Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EU

Printing date 08.03.2023 *Version number 7* *Revision: 08.03.2023*

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

1.1 Product identifier
Trade name: CU 303, gefüllt, B-Cu60Zn(Si)(Mn), (L-CuZn40)
Brass hard solder, flux-filled, B-Cu60Zn(Si)(Mn), (L-CuZn40)
UFI: *CMK5-K0F9-0004-C8J9*

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
Flux
Brazing alloy

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: *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

GHS08 health hazard

Repr. 2 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS08

Signal word *Warning*

Hazard-determining components of labelling:
potassium pentaborate - hydrat
Hazard statements
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
2.3 Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

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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*	*<60%*
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*	*<40%*
CAS: 12229-13-9 *EINECS: 234-371-7* *Reg.nr.: 01-2119970729-20*	*potassium pentaborate - hydrat* *Repr. 2, H361fd* *Specific concentration limit: Repr. 2; H361fd: C ≥ 5.2 %*	*<10%*
CAS: 10043-35-3 *EINECS: 233-139-2* *Index number: 005-007-00-2* *Reg.nr.: 01-2119486683-25*	*boric acid* *Repr. 1B, H360FD*	*<0.3%*

SVHC	
10043-35-3	*boric acid*

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.*
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:
Rinse out mouth and then drink plenty of water.
Seek medical treatment.
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.
Mouth respiratory protective device.

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.

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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*
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/m³ als Cu*
WEL (Great Britain)	*Short-term value: 2** mg/m³ Long-term value: 0.2* 1** mg/m³ *fume **dusts and mists (as Cu)*
OEL (Ireland)	*Long-term value: 0.2* 1** mg/m³ *fume **dusts and mists*
7440-66-6 zinc	
MAK (Germany)	*Long-term value: 0.1A* 2E** mg/m³ *alveolengängig; **einatembar*
10043-35-3 boric acid	
AGW (Germany)	*Long-term value: 0.5* mg/m³ 2(I);*einatembar; AGS, Y, 10*
OEL (Ireland)	*Long-term value: 2 mg/m³ Repr. 1B*

Regulatory information
MAK (Germany): MAK- und BAT-Liste
WEL (Great Britain): EH40/2020
OEL (Ireland): 2021 CoP for the Safety, Health and Welfare at Work
AGW (Germany): TRGS 900
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)
Additional information: *The lists valid during the making were used as basis.*

8.2 Exposure controls
Appropriate engineering controls *No further data; see item 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:
Do not eat, drink, smoke or sniff while working.
Wash hands before breaks and at the end of work.
Respiratory protection:
Use suitable respiratory protective device in case of insufficient ventilation.
Filter B
Filter P2
Hand protection
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
Nitrile rubber, NBR

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Recommended thickness of the material: ≥ 0.4 mm
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
Value for the permeation: Level ≤ 4
Eye/face 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	
Colour:	*Gold coloured*
Odour:	*Odourless*
Odour threshold:	*Not determined.*
Melting point/freezing point:	*870-900(Metall) °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:	*7.53 g/cm³*
Relative density	*Not determined.*
Vapour density	*Not applicable.*
Particle characteristics	*See item 3.*

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	*Void*
Flammable gases	*Void*
Aerosols	*Void*
Oxidising gases	*Void*
Gases under pressure	*Void*
Flammable liquids	*Void*

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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 and stored 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.*
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
Suspected of damaging fertility. Suspected of damaging the unborn child.
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.*
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
Additional ecological information:
General notes:
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.

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Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation *Contact manufacturer for recycling information.*
European waste catalogue
17 04 07: mixed metals
HP10: Toxic for reproduction

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.*
REGULATION (EU) 2019/1021 on persistent organic pollutants (POP) *None of the ingredients are listed.*

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 2 (Self-assessment): hazardous for water.*

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Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57	
10043-35-3	*boric acid*

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:
21.09.2015: adaption to Regulation 453/2010/ECG, 830/2015/EU, 18/2012/EU
16.09.2016: chapter 8.2, chapter 13
16.04.2019: chapter 3, 13
04.09.2019: chapter 1 UFI
23.04.2020: chapter 1
08.03.2023: chapter 1, 3, 11, 12, 15, 16
Information referred to in Annex I, point 1.3.4.2 of Regulation 1272/2008/EC:

Relevant phrases
H360FD May damage fertility. May damage the unborn child.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.
Contact: *Dr. M. Probst*
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)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
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
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Safety data sheet *SD2022*