

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/26/2020

Version number 20

Reviewed on 02/26/2020

**1 Identification****Trade name:** Leaded Solder Alloy Solid Bar / Wire**Relevant identified uses of the substance or mixture and uses advised against** Professional use**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**Kester LLC  
800 West Thorndale Avenue  
Itasca, IL 60143 USA  
Tel (630) 616-4000  
Tel International 00 1 630 616-4000ITW Specialty Materials (Suzhou) Co., Ltd.  
Heng Qiao Road  
Wujiang Economic Development Zone  
Suzhou, Jiangsu 215200 China  
Tel +86 512 82060808Kester GmbH  
Ganghofer Strasse 45  
D-82216 Gernlinden Germany  
Tel +49 (0) 8142 4785 0**Information department:** EHS\_Kester@kester.com**Emergency telephone number:**

CHEMTREC 24-Hour Emergency Response Telephone Number: International +1 703 741-5970

**2 Hazard(s) identification****Classification of the substance or mixture**

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 1A H360 May damage fertility or the unborn child.

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

GHS08

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

lead

**Hazard statements**

H351 Suspected of causing cancer.

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H360 May damage fertility or the unborn child.

**Precautionary statements**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- 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.

**Other hazards**

**Results of PBT and vPvB assessment**

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

**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Description:** Mixture

**Dangerous components:**

7440-31-5	tin	40–70%
7439-92-1	lead	30–60%
7440-22-4	silver	0–3%

**SVHC**

7439-92-1	lead
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**Additional information:** For the wording of the listed hazard phrases refer to section 16.

**4 First-aid measures**

**Description of first aid measures**

**After inhalation:**

Supply fresh air or oxygen; call for doctor.  
Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.

**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.

**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** No further relevant information available.

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**Advice for firefighters**

**Protective equipment:** No special measures required.

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.

**Environmental precautions:** No special measures required.

**Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

**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**

**Handling:**

**Precautions for safe handling** 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.

**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 item 7.

**Control parameters**

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

**7440-31-5 tin**

PEL (USA) Long-term value: 2 mg/m<sup>3</sup>  
metal

REL (USA) Long-term value: 2 mg/m<sup>3</sup>

TLV (USA) Long-term value: 2 mg/m<sup>3</sup>  
metal

**7439-92-1 lead**

PEL (USA) Long-term value: 0.05\* mg/m<sup>3</sup>  
\*see 29 CFR 1910.1025

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REL (USA)	Long-term value: 0.05* mg/m <sup>3</sup> *8-hr TWA ;See PocketGuide App.C
TLV (USA)	Long-term value: 0.05* mg/m <sup>3</sup> *and inorganic compounds, as Pb; BEI

**7440-22-4 silver**

PEL (USA)	Long-term value: 0.01 mg/m <sup>3</sup>
REL (USA)	Long-term value: 0.01 mg/m <sup>3</sup>
TLV (USA)	Long-term value: 0.1 mg/m <sup>3</sup> metal: dust and fume

**Ingredients with biological limit values:**

**7439-92-1 lead**

BEI (USA)	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
	10 µg/100 ml Medium: blood Time: not critical Parameter: Lead (women of child bearing potential)

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

**Exposure controls** Use only with adequate ventilation.

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

**Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when high concentrations are present.

**Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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.

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**Eye protection:**



Safety glasses

**Body protection:** Protective work clothing

**9 Physical and chemical properties**

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

<b>Form:</b>	Solid in various forms
<b>Color:</b>	Silver grey
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

**pH-value:** Not applicable.

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	1,740 °C (35.140 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not determined.

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

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

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure at 970 °C (1,778 °F):** 1.3 hPa (1 mm Hg)

**Density at 20 °C (68 °F):** 4.37655–12.16897 g/cm<sup>3</sup> (36.52231–101.55005 lbs/gal)

**Bulk density:** 2,793–7,791 kg/m<sup>3</sup>

**Relative density:** Not determined.

**Vapor density:** Not applicable.

**Evaporation rate:** Not applicable.

**Solubility in / Miscibility with**

**Water:** Insoluble.

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:** Not applicable.

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<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b> <b>VOC content:</b>	0.00 %
<b>Solids content:</b> <b>Other information</b>	100.0 % 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:**

**LD/LC50 values that are relevant for classification:**

Oral	LD50	mg/kg (rat)
Dermal	LD50	mg/kg (rat)
Inhalative	LC50/4 h	mg/l (rat)

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** No irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

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

**Carcinogenic categories**

<b>IARC (International Agency for Research on Cancer)</b>		
7439-92-1	lead	2B
<b>NTP (National Toxicology Program)</b>		
7439-92-1	lead	R
<b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		

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**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.

**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.

**Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

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

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**15 Regulatory information**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**Sara**

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

None of the ingredients is listed.

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

7439-92-1 | lead

7440-22-4 | silver

7440-36-0 | antimony

**TSCA (Toxic Substances Control Act): (Substances not listed)**

All ingredients are listed.

**Hazardous Air Pollutants**

7439-92-1 | lead

**Proposition 65**

**Chemicals known to cause cancer:**

7439-92-1 | lead

**Chemicals known to cause reproductive toxicity for females:**

7439-92-1 | lead

**Chemicals known to cause reproductive toxicity for males:**

7439-92-1 | lead

**Chemicals known to cause developmental toxicity:**

7439-92-1 | lead

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

7439-92-1 | lead

B2

7440-22-4 | silver

D

**TLV (Threshold Limit Value established by ACGIH)**

7439-92-1 | lead

A3

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

None of the ingredients is listed.

**National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

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



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**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.

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for the purchaser's use. The data on this Safety Data Sheet should be used only by or under the direction of technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require employees must be trained on how to use the SDS as a source for hazard information.

**Department issuing SDS:** Product Compliance / EHS Department

**Contact:** EHS\_Kester@Kester.com

**Date of preparation / last revision** 02/26/2020 / 1

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

VOC: Volatile Organic Compounds (USA, EU)

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

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

Carc. 2: Carcinogenicity – Category 2

Repr. 1A: Reproductive toxicity – Category 1A