

## Safety Data Sheet

### BERA-FIX™ Solder paste

Replaces date: 11/04/2023

Revision date: 12/03/2024  
Version: 5.0.0

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

##### 1.1. Product identifier

**Trade name:** BERA-FIX™ Solder paste

**UFI:** Q390-20E5-W00R-YX53

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

**Recommended uses:** Soldering and tinning.

##### 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:** Skin Corr. 1B;H314  
Eye Dam. 1;H318  
STOT SE 3;H335  
Repr. 1A;H360FD  
Lact.;H362  
STOT RE 1;H372  
Aquatic Acute 1;H400  
Aquatic Chronic 1;H410

**Most serious harmful effects:** Causes severe skin burns and eye damage. May cause respiratory irritation. May damage fertility. May damage the unborn child. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. Harmful if vapours from molten metal are inhaled or if the skin comes in contact with molten metal.

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#### 2.2. Label elements

##### Pictograms



Signal word:

Danger

##### Contains

Substance:

Lead; Zinc chloride; Ammonium-bromide;

##### Hazard Statements

H314

Causes severe skin burns and eye damage.

H335

May cause respiratory irritation.

H360FD

May damage fertility. May damage the unborn child.

H362

May cause harm to breast-fed children.

H372

Causes damage to organs through prolonged or repeated exposure.

H410

Very toxic to aquatic life with long lasting effects.

##### Precautionary statements

P263

Avoid contact during pregnancy and while nursing.

P303+361+353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+351+338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+233

Store in a well-ventilated place. Keep container tightly closed.

P405

Store locked up.

P501

Dispose of contents/container in accordance with local regulation.

##### Supplemental information

EUH201

Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

Restricted to professional users.

#### 2.3. Other hazards

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
Lead	7439-92-1 231-100-4 01-2119513221-59-xxxx	30 - 35 %	14, 28	Repr. 1A;H360FD Lact.;H362 STOT RE 1;H372 Aquatic Acute 1;H400 Aquatic Chronic 1;H410  C ≥ 0.03%; Repr. 1A;H360D M (acute): 10 M (chronic): 10
Tin	7440-31-5 231-141-8 01-2119486474-28-xxxx	20 - 25 %		

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Zinc chloride	7646-85-7 231-592-0 01-2119472431-44-xxxx	10 - 15 %		Acute Tox. 4;H302 Skin Corr. 1B;H314 Aquatic Acute 1;H400 Aquatic Chronic 1;H410  C ≥ 5%: STOT SE 3;H335
Ammonium-bromide	12124-97-9 235-183-8	1.5 - 2.0 %		Eye Irrit. 2;H319 STOT SE 3;H336 Repr. 1A;H360FD Lact.;H362 STOT RE 1;H372 (Nervous system.)

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

14 = The substance is included in the candidate list (SVHC), Regulation 1907/2006/EC, Article 59.

28 = The substance is covered by regulation 1907/2006/EU, annex XVII regarding restrictions.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation:</b>	Seek fresh air. Seek medical advice in case of persistent discomfort.
<b>Ingestion:</b>	Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Do not induce vomiting. Seek medical advice immediately.
<b>Skin contact:</b>	Immediately remove contaminated clothing. Wash the skin thoroughly with water and continue washing for a long time. Seek medical advice immediately.
<b>Eye contact:</b>	Open eye wide, remove any contact lenses and flush immediately with water (preferably using eye wash equipment). Seek medical advice immediately. Continue flushing until medical attention is obtained.
<b>General:</b>	When obtaining medical advice, show the safety data sheet or label.

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

May damage fertility. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. Has a caustic burning effect and causes burning pain, reddening, blistering and burning sores if it comes in contact with skin. Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight. Inhalation is irritating to the upper airways. Harmful if vapours from molten metal are inhaled or if the skin comes in contact with molten metal. May cause harm to breast-fed children.

#### 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

<b>Suitable extinguishing media:</b>	Extinguish with powder, foam, carbon dioxide or water mist. Use water or water mist to cool non-ignited stock.
<b>Unsuitable extinguishing media:</b>	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 a chemical protection suit. Extinguishing water which has been in contact with the product may be corrosive.

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#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel:** Wear respiratory protective equipment. Wear safety goggles/face protection. Wear gloves. Stay upwind/keep distance from source. Stop leak if this can be done without risk.

**For emergency responders:** In addition to the above: Chemical protective suit equivalent to EN 943-2 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

Contain and absorb spill with sand or other absorbent material and transfer to suitable waste containers. Wipe up minor spills with a cloth. Caution! Causes burns.

##### 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

Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work. A workplace assessment must be conducted to ensure that employees are not exposed to effects that may involve a risk when breastfeeding. A workplace assessment must be conducted to ensure that employees are not exposed to effects that may involve a risk during pregnancy.

##### 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, cool, well-ventilated area. Keep in tightly closed original packaging. Store locked up.

##### 7.3. Specific end use(s)

None.

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

**Occupational exposure limit:** Contains no substances subject to reporting requirements.

**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 2022/431/EU. Directive 2009/148/EC (Exposure to asbestos at work) as subsequently amended. Last amended by Directive 2023/2668/EU.

##### 8.2. Exposure controls

**Appropriate engineering controls:** Wear the personal protective equipment specified below. Work under effective process ventilation (e.g. local exhaust ventilation).

**Personal protective equipment, eye/face protection:** Wear safety goggles/face protection. Eye protection must conform to EN 166/16321.

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<b>Personal protective equipment, hand protection:</b>	Wear gloves. Type of material: Plastic/ Rubber. Breakthrough time has not been determined for the product. Change gloves often. 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.
<b>Personal protective equipment, respiratory protection:</b>	In case of heating/use of the product in an area with inadequate ventilation, wear respiratory protection with filter B/P3. Respiratory protection must conform to one of the following standards: EN 136/140/145.
<b>Environmental exposure controls:</b>	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	Paste
Colour	Grey / Silver
Odour	No data
Solubility	Soluble

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	No data	
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		Not spontaneously flammable
Decomposition temperature	No data	
pH (solution for use)	No data	
pH (concentrate)	No data	
Kinematic viscosity	No data	
Viscosity	No data	
Partition coefficient n-octanol/water	No data	
Vapour pressure	1 hPa	zinc chloride
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

**Other Information:**  
VOC (Volatile organic compounds): 0,99 %  
Percent solids by weight 88,7 %  
Watercontent: 9,7 %

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#### 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

Chlorine/ zinc oxide

#### SECTION 11: Toxicological information

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

###### Acute toxicity - oral

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Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		8530 - 9770 mg/kg bw			

Ingestion of large quantities may cause discomfort. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

**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.

**Skin corrosion/irritation:** Has a caustic burning effect and causes burning pain, reddening, blistering and burning sores if it comes in contact with skin.

**Serious eye damage/eye irritation:** Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight.

**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:** May damage fertility. May damage the unborn child. May cause harm to breast-fed children.

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<b>Single STOT exposure:</b>	Inhalation is irritating to the upper airways. 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.
<b>Repeated STOT exposure:</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard:</b>	The product does not have to be classified. Test data are not available.

#### 11.2. Information on other hazards

<b>Endocrine disrupting properties:</b>	None known.
<b>Other toxicological effects:</b>	Inhalation of lead vapours may cause accumulation of lead in the body. Accumulation of large volumes may give rise to nuisances such as amnesia, paralysis, sleep problems and kidney problems. Ingestion may cause caustic burning in mouth, oesophagus and stomach. Pains in mouth, throat and stomach. Difficulty swallowing, feeling unwell and vomiting of blood. Brown spots and burns may appear in and around the mouth.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

#### 12.2. Persistence and degradability

#### 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.

#### 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 meets the criteria of a hazardous waste (Dir. 2008/98/EU). Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site. Empty, cleansed packaging should be disposed of for recycling.

#### Category of waste:

EWC code: Depends on line of business and use, for instance 16 03 03\* inorganic wastes containing hazardous substances  
Absorbent/cloth contaminated with the product: EWC code: 15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing



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contaminated by dangerous substances.

#### SECTION 14: Transport information

##### Land transport (ADR/RID)

14.1. UN number or ID number:	3260	14.4. Packing group:	II
14.2. UN proper shipping name:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Zinc chloride)	14.5. Environmental hazards:	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		
Hazard identification number:	80	Tunnel restriction code:	E

##### Inland water ways transport (ADN)

14.1. UN number or ID number:	3260	14.4. Packing group:	II
14.2. UN proper shipping name:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (zinc chloride)	14.5. Environmental hazards:	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		
Transport in tank vessels:	Not applicable.		

##### Sea transport (IMDG)

14.1. UN number or ID number:	3260	14.4. Packing group:	II
14.2. UN proper shipping name:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (zinc chloride)	14.5. Environmental hazards:	The product is not a Marine Pollutant (MP).
14.3. Transport hazard class(es):	8	Environmental Hazardous Substance Name(s):	Zinc chloride Lead
Hazard label(s):	8		
EmS:	F-A, S-B	IMDG Code segregation group:	Segr. grp. 1 - Acids (SGG1)

##### Air transport (ICAO-TI / IATA-DGR)

14.1. UN number or ID number:	3260	14.4. Packing group:	II
14.2. UN proper shipping name:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (zinc chloride)	14.5. Environmental hazards:	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		

##### 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



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Special care should be applied for employees under the age of 18. Young people under the age of 18 may not carry out any work causing harmful exposure to this product.

Covered by:

Council Directive (EC) on the protection of young people at work.

The product is comprised by Regulation 1907/2006/EC, Annex XVII concerning restrictions.

Directive 2012/18/EU (Seveso), E1 Hazardous to the Aquatic Environment in Category

Acute 1 or Chronic 1: Column 2: 100 t, Column 3: 200 t.

**15.2. Chemical Safety Assessment**

REACH Reg. No.	Substance name
01-2119472431-44-xxxx	Zinc chloride
01-2119486474-28-xxxx	Tin
01-2119513221-59-xxxx	Lead

**SECTION 16: Other information****Version history and indication of changes**

Version	Revision date	Responsible	Changes
5.0.0	12/03/2024	Bureau Veritas HSE / MPE	1, 2, 3, 7, 8, 9, 11, 16

**Abbreviations:**

PBT: Persistent, Bioaccumulative and Toxic

vPvB: Very Persistent and Very Bioaccumulative

STOT: Specific Target Organ Toxicity

**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**

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure. (Nervous system.)
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Supplemental hazard information**

EUH201	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
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**SDS is prepared by**

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