



Safety Data Sheet acc. to OSHA HCS

Printing date 04/05/2023

Reviewed on 04/05/2023

1 Identification

- **Product identifier**
- **Trade name:** Loetdraht HS10 Pb93Sn5Ag2
Loetdraht HS10 Sn62Pb36Ag2
- **Application of the substance / the mixture** Brazing alloy
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Stannol GmbH & Co. KG
Haberstrasse 24
D-42551 Velbert

+49 (0) 2051 3120 332
sdb@stannol.de
- **Information department:** Product Safety Department
- **Emergency telephone number:**
8:00 am - 5:00 pm (GET) +49 (0) 2051 3120 332

+1 (307) 899 3845

2 Hazard(s) identification

- **Classification of the substance or mixture**

Sensitization - Skin 1	H317	May cause an allergic skin reaction.
Carcinogenicity 2	H351	Suspected of causing cancer.
Toxic to Reproduction 1A	H360-H362	May damage fertility or the unborn child. May cause harm to breast-fed children.
Specific Target Organ Toxicity - Repeated Exposure 1	H372	Causes damage to the central nervous system, the kidneys and the blood through prolonged or repeated exposure.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Lead
Rosin
- **Hazard statements**
May cause an allergic skin reaction.
Suspected of causing cancer.
May damage fertility or the unborn child. May cause harm to breast-fed children.
Causes damage to the central nervous system, the kidneys and the blood through prolonged or repeated exposure.
- **Precautionary statements**
Obtain special instructions before use.
Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid contact during pregnancy/while nursing.
Do not eat, drink or smoke when using this product.
Wear protective clothing / eye protection.
Wear protective gloves.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Store locked up.



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Printing date 04/05/2023

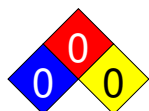
Reviewed on 04/05/2023

Trade name: Loetdraht HS10 Pb93Sn5Ag2
Loetdraht HS10 Sn62Pb36Ag2

(Contd. of page 1)

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

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

- **Other hazards**

Inhalation of vapors that are released during the soldering process should be avoided. Flux fumes will irritate nose, throat and lungs and may cause allergic reaction (asthma) after prolonged or repeated exposure. Therefore, we recommend the usage of fume extractions with appropriate filters.

Always wash your hands carefully with soap and water after handling the product before eating, drinking and smoking.

Do not heat the soldering materials above 500 °C.

Keep out of reach of children.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

Not applicable

CAS: 7439-92-1 Lead

EINECS: 231-100-4

CAS: 7440-31-5 tin

EINECS: 231-141-8

CAS: 8050-09-7 Rosin

EINECS: 232-475-7

CAS: 7440-22-4 silver

EINECS: 231-131-3

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.



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Trade name: **Loetdraht HS10 Pb93Sn5Ag2**
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(Contd. of page 2)

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective clothing.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **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.
- **Protective Action Criteria for Chemicals**
- **PAC-1:**

CAS: 7439-92-1 Lead	0.15 mg/m ³
CAS: 7440-31-5 tin	6 mg/m ³
CAS: 8050-09-7 Rosin	72 mg/m ³
CAS: 7440-22-4 silver	0.3 mg/m ³
- **PAC-2:**

CAS: 7439-92-1 Lead	120 mg/m ³
CAS: 7440-31-5 tin	67 mg/m ³
CAS: 8050-09-7 Rosin	790 mg/m ³
CAS: 7440-22-4 silver	170 mg/m ³
- **PAC-3:**

CAS: 7439-92-1 Lead	700 mg/m ³
CAS: 7440-31-5 tin	400 mg/m ³
CAS: 8050-09-7 Rosin	1,500 mg/m ³
CAS: 7440-22-4 silver	990 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 6.1 C

(Contd. on page 4)
US



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Trade name: **Loetdraht HS10 Pb93Sn5Ag2**
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(Contd. of page 3)

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

- **Control parameters**

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

CAS: 7439-92-1 Lead

PEL (USA) Long-term value: 0.05* mg/m³
*see 29 CFR 1910.1025

REL (USA) Long-term value: 0.05* mg/m³
*8-hr TWA ;See PocketGuide App.C

TLV (USA) Long-term value: 0.05* mg/m³
*and inorganic compds., as Pb; BEI, A3

BOELV (EU) Long-term value: 0.15 mg/m³
as Pb

CAS: 7440-31-5 tin

PEL (USA) Long-term value: 2 mg/m³
metal

REL (USA) Long-term value: 2 mg/m³

TLV (USA) Long-term value: 2* mg/m³
metal, *inh. fraction

CAS: 8050-09-7 Rosin

TLV (USA) Long-term value: 0.001* mg/m³
*inhalable fraction, DSEN, RSEN

CAS: 7440-22-4 silver

PEL (USA) Long-term value: 0.01 mg/m³

REL (USA) Long-term value: 0.01 mg/m³

TLV (USA) Long-term value: 0.1 mg/m³
metal: dust and fume

IOELV (EU) Long-term value: 0.1 mg/m³

- **Ingredients with biological limit values:**

CAS: 7439-92-1 Lead

BEI (USA) 200 µg/L
Medium: blood
Time: not critical
Parameter: Lead

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.

- **Breathing equipment:**

Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2

(Contd. on page 5)
US



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Trade name: **Loetdraht HS10 Pb93Sn5Ag2**
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(Contd. of page 4)

· Protection of hands:



Protective gloves

Rubber gloves

Synthetic gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

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 determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Wire

Color: Grey

· Odor: Characteristic

· Odor threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not determined.

· Decomposition temperature: Not determined.

· Ignition temperature: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapor pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapor density: Not applicable.

· Evaporation rate: Not applicable.

(Contd. on page 6)
US



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(Contd. of page 5)

- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Solvent content:**
 - VOC content:** 0.00 %
 - Solids content:** 100.0 %
- **Other information** No further relevant information available.

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:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

CAS: 7439-92-1 Lead 2B
- **NTP (National Toxicology Program)**

CAS: 7439-92-1 Lead R
- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 7)
US



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(Contd. of page 6)

- **Additional ecological information:**
- **General notes:** Not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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:** Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

14 Transport information

- **UN-Number**
- **DOT, ADN, IMDG, IATA** not regulated
- **UN proper shipping name**
- **DOT, ADN, IMDG, IATA** not regulated
- **Transport hazard class(es)**
- **DOT, ADN, IMDG, IATA**
- **Class** not regulated
- **Packing group**
- **DOT, IMDG, IATA** not regulated
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** not regulated

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 ingredients is listed.
- **Section 313 (Specific toxic chemical listings):**
CAS: 7439-92-1 Lead
CAS: 7440-22-4 silver
- **TSCA (Toxic Substances Control Act):**
All components have the value ACTIVE.
- **Hazardous Air Pollutants**
CAS: 7439-92-1 Lead

(Contd. on page 8)
US



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(Contd. of page 7)

· Proposition 65**· Chemicals known to cause cancer:**

CAS: 7439-92-1 Lead

· Chemicals known to cause reproductive toxicity for females:

CAS: 7439-92-1 Lead

· Chemicals known to cause reproductive toxicity for males:

CAS: 7439-92-1 Lead

· Chemicals known to cause developmental toxicity:

CAS: 7439-92-1 Lead

· Carcinogenic categories**· EPA (Environmental Protection Agency)**

CAS: 7439-92-1 Lead

B2

CAS: 7440-22-4 silver

D

· TLV (Threshold Limit Value)

CAS: 7439-92-1 Lead

A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).**· Hazard pictograms**

GHS07

GHS08

· Signal word Danger**· Hazard-determining components of labeling:**

Lead

Rosin

· Hazard statements

May cause an allergic skin reaction.

Suspected of causing cancer.

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

Causes damage to the central nervous system, the kidneys and the blood through prolonged or repeated exposure.

· Precautionary statements

Obtain special instructions before use.

Do not breathe dust/fume/gas/mist/vapors/spray.

Avoid contact during pregnancy/while nursing.

Do not eat, drink or smoke when using this product.

Wear protective clothing / eye protection.

Wear protective gloves.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Store locked up.

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

· 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: Product Safety Department(Contd. on page 9)
US



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(Contd. of page 8)

- **Contact:** Hr. Dörr
- **Date of preparation / last revision** 04/05/2023
- **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)
 - NFPA: National Fire Protection Association (USA)
 - VOC: Volatile Organic Compounds (USA, EU)
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - NIOSH: National Institute for Occupational Safety
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - BEI: Biological Exposure Limit
 - Sensitization - Skin 1: Skin sensitisation – Category 1
 - Carcinogenicity 2: Carcinogenicity – Category 2
 - Toxic to Reproduction 1A: Reproductive toxicity – Category 1A
 - Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1

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