

# Safety data sheet

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

Printing date 04.06.2025

Version number 5 (replaces version 4)

Revision: 13.05.2025

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

**1.1 Product identifier****Trade name:** AG 206, B-Cu44ZnAg(Si) 690/810 (L-Ag20)**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

**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

**1.4 Emergency telephone number:** Not required as this product is not subject to labelling.**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:**

EUH210 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	<45%
	⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
CAS: 7440-66-6 EINECS: 231-175-3 Index number: 030-001-01-9 Reg.nr.: 01-2119467174-37	zinc substance with a Community workplace exposure limit	<36%
CAS: 7440-22-4 EINECS: 231-131-3 Reg.nr.: 01-2119555669-21	silver substance with a Community workplace exposure limit	<21%

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

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## 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.

Generally the product does not irritate the skin.

**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:** No special measures required.

## 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:** 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** No special measures required.

**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**

WES (Australia) Long-term value: 1\* 0.2\*\* mg/m<sup>3</sup>  
\*dust & mists (as Cu) \*\*fume

AGW (Germany) Long-term value: 0.045 (A) 0.200 (E) mg/m<sup>3</sup>  
8 (II) (A) 4 (II) (E); AGS, 10, 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)

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OEL (Ireland)	Long-term value: 0.2* 1** mg/m <sup>3</sup> *fume **dusts and mists
<b>7440-66-6 zinc</b>	
MAK (Germany)	Long-term value: 0.1A* 2E** mg/m <sup>3</sup> *alveolengängig; **einatembar
<b>7440-22-4 silver</b>	
IOELV (EU)	Long-term value: 0.1 mg/m <sup>3</sup>
WES (Australia)	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**

WES (Australia): Workplace exposure standards for airborne contaminants

AGW (Germany): TRGS 900

WEL (Great Britain): EH40/2020

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

MAK (Germany): MAK- und BAT-Liste

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)

7440-66-6 zinc: NIOSH 7300, 7301, 7303(E), OSHA ID 121(E)

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** No further data; see section 7.**Appropriate engineering controls:**

Ensure adequate ventilation.

Remove the fumes by means of suitable suction devices.

**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Filter P2

**Hand protection**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Penetration time of glove material** Value for the permeation: Level ≤ nicht erforderlich**Eyeface 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:	Gold coloured
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	690-810 °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.

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**Solubility**

water:	<i>Insoluble.</i>
Partition coefficient n-octanol/water (log value)	<i>Not determined.</i>
Vapour pressure:	<i>Not applicable.</i>
Density and/or relative density	
Density at 20 °C:	<i>8.7 g/cm<sup>3</sup></i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not applicable.</i>
Particle characteristics	<i>See section 3.</i>

**9.2 Other information****Appearance:**Form: *Solid***Important information on protection of health and environment, and on safety.****Ignition temperature:***Product is not selfigniting.***Explosive properties:***Product does not present an explosion hazard.***Solvent content:****Organic solvents:***0.0 %***VOC (EC)***0.00 %***Solids content:***100.0 %***Change in condition****Evaporation rate***Not applicable.***Information with regard to physical hazard classes**

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

**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** *Reacts with acids, alkalis 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.***Primary irritant effect:****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.*

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**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.**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 conditions Copper (029-024-00-X) Environmental hazard not fulfilled.

Classification conditions Copper (029-026-00-0) specific surface area < 0,67 mm<sup>2</sup>/mg.**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** For information on endocrine disrupting properties see section 11.**12.7 Other adverse effects****Additional ecological information:****General notes:**

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

Sales packaging made of plastic (PP5):

15 01 02: plastic packaging

Sales packaging (PAP21)/ outer packaging (PAP20):

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.

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UN "Model Regulation":

Void

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## 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.*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
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<i>None of the ingredients is listed.</i>
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REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
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<i>None of the ingredients is listed.</i>
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Annex II - REPORTABLE EXPLOSIVES PRECURSORS
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<i>None of the ingredients is listed.</i>
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Regulation (EC) No 273/2004 on drug precursors
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<i>None of the ingredients is listed.</i>
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Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
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<i>None of the ingredients is listed.</i>
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#### 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:

25.08.2015: *adaption to Regulation 453/2010/EG, 830/2015/EU, 2012/18/EU*08.06.2017: *chapter 8.2*22.08.2024: *chapter 1, 11, 12, 15, 16*13.05.2025: *chapter 1, 8, 12, 13*

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

#### Relevant phrases

H400 *Very toxic to aquatic life.*H410 *Very toxic to aquatic life with long lasting effects.*Contact: *Dr. M. Probst*

Version number of previous version: 4

#### Abbreviations and acronyms:

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 Acute 1: *Hazardous to the aquatic environment - acute aquatic hazard – Category 1*Aquatic Chronic 1: *Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

Safety data sheet SD3214