

**Safety data sheet**  
**according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/EU**

Printing date 08.07.2024

Version number 7 (replaces version 6)

Revision: 08.07.2024

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

### 1.1 Product identifier

**Trade name:** CuP281 (CP 104), B-Cu89PAg-645-815, CuRophos 5

**UFI:** not applicable.



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

*No further relevant information available.*

**Application of the substance / the mixture** Hard solder

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

**Manufacturer/Supplier:**

Felder GmbH

Im Lipperfeld 11

D-46047 Oberhausen

Tel.: +49 (0)208/ 85035-0

Fax.: +49 (0)208/ 26080

<http://www.felder.de>

e-mail: [info@felder.de](mailto:info@felder.de)

### Further information obtainable from:

*lab*

(mo-thu: 8:00 a.m. - 4:00 p.m./ fr: 8:00 a.m. - 1:00 p.m.)

*email:* [mprobst@felder.de](mailto:mprobst@felder.de)

### 1.4 Emergency telephone number:

*Not required as this product is not subject to labelling.*

tel: +49 208 8503529

**EuPCs:** PC-TEC-24

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

*The product is not classified, according to the CLP regulation.*

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

**Additional information:**

*Safety data sheet available on request.*

### 2.3 Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Description:** Mixture: consisting of the following components.

#### Dangerous components:

CAS: 7440-50-8 EINECS: 231-159-6 Index number: 029-024-00-X Reg.nr.: 01-2119480154-42	copper	 Aquatic Chronic 2, H411	88.6-89.4%
CAS: 7440-22-4 EINECS: 231-131-3 Reg.nr.: 01-2119555669-21	silver	substance with a Community workplace exposure limit	4.8-5.2%

#### further ingredients:

phosphor

Reg.nr.: 01-2119448009-39

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

(Contd. on page 2)

EU

**Safety data sheet**  
 according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/  
 EU

Printing date 08.07.2024

Version number 7 (replaces version 6)

Revision: 08.07.2024

Trade name: CuP281 (CP 104), B-Cu89PAg-645-815, CuRophos 5

(Contd. of page 1)

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General information:** Take affected persons out into the fresh air.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:**

After contact with the molten product, cool rapidly with cold water.

Do not pull solidified product off the skin.

Seek medical treatment.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** If symptoms persist consult doctor.

**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: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**5.2 Special hazards arising from the substance or mixture** No further relevant information available.

**5.3 Advice for firefighters**

**Protective equipment:** Do not inhale explosion gases or combustion gases.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:** Allow to solidify. Pick up mechanically.

**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Extractors are required on all machines used for thermal processing or splinter removal processes.

**Information about fire - and explosion protection:** No special measures required.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Store away from foodstuffs.

**Further information about storage conditions:** Store in dry conditions.

**Storage class:** 13

**7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

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

**7440-50-8 copper**

MAK (Germany)	Long-term value: 0.01 A mg/m <sup>3</sup> als Cu
WEL (Great Britain)	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)
OEL (Ireland)	Long-term value: 0.2* 1 ** mg/m <sup>3</sup> *fume **dusts and mists

(Contd. on page 3)

EU

**Safety data sheet**  
 according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/  
 EU

Printing date 08.07.2024

Version number 7 (replaces version 6)

Revision: 08.07.2024

Trade name: CuP281 (CP 104), B-Cu89PAg-645-815, CuRophos 5

(Contd. of page 2)

7440-22-4 silver	
IOELV (EU)	Long-term value: 0.1 mg/m <sup>3</sup>
AGW (Germany)	Long-term value: 0.1 E mg/m <sup>3</sup> 8(II);DFG, EU
WEL (Great Britain)	Long-term value: 0.1 mg/m <sup>3</sup>
OEL (Ireland)	Long-term value: 0.1 mg/m <sup>3</sup> IOELV

**Regulatory information**

MAK (Germany): MAK- und BAT-Liste

WEL (Great Britain): EH40/2020

OEL (Ireland): 2024 CoP for the Safety, Health and Welfare at Work

AGW (Germany): TRGS 900

IOELV (EU): (EU) 2019/1831

**recommended monitoring procedures in accordance with 2020/878/EU no. 8.1.2:**

7440-50-8 copper: BIA 7755 (D), NIOSH 7301(E), MétroPol Fiche 003(F), MTA/MA-025/A92(ESP)

7440-22-4 silver: ISO 15202(F, E), BIA 8600(D), NIOSH 7301(E)

**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls**

Ensure adequate ventilation.

Remove the fumes by means of suitable suction devices.

**Appropriate engineering controls:**

Ensure adequate ventilation.

Remove the fumes by suitable suction devices.

**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:** Avoid skin contact with the liquefied material.**Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Filter P2

**Hand protection** Leather gloves**Penetration time of glove material** Value for the permeation: Level ≤ -**Eye/face protection** in cases of application: protective goggles**Body protection:** Protective work clothing**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information**

Colour:	Copper coloured
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	645-815 °C
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not determined.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH	Not applicable.
Viscosity:	
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water:	Insoluble.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not applicable.
Density and/or relative density	
Density at 20 °C:	8.6 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not applicable.

(Contd. on page 4)

EU

**Safety data sheet**  
 according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/  
 EU

Printing date 08.07.2024

Version number 7 (replaces version 6)

Revision: 08.07.2024

Trade name: CuP281 (CP 104), B-Cu89PAg-645-815, CuRophos 5

(Contd. of page 3)

**Particle characteristics**

See section 3.

**9.2 Other information****Appearance:****Form:****Important information on protection of health and environment, and on safety.****Ignition temperature:****Explosive properties:****Solvent content:****Organic solvents:****VOC (EC)****Change in condition****Evaporation rate***Solid**Product is not selfigniting.**Product does not present an explosion hazard.*

0.0 %

0.00 %

*Not applicable.***Information with regard to physical hazard classes****Explosives***Void***Flammable gases***Void***Aerosols***Void***Oxidising gases***Void***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 used according to specifications.***10.3 Possibility of hazardous reactions***No dangerous reactions known.**Reacts with strong acids and oxidising agents.***10.4 Conditions to avoid** *No further relevant information available.***10.5 Incompatible materials:** *No further relevant information available.***10.6 Hazardous decomposition products:** *No dangerous decomposition products known.***SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** *Based on available data, the classification criteria are not met.***Skin corrosion/irritation** *Based on available data, the classification criteria are not met.***Serious eye damage/irritation** *Based on available data, the classification criteria are not met.***Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.***Germ cell mutagenicity** *Based on available data, the classification criteria are not met.***Carcinogenicity** *Based on available data, the classification criteria are not met.***Reproductive toxicity** *Based on available data, the classification criteria are not met.***STOT-single exposure** *Based on available data, the classification criteria are not met.***STOT-repeated exposure** *Based on available data, the classification criteria are not met.***Aspiration hazard** *Based on available data, the classification criteria are not met.*

(Contd. on page 5)

EU —

**Safety data sheet**  
**according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/  
EU**

Printing date 08.07.2024

Version number 7 (replaces version 6)

Revision: 08.07.2024

Trade name: CuP281 (CP 104), B-Cu89PAg-645-815, CuRophos 5

(Contd. of page 4)

**11.2 Information on other hazards****Endocrine disrupting properties***None of the ingredients is listed.***SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** *No further relevant information available.***chronic aquatic toxicity:** *Classification criteria Copper (029-024-00-X) Environmental hazard not fulfilled.***12.2 Persistence and degradability** *No further relevant information available.***12.3 Bioaccumulative potential** *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** *No further relevant information available.***Additional ecological information:****General notes:***The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary**Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.***SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation** *Contact manufacturer for recycling information.***European waste catalogue***17 04 07: mixed metals**inner packaging:**15 01 02: plastic packaging**overpack:**15 01 01: paper and cardboard packaging***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***SECTION 14: Transport information****14.1 UN number or ID number****ADR, ADN, IMDG, IATA** *Void***14.2 UN proper shipping name****ADR, ADN, IMDG, IATA** *Void***14.3 Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class** *Void***14.4 Packing group****ADR, IMDG, IATA** *Void***14.5 Environmental hazards:****Marine pollutant:** *No***14.6 Special precautions for user** *Not applicable.***14.7 Maritime transport in bulk according to IMO****instruments** *Not applicable.***UN "Model Regulation":** *Void***SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.*

(Contd. on page 6)

EU

**Safety data sheet**  
**according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/  
 EU**

Printing date 08.07.2024

Version number 7 (replaces version 6)

Revision: 08.07.2024

Trade name: CuP281 (CP 104), B-Cu89PAg-645-815, CuRophos 5

(Contd. of page 5)

**REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)** *None of the ingredients are included.***DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II***None of the ingredients is listed.***REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))***None of the ingredients is listed.***Annex II - REPORTABLE EXPLOSIVES PRECURSORS***None of the ingredients is listed.***Regulation (EC) No 273/2004 on drug precursors***None of the ingredients is listed.***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***None of the ingredients is listed.***National regulations:****Information about limitation of use:** *Employment restrictions concerning juveniles must be observed.***Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly 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.***Reasons for changes:**

10/26/2015: Section 1, 8, 15 adaptation to VO 453/2010/EC, 830/2015/EU, 2012/18/EU

02/22/2017: section 8.1, 8.2

09/09/2018: section 13

02/02/2020: section 1, 3, 15, 16

05/16/2022: section 15

07/08/2024: section 1, 12

**Information referred to in Annex I, point 1.3.4.2 of Regulation 1272/2008/EC:****Relevant phrases**

H411 Toxic to aquatic life with long lasting effects.

**Contact:** Dr. M. Probst**Version number of previous version:** 6**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)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage 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

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

**Safety data sheet SD2020**

EU —