Safety Data Sheet

BERA™ Soldering fat

Replaces date: 2/15/2017

Revision date: 1/4/2022
Version: 3.0.0

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

1.1. Product identifier

Trade name: BERA™ Soldering fat

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

Recommended uses: Soldering flux.

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:	metal.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: Acute Tox. 4;H302 Skin Corr. 1B;H314 Eye Dam. 1;H318 STOT SE 3;H335 Aquatic Acute 1;H400 Aquatic Chronic 1;H410

Most serious harmful effects: Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. 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.

2.2. Label elements

Pictograms

Signal word: Danger

Contains

Substance: Zinc chloride; Ammonium chloride;

H-phrases

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

P-phrases

P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
P310	Immediately call a POISON CENTER/doctor.
P501	Dispose of contents/container in accordance with local regulation.

Supplemental information

None.

2.3. Other hazards

The product does not contain any PBT or vPvB substances.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No./ EC No./ REACH Reg. No.	Concentration	Notes	CLP-classification
Zinc chloride	7646-85-7 231-592-0 01-2119472431-44-xxxx	~ 25%		Acute Tox. 4;H302 Skin Corr. 1B;H314 Aquatic Acute 1;H400 Aquatic Chronic 1;H410 C ≥ 5%: STOT SE 3;H335
White mineral oil (petroleum)	8042-47-5 232-455-8 01-2119487078-27-xxxx	~ 5%		
Ammonium chloride	12125-02-9 235-186-4 01-2119487950-27-xxxx	2 - 4%		Acute Tox. 4;H302 Eye Irrit. 2;H319

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. Do not induce vomiting. Seek medical advice immediately.

Skin contact: Immediately remove contaminated clothing. Wash skin with soap and water. Seek medical advice immediately.

Eye contact: 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.

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

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

Harmful if swallowed. 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.

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 a chemical protection suit. Extinguishing water which has been in contact with the product may be corrosive.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: In case of insufficient ventilation, 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

Sweep up/collect spills for possible reuse or transfer to suitable waste containers. Caution! Causes burns. Rinse with water.

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

Work under effective process ventilation (e.g. local exhaust ventilation). 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, cool, well-ventilated area. Keep in tightly closed original packaging.

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 2019/983/EU.

8.2. Exposure controls

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

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

Personal protective equipment, hand protection: Wear gloves. Type of material: Nitrile rubber. Rubber. Gloves must conform to EN 374. 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: Light use (small volume, shortterm contact (below 10 min.)): Not required.
Medium use (medium volume, medium contact (1-2 hours)): Wear respiratory protective equipment. Filter type: B/P3 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	Paste
Colour	Colourless White
Odour	Odourless
Solubility	Partly soluble

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	70 °C	
Freezing point	70 °C	
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	
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	1.1 g/cm³	
Vapour density	No data	
Relative density (sat. air)	No data	
Particle characteristics	No data	

9.2. Other information

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

Chlorine/ zinc oxide

SECTION 11: Toxicological information

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

Acute toxicity - oral

Zinc chloride, cas-no 7646-85-7

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		350mg/kg			

Ammonium chloride, cas-no 12125-02-9

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		1410mg/kg			

Harmful if swallowed.

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:	The product does not have to be classified. Test data are not available.
Single STOT exposure:	Inhalation is irritating to the upper airways. 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 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:	Ingestion may cause caustic burning in mouth, aesophagus 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

Test data are not available.

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

The product does not contain any PBT or vPvB substances.

12.6. Endocrine disrupting properties

None known.

12.7. Other adverse effects

The product affects the pH value of the local aquatic environment.

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 contaminated by dangerous substances.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	1759	**14.4. Packing group:**	III
14.2. UN proper shipping name:	CORROSIVE SOLID, N.O.S. (Zinc chloride)	**14.5. Environmental hazards:**	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
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:	1759	**14.4. Packing group:**	III
14.2. UN proper shipping name:	CORROSIVE SOLID, N.O.S. (Zinc chloride)	**14.5. Environmental hazards:**	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
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:	1759	**14.4. Packing group:**	III
14.2. UN proper shipping name:	CORROSIVE SOLID, N.O.S. (Zinc chloride)	**14.5. Environmental hazards:**	The product must be labelled as a Marine Pollutant (MP) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	8	**Environmental Hazardous Substance Name(s):**	
Hazard label(s):	8		

EmS:	F-A, S-B	**IMDG Code segregation group:**	Segr. grp. 1 - Acids (SGG1 or SGG1a)

Air transport (ICAO-TI / IATA-DGR)

14.1. UN number or ID number:	1759	**14.4. Packing group:**	III
14.2. UN proper shipping name:	CORROSIVE SOLID, 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

Special Provisions: Young people under the age of 18 may not work with or be exposed occupationally to the product. However, young people above the age of 15 are exempt from this rule if the product is used as a necessary part of a training programme.

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

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
01-2119487078-27-xxxx	White mineral oil (petroleum)
01-2119487950-27-xxxx	Ammonium chloride

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
3.0.0	1/4/2022	Bureau Veritas HSE / MPE	1 - 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.

Safety Data Sheet

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Replaces date: 2/15/2017

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Version: 3.0.0

List of relevant H-statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS is prepared by

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