

Safety data sheet

according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 06.06.2018

Version number 3

Revision: 06.06.2018

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

1.1 Product identifier

Trade name: **Ag 244, B-Ag44CuZn-675/735 (L-Ag44, AG203)**

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 necessary, due to the fact that the product does not need to be labelled.

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*

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: *Not applicable.*vPvB: *Not applicable.*

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

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

Dangerous components:

CAS: 7440-22-4 EINECS: 231-131-3 Reg.nr.: 01-2119555669-21	silver	substance with a Community workplace exposure limit	43.0-45.0%
CAS: 7440-50-8 EINECS: 231-159-6 Reg.nr.: 01-2119480154-42	copper	substance with a Community workplace exposure limit	29.0-31.0%
CAS: 7440-66-6 EINECS: 231-175-3 Reg.nr.: 01-2119467174-37	zinc	substance with a Community workplace exposure limit	24.0-28.0%

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Take affected persons out into the fresh air.

No special measures required.

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

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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.***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:***CO₂, 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:** *No special measures required.***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***Ensure that suitable extractors are available on processing machines**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:** 11**7.3 Specific end use(s)** *No further relevant information available.***SECTION 8: Exposure controls/personal protection****Additional information about design of technical facilities:** *No further data; see item 7.***8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****7440-22-4 silver**

IOELV (EU)	Long-term value: 0.1 mg/m ³
AGW (Germany)	Long-term value: 0.1 E mg/m ³ 8(II);DFG, EU

7440-50-8 copper

MAK (Germany)	Long-term value: 0.01 A mg/m ³ als Cu
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7440-66-6 zinc

MAK (Germany)	Long-term value: 0.1A* 2E** mg/m ³ *alveolengängig; **einatembar
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Regulatory information

IOELV (EU): (EU) 2017/164

AGW (Germany): TRGS 900

MAK (Germany): MAK- und BAT-Liste

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recommended monitoring procedures in accordance with 453/2010/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)

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

Additional information: The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls:** Not required if no contact.**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

Protection of hands:

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

Material of gloves Leather gloves.**Eye protection:** Safety glasses**Body protection:** Protective work clothing**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:****Form:** Solid**Colour:** Gold coloured**Odour:** Odourless**Odour threshold:** Not determined.**pH-value:** Not applicable.**Change in condition****Melting point/freezing point:** 675-735 °C**Initial boiling point and boiling range:** Undetermined.**Flash point:** Not applicable.**Flammability (solid, gas):** Not determined.**Decomposition temperature:** Not determined.**Auto-ignition temperature:** Product is not selfigniting.**Explosive properties:** Product does not present an explosion hazard.**Explosion limits:****Lower:** Not determined.**Upper:** Not determined.**Vapour pressure:** Not applicable.**Density at 20 °C:** 9.8 g/cm³**Relative density:** Not determined.**Vapour density:** Not applicable.**Evaporation rate:** Not applicable.**Solubility in / Miscibility with water:**

Insoluble.

Partition coefficient: n-octanol/water: Not determined.**Viscosity:****Dynamic:** Not applicable.**Kinematic:** Not applicable.**Solvent content:****Organic solvents:** 0.0 %**VOC (EC)** 0.00 %**Solids content:** 100.0 %**9.2 Other information** No further relevant information available.**SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

Stable at environment temperature.

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*Stable up to melting point.***10.3 Possibility of hazardous reactions***Reacts with strong oxidising agents.**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 toxicological effects**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.***CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****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.*

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 Bioaccumulative potential** *No further relevant information available.***12.4 Mobility in soil** *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**Generally not hazardous for water***12.5 Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***12.6 Other adverse effects** *No further relevant information available.*

SECTION 13: Disposal considerations

13.1 Waste treatment methods**Recommendation** *Contact manufacturer for recycling information.***European waste catalogue***17 04 07: mixed metals**Plastic packaging:**15 01 02: plastic packaging**Outer packaging or cardboard packaging:**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**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

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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 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

UN "Model Regulation":

Void

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations:****Information about limitation of use:** *Employment restrictions concerning juveniles must be observed.***Waterhazard class:** *Generally not 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

06.06.2018: section 8.2, 13, 15

Contact: Dr. M. Probst**Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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

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