Concentration[%]
copper flakes (coated with aliphatic acid)	Not Assigned	Acute Tox.;4;H302 ;2A;H319 Aquatic Acute;1;H400 Aquatic Chronic;1;H410	50 - 100

For the full text of the H-Statements mentioned in this Section, see Section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General advice : Move the victim to fresh air.

Do not leave the victim unattended.

Move out of dangerous area.

Show this safety data sheet to the doctor in attendance.

If inhaled : If unconscious, place in recovery position and seek medical advice.

If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with soap and plenty of water.

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- If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.  
Remove contact lenses.  
Keep eye wide open while rinsing.  
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.

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

This information is not available.

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

This information is not available.

**SECTION 5: Firefighting measures**
**5.1 Extinguishing media**

- Suitable extinguishing media : Special powder against metal fire, Dry sand, ABC powder
- Unsuitable extinguishing media : Water, High volume water jet

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

- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

**5.3 Advice for firefighters**

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

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- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

- Personal precautions : Use personal protective equipment.  
Evacuate personnel to safe areas.  
Use personal protective equipment.  
Avoid dust formation.  
Avoid breathing dust.  
Remove all sources of ignition.

**6.2 Environmental precautions**

- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

**6.3 Methods and materials for containment and cleaning up**

- Methods for cleaning up : Use mechanical handling equipment.  
  
Pick up and transfer to properly labelled containers.

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Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For personal protection see section 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Avoid creating dust. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Avoid formation of respirable particles. Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

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

Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : General industrial hygiene practice. Do not smoke. Wash hands before breaks and at the end of workday. Keep away from food and drink. Keep away from tobacco products.

When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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

Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards.

Keep away from sources of ignition - No smoking. Do not

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store near combustible materials. Keep containers tightly closed in a cool, well-ventilated place. To maintain product quality, do not store in heat or direct sunlight.

No smoking. Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

- Further information on storage conditions : Protect from humidity and water.
- Advice on common storage : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. Do not store together with oxidizing and self-igniting products.
- Dampness : Keep in a dry, cool and well-ventilated place.
- Other data : Keep in a dry place. No decomposition if stored and applied as directed.

**7.3 Specific end use(s)**

This information is not available.

**SECTION 8: Exposure controls/personal protection**
**8.1 Control parameters**
**Germany:**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
copper flakes (coated with aliphatic acid)	Not Assigned	AGW (inhalable fraction)	1 mg/m <sup>3</sup>		DE TRGS 900

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**United States of America (USA):**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
Copper	7440-50-8	TWA	1 mg/m <sup>3</sup>	2008-01-01	
Copper	7440-50-8	TWA (dust and mists)	1 mg/m <sup>3</sup>	2005-09-01	
Copper	7440-50-8	TWA	1 mg/m <sup>3</sup>	1989-01-19	
Copper	7440-50-8	TWA	0,2 mg/m <sup>3</sup>	2008-01-01	
Copper	7440-50-8	TWA	0,1 mg/m <sup>3</sup>	1989-01-19	
Copper	7440-50-8	TWA (Dust and mist)	1 mg/m <sup>3</sup>	2010-03-01	
Copper	7440-50-8	TWA (Fumes)	0,2 mg/m <sup>3</sup>	2010-03-01	
Copper	7440-50-8	TWA (Dust)	1 mg/m <sup>3</sup>	2013-10-08	
Copper	7440-50-8	TWA (Mist)	1 mg/m <sup>3</sup>	2013-10-08	
Copper	7440-50-8	TWA (dusts and mists)	1 mg/m <sup>3</sup>	2011-07-01	
Copper	7440-50-8	TWA (Fumes)	0,1 mg/m <sup>3</sup>	2011-07-01	
Copper	7440-50-8	TWA (Fumes)	0,1 mg/m <sup>3</sup>	1989-01-19	
Copper	7440-50-8	TWA (Dust and mist)	1 mg/m <sup>3</sup>	1989-01-19	
Copper	7440-50-8	PEL (Fumes)	0,1 mg/m <sup>3</sup>	2014-11-26	

**8.2 Exposure controls**
**Personal protective equipment**

Eye protection : Safety glasses



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- : Wear face-shield and protective suit for abnormal processing problems.
- Hand protection
- Material : Leather
- Remarks : Leather gloves  
The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.  
The exact break through time can be obtained from the protective glove producer and this has to be observed.  
Recommended preventive skin protection
- : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Long sleeved clothing  
Safety shoes
- : Dust impervious protective suit  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : Use suitable breathing protection if workplace concentration requires.  
Respirator with a dust filter  
P1 filter

### Environmental exposure controls

General advice :

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- : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform  
respective authorities.
- Water : The product should not be allowed to enter drains, water  
courses or the soil.
- :

**SECTION 9: Physical and chemical properties**
**9.1 Information on basic physical and chemical properties**

- Appearance : powder
- Colour : copper
- Odour : odourless
- pH : No data available
- Freezing point : No data available
- Boiling point/boiling range : 2 597 °C
- Flash point : No data available
- Bulk density : No data available
- Flammability (solid, gas) : The substance or mixture is a flammable solid  
with the category 1.
- Auto-flammability : No data available
- Upper explosion limit : No data available
- Lower explosion limit : No data available

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Vapour pressure	: No data available
Density	: 8,96 g/cm <sup>3</sup>
Solubility(ies)	
Water solubility	: immiscible
Miscibility with water	: immiscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available

### 9.2 Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.

**No decomposition if stored and applied as directed.**

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions., No hazards to be specially mentioned.

No decomposition if stored and applied as directed.

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Dust may form explosive mixture in air.

**10.4 Conditions to avoid**

Conditions to avoid : No data available

Heat, flames and sparks.

Heat, flames and sparks.

**10.5 Incompatible materials**

Materials to avoid : No data available

**10.6 Hazardous decomposition products**

Hazardous decomposition products : No data available

Other information : No data available

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**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity****Components:****copper flakes (coated with aliphatic acid) :**

Acute oral toxicity : LD50 Oral Rat, male and female: 300 - 500 mg/kg

Method: OECD Test Guideline 423

The component/mixture is moderately toxic after single ingestion.

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Acute dermal toxicity : LD50 Rat, male and female: > 2 000 mg/kg  
Method: OECD Test Guideline 402  
The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation****Product**

May cause skin irritation in susceptible persons.

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

Eye irritation

**Respiratory or skin sensitisation**

No data available

**Carcinogenicity**

No data available

**Toxicity to reproduction/fertility**

No data available

**Reprod.Tox./Development/Teratogenicity**

No data available

**STOT - single exposure**

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No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

**Further information****Product**

No data available

**SECTION 12: Ecological information****12.1 Toxicity****Components:****copper () :****Ecotoxicology Assessment**

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

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### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

No data available

### 12.6 Other adverse effects

**Product:**

Additional ecological  
information

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Very toxic to aquatic life with long lasting effects.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

- Product : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.  
In accordance with local and national regulations.
- Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.  
In accordance with local and national regulations.

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**SECTION 14: Transport information****14.1 UN number**

ADR	: 3089
TDG	: 3089
CFR	: 3089
IMDG	: 3089
IATA	: 3089

**14.2 Proper shipping name**

ADR	: METAL POWDER, FLAMMABLE, N.O.S. (Copper metal powder )
TDG	: METAL POWDER, FLAMMABLE, N.O.S. (Copper metal powder )
CFR	: METAL POWDERS, FLAMMABLE, N.O.S. (Copper metal powder )
IMDG	: METAL POWDER, FLAMMABLE, N.O.S. (,Copper metal powder )
IATA	: METAL POWDER, FLAMMABLE, N.O.S.

**14.3 Transport hazard class**

ADR	: 4.1
TDG	: 4.1
CFR	: 4.1
IMDG	: 4.1
IATA	: 4.1

**14.4 Packing group**

ADR



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Packaging group : II  
Classification Code : F3  
Hazard Identification Number : 40  
Labels : 4.1  
Tunnel restriction code : (E)

**TDG**

Packaging group : II  
Labels : 4.1

**CFR**

Packaging group : II  
Labels : 4.1

**IMDG**

Packaging group : II  
Labels : 4.1  
EmS Number : F-G, S-G

**IATA**

Packing instruction (cargo aircraft) : 448  
Packing instruction (passenger aircraft) : 445  
Packing instruction (LQ) : Y441  
Packaging group : II  
Labels : 4.1

**14.5 Environmental hazards**

**ADR** : Environmentally hazardous

**IMDG** : Marine pollutant

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### 14.6 Special precautions for user

#### IMDG Code- segregation group:

- : IMDG Code segregation group 7 - Heavy metals and their salts
- : IMDG Code segregation group 15 - Powdered metals

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

No data available

## SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

### 15.2 Chemical safety assessment

No data available

## SECTION 16: Other information

#### Full text of H-Statements

H228 : Flammable solid.

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H302 : Harmful if swallowed.  
H319 : Causes serious eye irritation.  
H400 : Very toxic to aquatic life.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.