

Safety Data Sheet
according to HPR, Schedule 1

Date of issue 08/31/2025

Version number 1

Revision: 08/21/2025

1 Identification

- **Product identifier**
- **Trade name:** LOT-LF
- **Other means of identification**
- **Application of the substance / the mixture** Brazing alloy
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Hottinger Brüel & Kjaer GmbH
Im Tiefen See 45
D-64293 Darmstadt
Germany
Tel: +49 6151 803 0
E-Mail: info@hbkworld.com
<https://www.hbkworld.com>
- **Information department:**
Tel. +49(0)6131 19240
EMail support-esa@hbkworld.com
- **Emergency telephone number:**
Canada:
+1 800 332 1414 (Alberta, NW Territories);
+1 866 454 1212 (Saskatchewan);
+1 403 944 1414 (Calgary, outside Alberta, VOIP users)
Poison and Drug Information Services
Foothills Medical Centre
1403 29th Street N.W.
T2N 2T9 Calgary

National Capital Poison Center, U.S.A.:
1-800-222-1222
3201 New Mexico Ave Ste 310
20016 Washington, DC
USA
CHEMTREC: +1 703-741-5970 (24h emergency call).
Outside continental USA please call CHEMTREC at +1-703-527-3887 (R-calls are accepted).

2 Hazard identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Reproductive Toxicity - Category 2

H361 Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (repeated exposure) – Category 2

H373 May cause damage to the nervous system through prolonged or repeated exposure.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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- **Hazard pictograms**



GHS08

- **Signal word** Warning

- **Hazard-determining components of labeling:**

silver

- **Hazard statements**

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to the nervous system through prolonged or repeated exposure.

- **Precautionary statements**

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Additional information:**

Please refer to additional labeling elements in Section 15 of this Safety Data Sheet, if applicable.

3 Composition/Information on ingredients

- **Chemical characterization: Mixtures**

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

- **Dangerous components:**

CAS: 7440-31-5 RTECS: XP 7320000	tin	80 - 100% w/w *
CAS: 7440-22-4	silver	1 - 5% w/w *

* Actual concentration ranges are withheld as a trade secret.

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 complaints.

- **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 full 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 respiratory protective device.
- **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:** Pick up 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 disposal information.

7 Handling and storage

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Handling:**
Do not eat, drink, smoke or sniff while working.
Do not inhale gases / fumes / aerosols.
Wash hands before breaks and at the end of work.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
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.

8 Exposure controls/ Personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
TLV: Threshold Limit Value

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7440-31-5 tin

EL	TWA: 2 mg/m ³ metal
EV	TWA: 2* 0.1** mg/m ³ *metal, oxide, inorg. compds.; **org. compds.: Skin

7440-22-4 silver

EL	STEL: 0.03 mg/m ³ TWA: 0.01 mg/m ³ as Ag
EV	TWA: 0.1* 0.01** mg/m ³ *metal; **water-soluble compounds (as silver)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:**
Use suitable respiratory protective device 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
- **Color:** Grey
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.
- **Flammability:** Not determined.
- **Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** Not applicable.
- **Auto igniting:** Product is not selfigniting.

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· Decomposition temperature:	Not determined.
· SADT	
· pH-value:	Not applicable.
· Viscosity:	
· Kinematic:	Not applicable.
· Dynamic:	Not applicable.
· Solubility in / Miscibility with	
· Water:	Soluble.
· Segregation coefficient (n-octanol/water):	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not applicable.
· Particle characteristics	No further details.
· Other information	
· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Change in condition	
· Evaporation rate	Not applicable.

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.

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)

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Inhalative LC0	> 5.16 mg/l/4h (Rat) (OECD 436)
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- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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.

- **Additional ecological information:**

- **General notes:** 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 cleansed are to be disposed of in the same manner as the product.

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- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|--|
| <ul style="list-style-type: none"> · UN-Number · DOT/TDG, ADR, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT/TDG, ADR, ADN, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT/TDG (Transport dangerous goods): · Class | Void
No hazardous good |
| <ul style="list-style-type: none"> · ADR, ADN, IMDG · Class | Void |
| <ul style="list-style-type: none"> · IATA · Class | Void
Not Restricted |
| <ul style="list-style-type: none"> · Packing group · DOT/TDG, ADR, IMDG, IATA | Void |
| <ul style="list-style-type: none"> · Environmental hazards: | Not applicable. |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · Transport/Additional information: | Not dangerous according to the above specifications. |
| <ul style="list-style-type: none"> · Special precautions for user | Not applicable. |
| <ul style="list-style-type: none"> · UN "Model Regulation": | Void |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

7440-22-4 silver

7440-50-8 copper

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

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- **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 1%)**

All ingredients are listed.

- **Per- and polyfluoroalkyl substances (PFAS)**


None of the ingredients is listed.

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

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.

- **Department issuing SDS:**

 **DEKRA** This Safety Data Sheet has been drawn up in cooperation with:
DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,
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- **Kit-Components:**

- **Date of preparation** 08/31/2025

- **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

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

vPvB: very Persistent and very Bioaccumulative

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

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