Safety Data Sheet

ELSOLD SN100 MA-S, ELSOLD lead free solder tin, ELSOLD lead free solder tin with flux A/C/E/K/X/105-19/3064BF and BERA Sølvlod 5

Replaces date: 13/03/2024

Revision date: 28/06/2024
Version: 1.2.0

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

1.1. Product identifier

Trade name: ELSOLD SN100 MA-S, ELSOLD lead free solder tin, ELSOLD lead free solder tin with flux A/C/E/K/X/105-19/3064BF and BERA Sølvlod 5

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

Recommended uses: Soldering.

1.3. Details of the supplier of the safety data sheet

Supplier

Company:	Boliden Bergsøe A/S
Address:	Hvissingevej 116
Zip code:	2600
City:	Glostrup
Country:	DENMARK
E-mail:	environment.glostrup@boliden.com
Phone:	+45 43268300

1.4. Emergency Telephone Number

+45 43 26 83 00 (company)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: The product shall not be classified as hazardous according to the classification and labeling rules for substance and mixtures.

Most serious harmful effects: Prolonged exposure to welding smoke and particles constitutes a risk of developing asthmatic diseases, various respiratory disorders and cancer of the respiratory system.

2.2. Label elements

Supplemental information

EUH210 Safety data sheet available on request.

2.3. Other hazards

(PBT/vPvB) No assessment required, as the product contains inorganic matter only.
Endocrine disrupting properties: None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No./ EC No./ REACH Reg. No.	Concentration	Notes	CLP-classification
Tin	7440-31-5 231-141-8	> 90 %		

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Silver, metallic	7440-22-4 231-131-3 01-2119555669-21-xxxx	0 - 5 %		Aquatic Acute 1;H400 Aquatic Chronic 1;H410
Copper	7440-50-8 231-159-6	0 - 5 %		
Germanium	7440-56-4 231-164-3	0 - 1 %		
red phosphorus	7723-14-0 231-768-7	0 - 1 %		Flam. Sol. 1;H228 Aquatic Chronic 3;H412
nickel	7440-02-0 231-111-4	0 - 0.04 %		Skin Sens. 1;H317 Carc. 2;H351 STOT RE 1;H372

Please see section 16 for the full text of H- / EUH-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Seek fresh air. Seek medical advice in case of persistent discomfort.

Ingestion: Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of persistent discomfort.

Skin contact: Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.

Eye contact: Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.

General: When obtaining medical advice, show the safety data sheet or label.

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

Prolonged exposure to welding smoke and particles constitutes a risk of developing asthmatic diseases, various respiratory disorders and cancer of the respiratory system. Harmful if vapours from molten metal are inhaled or if the skin comes in contact with molten metal.

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

Treat symptoms. No special immediate treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with powder, foam, carbon dioxide or water mist. Use water or water mist to cool non-ignited stock.

Unsuitable extinguishing media: Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

The product is not directly flammable. Avoid inhalation of vapour and fumes - seek fresh air.

5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases - seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with chemical resistant gloves.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear safety goggles if there is a risk of dust contact with eyes. Wear gloves.

For emergency responders: In addition to the above: Normal protective clothing equivalent to EN 469 is recommended.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

6.3. Methods and material for containment and cleaning up

Sweep up/collect spills for possible reuse or transfer to suitable waste containers. Do not sweep - use vacuum cleaner to collect spillage.

6.4. Reference to other sections

See section 8 for type of protective equipment. See section 13 for instructions on disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

When there is a risk of dust generation and when working with a heated product, sufficient ventilation must be established to remove dust/vapours from the place of work. Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Store in a dry area.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit

Substance name	Time period	ppm	mg/m³	fiber/cm3	Remarks	Notation
Silver	8h		0.1			

Measuring methods: Compliance with occupational exposure limits may be checked by occupational hygiene measurements.

Legal basis: Commission Directive 2000/39/EC (Occupational Exposure Limits) as subsequently amended. Last amended by Commission Directive 2019/1831/EU. Directive 2004/37/EC (Exposure to carcinogens or mutagens at work) as subsequently amended. Last amended by Directive 2024/869/EU. Directive 2009/148/EC (Exposure to asbestos at work) as subsequently amended. Last amended by Directive 2023/2668/EU.

PNEC

Silver, metallic, cas-no 7440-22-4				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	0,04 µg/l			

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PNEC aqua (marine water)	0,86 µg/l			
PNEC STP (wastewater-treatment facilities)	0,025 mg/l			
PNEC sediment (freshwater)	438,1 mg/kg			
PNEC sediment (marine water)	438,1 mg/kg			

DNEL - workers

Silver, metallic, cas-no 7440-22-4					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	0,1 mg/m³				

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles if there is a risk of dust contact with eyes. Eye protection must conform to EN 166/16321.

Personal protective equipment, hand protection: Wear protective gloves which protect against contact and splashing from molten metal. Breakthrough time has not been determined for the product. Change gloves often. Gloves must conform to EN 12477.
The suitability and durability of a glove is dependant on usage, e.g. frequency and duration of contact, glove material thickness, functionality and chemical resistance. Always seek advice from the glove supplier.

Personal protective equipment, respiratory protection: When heating/using the product without process ventilation, you must use respiratory equipment with B/P3 filter. Respiratory protection must conform to one of the following standards: EN 136/140/145.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Solid substance
Colour	Silver / Grey
Odour	No data
Solubility	Insoluble

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	> 200 °C	
Freezing point	No data	
Initial boiling point and boiling range	No data	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	No data	
Flash Point	No data	
Auto-ignition temperature	No data	

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Decomposition temperature:	No data	
pH (solution for use)	No data	
pH (concentrate)	No data	
Kinematic viscosity	No data	
Viscosity	No data	
Partition coefficient n-octonol/water	No data	
Vapour pressure	No data	
Density	No data	
Relative density	No data	
Vapour density	No data	
Relative density (sat. air)	No data	
Particle characteristics	No data	

9.2. Other information

Parameter	Value/unit	Remarks
Explosive properties		Non-explosive
Oxidising properties		Non-oxidising.

Other Information: None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive.

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - oral: The product does not have to be classified. Test data are not available. Ingestion may cause discomfort.

Acute toxicity - dermal: The product does not have to be classified. Test data are not available.

Acute toxicity - inhalation: The product does not have to be classified. Test data are not available. The product does not release hazardous vapours in metallic form. Metallic oxides which are hazardous to inhale are formed during soldering/welding.

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Skin corrosion/irritation:	The product does not have to be classified. Test data are not available. May cause slight irritation.
Serious eye damage/eye irritation:	The product does not have to be classified. Test data are not available. Temporary irritation.
Respiratory sensitisation or skin sensitisation:	The product does not have to be classified. Test data are not available.
Germ cell mutagenicity:	The product does not have to be classified. Test data are not available.
Carcinogenic properties:	The product does not have to be classified. Test data are not available.
Reproductive toxicity:	The product does not have to be classified. Test data are not available.
Single STOT exposure:	The product does not have to be classified. Test data are not available. Inhalation of smoke from the soldering / welding process may cause irritation to the upper airways. May cause a burning sensation in the nose, mouth and throat, as well as headaches, coughing and discomfort.
Repeated STOT exposure:	The product does not have to be classified. Test data are not available. Prolonged exposure to welding smoke and particles constitutes a risk of developing asthmatic diseases, various respiratory disorders and cancer of the respiratory system. Prolonged inhalation may cause water in the lungs.
Aspiration hazard:	The product does not have to be classified. Test data are not available.

11.2. Information on other hazards

Endocrine disrupting properties:	None known.
Other toxicological effects:	None known.

SECTION 12: Ecological information

12.1. Toxicity

The product contains small quantities of environmentally hazardous substances. The product does not have to be classified. Test data are not available.

12.2. Persistence and degradability

Non-biodegradable.

12.3. Bioaccumulative potential

No bioaccumulation expected.

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

No assessment required, as the product contains inorganic matter only.

12.6. Endocrine disrupting properties

None known.

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12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid discharge to drain or surface water.
If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste (Dir. 2008/98/EU). Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.
Empty, cleansed packaging should be disposed of for recycling. Uncleansed packaging is to be disposed of via the local waste-removal scheme.

Category of waste: EWC code: Depends on line of business and use, for instance 17 04 06 tin
Absorbent/cloth contaminated with the product: EWC code: Depends on line of business and use, for instance 15 02 03 absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02

SECTION 14: Transport information

14.1. UN number or ID number: Not applicable.
14.2. UN proper shipping name: Not applicable.
14.3. Transport hazard class(es): Not applicable.
14.4. Packing group: Not applicable.
14.5. Environmental hazards: Not applicable.

14.6. Special precautions for user

None.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

Special Provisions: None.

15.2. Chemical Safety Assessment

REACH Reg. No.	Substance name
01-2119555669-21-xxxx	Silver, metallic

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
1.2.0	28/06/2024	MPE	1, 3, 16

Abbreviations:
DNEL: Derived No Effect Level
PBT: Persistent, Bioaccumulative and Toxic
PNEC: Predicted No Effect Concentration
STOT: Specific Target Organ Toxicity
vPvB: Very Persistent and Very Bioaccumulative

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Other Information: This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.

Training advice: A thorough knowledge of this safety data sheet should be a prerequisite condition.

Classification method: Calculation based on the hazards of the known components.

Hazard statements

H228	Flammable solid.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Supplemental hazard information

EUH210	Safety data sheet available on request.

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