

**Safety data sheet**  
**according SS 586 : Part 3**

Date of issue: 31.08.2025

Version number 1

Revision: 21.08.2025

**1 Identification**

· **Product identifier**

· **Trade name:** **LOT-LF**

· **Relevant identified uses of the substance or mixture and uses advised against**

· **Product category** PC7 Base metals and alloys

· **Application of the substance / the mixture** Brazing alloy

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

HOTTINGER BRUEL & KJAER UK LTD  
Advanced Manufacturing Park Technology Centre  
Brunel Way, Catcliffe, Rotherham  
South Yorkshire, S60 5WG  
United Kingdom  
Phone: +44 (0) 1145 512230  
Email: info@uk.hbm.com

· **Informing department:**

Tel. +49(0)6131 19240  
EMail support-esa@hbkworld.com

· **Emergency telephone number:**

Gift-Informationszentrum Nord, Göttingen  
Poison Information Center, Göttingen  
Tel.: +49 (0)551 19240  
(German and English only)

United Kingdom:

National Poisons Information Service  
Emergency number: +44 844 892 0111

Poisons Information Centre of Ireland:

+353 1 837 9964 for medical professionals  
+353 1 809 2166 for public inquiries  
CHEMTREC: +44 20 3807 3798 (24h emergency call).  
Outside continental USA please call CHEMTREC at +1-703-527-3887 (R-calls are accepted).

**2 Hazards identification**

· **Classification of the substance or mixture**



GHS08 health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

· **Label elements**

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

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- **Hazard pictograms**



GHS08

- **Signal word** Warning

- **Hazard-determining components of labelling:**

silver

- **Hazard statements**

H361 Suspected of damaging fertility or the unborn child.

- **Precautionary statements**

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.

- **Additional information:**

Please refer to further labelling elements in section 15 of this safety data sheet, if applicable.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**

- **Description:** Mixture of the substances listed below including additives not requiring identification.

- **Dangerous components:**

7440-31-5	tin		50 - 100%
7440-22-4	silver	Repr. 2, H361; STOT RE 2, H373	≥ 3 - < 10%

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

### 4 First-aid measures

- **Description of first aid measures**

- **General information** Personal protection for the First Aider.

- **After inhalation** Supply fresh air; consult doctor in case of symptoms.

- **After skin contact** Wash with water and soap.

- **After eye contact**

Do not rub eyes dry, the mechanical stress can cause additional cornea damages.

Remove contact lenses if possible.

In case of permanent aches and pains please go and see the doctor.

- **After swallowing**

Rinse out mouth.

In case of disorders get medical advice.

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**  
Alcohol-resistant foam, extinguishing powder or carbon dioxide. Fight larger fire with water spray.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **Special hazards arising from the substance or mixture**  
Inhalation of combustion gases may cause serious health hazards.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information** Remove goods in stock from incendiary zone, if possible.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **For non-emergency personnel** Avoid contact with the product.
- **For emergency responders** Put on suitable personal protective equipment.
- **Environmental precautions:** Do not allow to enter drainage system, ground/soil and water bodies.
- **Methods and material for containment and cleaning up:** Collect mechanically.
- **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 information on disposal.

### 7 Handling and storage

- **Precautions for safe handling** No special precautions necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Handling**  
Do not eat, drink or smoke while working.  
Do not inhale gases / fumes / aerosols.  
Wash hands during breaks and at the end of the work.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Only store in suitable containers (e.g. containers authorised under dangerous goods legislation).
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Unrestricted storage life at room temperature.
- **Specific end use(s)** No further relevant information available.

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### 8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**

WEL: workplace exposure limit

OEL: Occupational Exposure Limit

#### 7440-31-5 tin

PEL (Singapore)	Long-term value: 2 mg/m <sup>3</sup>
WSH (Singapore)	Long-term value: 2 mg/m <sup>3</sup>
PEL (Malaysia)	Long-term value: 2 mg/m <sup>3</sup> sebagai Sn

#### 7440-22-4 silver

PEL (Singapore)	Long-term value: 0.1 mg/m <sup>3</sup>
WSH (Singapore)	Long-term value: 0.1 mg/m <sup>3</sup>
PEL (Malaysia)	Long-term value: 0.1* 0.01** mg/m <sup>3</sup> *Logum **Sebatian terlarutkan, sebagai Ag
WEL (Great Britain)	Long-term value: 0.1 mg/m <sup>3</sup>

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands during breaks and at the end of the work.
- **Breathing equipment:**  
Use breathing protection only when aerosol or mist is formed.  
filter A/P.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
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 can not be calculated in advance and has therefore to be checked prior to the application.
- **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.
- **Eye protection:** Not required.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Colour:** Grey
- **Odour:** odourless
- **Odour threshold:** Not determined.

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· <b>pH-value:</b>	Not applicable.
· <b>Melting point/freezing point:</b>	Not determined
· <b>Initial boiling point and boiling range:</b>	Not determined
· <b>Flash point:</b>	Not applicable
· <b>Evaporation rate</b>	Not applicable.
· <b>Inflammability (solid, gaseous)</b>	Not determined.
· <b>Critical values for explosion:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapour pressure:</b>	Not applicable.
· <b>Vapour density</b>	Not applicable.
· <b>Density</b>	Not determined
· <b>Relative density</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Soluble
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Decomposition temperature:</b>	Not determined.
· <b>SADT</b>	
· <b>Viscosity:</b>	
· <b>kinematic:</b>	Not applicable.
· <b>dynamic:</b>	Not applicable.
· <b>Particle characteristics</b>	No further details.

· <b>Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Solid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Self-inflammability:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
None in case of intended use and storage in compliance with instructions.

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### 11 Toxicological information

- Information on toxicological effects
- Acute toxicity

- LD/LC50 values that are relevant for classification:

#### 7440-31-5 tin

Oral	LD50	> 2,000 mg/kg (Rat) (OECD 423)
Dermal	LD50	> 2,000 mg/kg (Rat) (OECD 402)
Inhalative	LC50	> 4.75 mg/l/4h (Rat) (OECD 403)

#### 7440-22-4 silver

Oral	LD50	> 2,000 mg/kg (Rat) (OECD 401)
Dermal	LD0	> 2,000 mg/kg (Rat) (OECD 402)
Inhalative	LC0	> 5.16 mg/l/4h (Rat) (OECD 436)

- Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

- Repeated dose toxicity

#### 7440-22-4 silver

Oral	NOAEL (90d)	30 mg/kg bw/day (Rat) (OECD 408)
	LOAEL (90d)	125 mg/kg bw/day (Rat)
Inhalative	NOAEC (90d)	0.133 mg/m <sup>3</sup> (Rat) (OECD 413)
	LOAEC (90d)	0.515 mg/m <sup>3</sup> (Rat) (OECD 413)

- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)  
Repr. 2

### 12 Ecological information

- Toxicity

- Aquatic toxicity:

#### 7440-31-5 tin

LC50 (static)	> 0.0124 mg/l/96h (Pimephales promelas) (OECD 203)
EC50 (static)	9,846 mg/l/72h (Raphidocelis subcapitata) (OECD 201)

#### 7440-22-4 silver

EC50 (static)	0.00022 mg/l/48h (Daphnia magna) (OECD 202)
LC50	0.0012 mg/l/96h (Pimephales promelas)
EC50 (static)	0.0051 mg/l/72h (Raphidocelis subcapitata) (OECD 201)

- Persistence and degradability No further relevant information available.
- Other information: There are no data available about the preparation.
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

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- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**  
Dispose of packaging according to regulations on the disposal of packagings.  
Non contaminated packagings can be used for recycling.  
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### 14 Transport information

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>ADR/RID, IMDG, IATA</b></li> </ul>   | Void   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADR/RID, ADN, IMDG, IATA</b></li> </ul>                      | Void   |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>ADR/RID, ADN, IMDG</b></li> <li>· <b>Class</b></li> </ul> | Void   |
| <ul style="list-style-type: none"> <li>· <b>IATA</b></li> <li>· <b>Class</b></li> </ul>  | Void<br>Not Restricted.                              |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>ADR/RID, IMDG, IATA</b></li> </ul>                                     | Void   |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>  | Not applicable.                                      |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>                      | Not applicable.                                      |
| <ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>   | Not dangerous according to the above specifications. |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>  | Not applicable.                                      |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>  | Void   |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Poisons Act - Schedule 1**  
None of the ingredients is listed.

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- **Poisons Act - Schedule 2, Group II**

None of the ingredients is listed.

- **Health Products Act - First Schedule - Psychotropic Substances**

None of the ingredients is listed.

- **National regulations**

- **Water hazard class:**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is contained.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

- **Department issuing data specification sheet:**



This Safety Data Sheet has been drawn up in cooperation with:

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- **Kit-Components:**

- **Abbreviations and acronyms:**

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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Repr. 2: Reproductive toxicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

- **\* Data compared to the previous version altered.**