

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/  
EU

Printing date 09.07.2025

Version number 5 (replaces version 4)

Revision: 05.03.2025

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

**1.1 Product identifier****Trade name:** Lead wire, lead pencils, lead ingots, Pb99,9**CAS Number:**

7439-92-1

**EC number:**

231-100-4

**Index number:**

082-014-00-7

**UFI:** Q9J9-U0SJ-P00A-M38G**1.2 Relevant identified uses of the substance or mixture and uses advised against***No further relevant information available.***Application of the substance / the mixture** *Brazing alloy***1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:***Felder GmbH**Im Lipperfeld 11**D-46047 Oberhausen**Tel.: +49 (0)208/ 85035-0**Fax.: +49 (0)208/ 26080**http://www.felder.de**e-mail: info@felder.de***Further information obtainable from:***lab**(mo-thu. 8:00 a.m. - 4:00 p.m./ fr. 8:00 a.m. - 1:00 p.m.)**email: mprobst@felder.de***1.4 Emergency telephone number:***24-hour emergency information:**Giftnotruf Berlin, counselling in German and English**Phone: (030) 30686 700***EuPCS:** PC-TEC-24

## SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008****GHS08 health hazard***Repr. 1A**H360FD May damage fertility. May damage the unborn child.**Lact.**H362 May cause harm to breast-fed children.**STOT RE 1**H372 Causes damage to organs through prolonged or repeated exposure.***GHS09 environment***Aquatic Chronic 1 H410**Very toxic to aquatic life with long lasting effects.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008***The substance is classified and labelled according to the CLP regulation.***Hazard pictograms**

GHS08 GHS09

**Signal word** *Danger***Hazard-determining components of labelling:***lead*

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**Hazard statements***H360FD May damage fertility. May damage the unborn child.**H362 May cause harm to breast-fed children.**H372 Causes damage to organs through prolonged or repeated exposure.**H410 Very toxic to aquatic life with long lasting effects.***Precautionary statements***P260 Do not breathe dust/fume/gas/mist/vapours/spray.**P263 Avoid contact during pregnancy and while nursing.**P264 Wash thoroughly after handling.**P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***Additional information:***Restricted to professional users.***Information concerning particular hazards for human and environment:***Risk of poisoning in case of contact with mucous membranes.***2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***SECTION 3: Composition/information on ingredients****3.1 Substances****CAS No. Description**

7439-92-1 lead

**Identification number(s)****EC number:** 231-100-4**Index number:** 082-014-00-7**M-factor Aquatic Chronic:** 10**SVHC**

7439-92-1 | lead

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:***Take affected persons out into the fresh air.**Keep quiet and cover.***After inhalation:** *Supply fresh air; consult doctor in case of complaints.***After skin contact:***After contact with the molten product, cool rapidly with cold water.**Do not pull solidified product off the skin.**Seek medical treatment.***After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.***After swallowing:***Rinse out mouth and then drink plenty of water.**Seek immediate medical advice.***4.2 Most important symptoms and effects, both acute and delayed***Headache**Gastric or intestinal disorders***4.3 Indication of any immediate medical attention and special treatment needed***No further relevant information available.***SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:***CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.***5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*

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**5.3 Advice for firefighters****Protective equipment:** *Wear self-contained respiratory protective device.***SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures***Wear protective clothing.**Use respiratory protective device against the effects of fumes/dust/aerosol.***6.2 Environmental precautions:***Do not allow product to reach sewage system or any water course.**Do not allow to enter sewers/ surface or ground water.***6.3 Methods and material for containment and cleaning up:** *Allow to solidify. Pick up mechanically.***6.4 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.***SECTION 7: Handling and storage****7.1 Precautions for safe handling***Extractors are required on all machines used for thermal processing or splinter removal processes.**Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.**Ensure good ventilation/exhaustion at the workplace.**Extractor required at the object.***Information about fire - and explosion protection:** *Keep respiratory protective device available.***7.2 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:***Store away from foodstuffs.**Do not store together with oxidising and acidic materials.**Do not store together with alkalis (caustic solutions).***Further information about storage conditions:** *Keep container tightly sealed.***Storage class:** 6.1 D**7.3 Specific end use(s)** *No further relevant information available.***SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****7439-92-1 lead**

|                 |   |
|-----------------|---|
| AGW (EU)        | Long-term value: 0.15 mg/m <sup>3</sup>                       |
| BOELV (EU)      | Long-term value: 0.15 mg/m <sup>3</sup><br>as Pb              |
| WES (Australia) | Long-term value: 0.05 mg/m <sup>3</sup>                       |
| MAK (Germany)   | Long-term value: 0.004E mg/m <sup>3</sup><br>vgl. Abschn. XII |
| OEL (Ireland)   | Long-term value: 0.15 mg/m <sup>3</sup><br>Repr1A, BOELV      |

**Regulatory information**

BOELV (EU): EU 2022/431

WES (Australia): Workplace exposure standards for airborne contaminants

MAK (Germany): MAK- und BAT-Liste

OEL (Ireland): 2024 CoP for the Safety, Health and Welfare at Work

**recommended monitoring procedures in accordance with 2020/878/EU no. 8.1.2:**

7439-92-1 lead: NIOSH 7702(E), OSHA 1006(E), OSHA ID-206(E)

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| Ingredients with biological limit values: |  |
|---|--|
| <b>7439-92-1 lead</b>                     |  |
| BAT (EU)                                  | 70 µg/dl<br>blood<br>lead  |
| BGW (Germany)                             | 150 µg/l<br>Untersuchungsmaterial: Vollblut<br>Probennahmezeitpunkt: keine Beschränkung<br>Parameter: Blei |

**Regulatory information BGW (Germany): TRGS 903****Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see section 7.**Appropriate engineering controls:**

Ensure adequate ventilation.

Remove the fumes by means of suitable suction devices.

**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

Pregnant women should strictly avoid inhalation or skin contact.

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.

**Respiratory protection:** Filter P2**Hand protection**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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.

Schutzhandschuhe

**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.

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.

**Eyeface protection**

Tightly sealed goggles

**Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information**

|   |                           |
|---|---------------------------|
| <b>Colour:</b>  | Grey                      |
| <b>Odour:</b>   | Recognisable              |
| <b>Odour threshold:</b>   | Not determined.           |
| <b>Melting point/freezing point:</b>                            | 326 °C                    |
| <b>Boiling point or initial boiling point and boiling range</b> | 1740 °C                   |
| <b>Flammability</b>   | Product is not flammable. |
| <b>Lower and upper explosion limit</b>                          |                           |
| <b>Lower:</b>   | Not determined.           |
| <b>Upper:</b>   | Not determined.           |
| <b>Flash point:</b>   | Not applicable.           |
| <b>Decomposition temperature:</b>                               | Not determined.           |
| <b>pH</b>   | Not applicable.           |
| <b>Viscosity:</b>   |                           |
| <b>Kinematic viscosity</b>                                      | Not applicable.           |
| <b>Dynamic:</b>   | Not applicable.           |

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**Solubility**

|   |                              |
|---|------------------------------|
| water:  | <i>Insoluble.</i>            |
| Partition coefficient n-octanol/water (log value) | <i>Not determined.</i>       |
| Vapour pressure:                                  | <i>Not applicable.</i>       |
| Density and/or relative density                   |                              |
| Density at 20 °C:                                 | <i>11.4 g/cm<sup>3</sup></i> |
| Relative density                                  | <i>Not determined.</i>       |
| Vapour density                                    | <i>Not applicable.</i>       |
| Particle characteristics                          | <i>See section 3.</i>        |

**9.2 Other information****Appearance:**Form: *Solid in various forms***Important information on protection of health and environment, and on safety.****Ignition temperature:***Not determined.***Explosive properties:***Product does not present an explosion hazard.***Solvent content:****Organic solvents:***0.0 %***VOC (EC)***0.00 %***Solids content:***100.0 %***Change in condition****Evaporation rate***Not applicable.***Information with regard to physical hazard classes**

|   |             |
|---|-------------|
| Explosives  | <i>Void</i> |
| Flammable gases   | <i>Void</i> |
| Aerosols  | <i>Void</i> |
| Oxidising gases   | <i>Void</i> |
| Gases under pressure  | <i>Void</i> |
| Flammable liquids   | <i>Void</i> |
| Flammable solids  | <i>Void</i> |
| Self-reactive substances and mixtures                                     | <i>Void</i> |
| Pyrophoric liquids  | <i>Void</i> |
| Pyrophoric solids   | <i>Void</i> |
| Self-heating substances and mixtures                                      | <i>Void</i> |
| Substances and mixtures, which emit flammable gases in contact with water | <i>Void</i> |
| Oxidising liquids   | <i>Void</i> |
| Oxidising solids  | <i>Void</i> |
| Organic peroxides   | <i>Void</i> |
| Corrosive to metals   | <i>Void</i> |
| Desensitised explosives   | <i>Void</i> |

**SECTION 10: Stability and reactivity****10.1 Reactivity** *No further relevant information available.***10.3 Possibility of hazardous reactions***Toxic fumes may be released if heated above the decomposition point.**Reacts with acids, alkalis and oxidising agents.***10.4 Conditions to avoid** *No further relevant information available.***10.5 Incompatible materials:** *No further relevant information available.***10.6 Hazardous decomposition products:***Toxic metal oxide smoke**Leadoxide vapour***SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** *Based on available data, the classification criteria are not met.***Primary irritant effect:****Skin corrosion/irritation** *Based on available data, the classification criteria are not met.***Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*

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**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity**

May damage fertility. May damage the unborn child.

May cause harm to breast-fed children.

**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Based on available data, the classification criteria are not met.**11.2 Information on other hazards****Endocrine disrupting properties**

Substance is not listed.

**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

**12.7 Other adverse effects****Additional ecological information:****General notes:**

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation** Contact manufacturer for recycling information.**European waste catalogue**

17 04 03: lead

HP 5: Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 10: Toxic for reproduction

spool:

15 01 02: plastic packaging

packaging:

15 01 01: paper and cardboard packaging

**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN number or ID number****ADR, IMDG, IATA**

UN3077

**14.2 UN proper shipping name****ADR**UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S.  
(LEAD)**IMDG, IATA**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (lead)

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**14.3 Transport hazard class(es)**

ADR, IMDG, IATA



|   |  |
|---|--|
| <b>Class</b>  | 9 Miscellaneous dangerous substances and articles.                     |
| <b>Label</b>  | 9  |
| <b>14.4 Packing group</b>   |  |
| ADR, IMDG, IATA   | III  |
| <b>14.5 Environmental hazards:</b>                                  |  |
| Marine pollutant:   | No   |
| Special marking (ADR):  | Symbol (fish and tree)   |
| Special marking (IATA):   | Symbol (fish and tree)   |
| <b>14.6 Special precautions for user</b>                            | Warning: Miscellaneous dangerous substances and articles.              |
| <b>Hazard identification number (Kemler code):</b>                  | 90   |
| <b>EMS Number:</b>  | F-A, S-F   |
| <b>Stowage Category</b>   | A  |
| <b>Stowage Code</b>   | SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9. |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b> | Not applicable.  |

**Transport/Additional information:****ADR**

|                          |  |
|--------------------------|--|
| Limited quantities (LQ)  | 5 kg   |
| Excepted quantities (EQ) | Code: E1<br>Maximum net quantity per inner packaging: 30 g<br>Maximum net quantity per outer packaging: 1000 g |
| Transport category       | 3  |
| Tunnel restriction code  | (-)  |
| Remarks:                 | Special regulation SV 375 (not subject to ADR, if inner packaging maximum 5kg/5liter)                          |

**IMDG**

|                          |  |
|--------------------------|--|
| Limited quantities (LQ)  | 5 kg   |
| Excepted quantities (EQ) | Code: E1<br>Maximum net quantity per inner packaging: 30 g<br>Maximum net quantity per outer packaging: 1000 g |
| UN "Model Regulation":   | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.<br>(LEAD), 9, III                                   |

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU**

Named dangerous substances - ANNEX I Substance is not listed.

Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

REGULATION (EU) 2019/1021 on persistent organic pollutants (POP) None of the ingredients are included.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 30, 63, 72

**Regulation (EU) No 649/2012**

Unterkatogerie: i(2); Beschränkung: sr

**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

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**REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))***Substance is not listed.***Annex II - REPORTABLE EXPLOSIVES PRECURSORS***Substance is not listed.***Regulation (EC) No 273/2004 on drug precursors***Substance is not listed.***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***Substance is not listed.***National regulations:****Additional classification according to Decree on Hazardous Materials, Annex II:***Can cause cancer if present as respirable dust.***Information about limitation of use:***Employment restrictions concerning pregnant and lactating women must be observed.**Employment restrictions concerning women of child-bearing age must be observed.**Employment restrictions concerning juveniles must be observed.***Waterhazard class:** *Water hazard class 2 (Self-assessment): hazardous for water.***Other regulations, limitations and prohibitive regulations****Substances of very high concern (SVHC) according to REACH, Article 57**7439-92-1 | *lead***15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 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.***Reasons for changes:**

27.08.2018: section 3, 13, 15

10.06.2020: section 1, 2, 13

08.12.2022: section 1, 15, 16

05.03.2025: section 1, 8, 14, 16 (21.ATP)

**Information referred to in Annex I, point 1.3.4.2 of Regulation 1272/2008/EC:****Recommended restriction of use** *For commercial users only***Contact:** *Dr. M. Probst***Version number of previous version: 4****Abbreviations and acronyms:***RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**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**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Repr. 1A: Reproductive toxicity – Category 1A**STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1***Safety data sheet SD3451**