

# Safety data sheet

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

Printing date 06.02.2026

Version number 5 (replaces version 4)

Revision: 03.12.2025

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

**1.1 Product identifier****Trade name:** bearing metal **PbSb14Sn9CuAs****UFI:** KFM9-H01G-A00P-5MU3**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**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

## 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 product is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS08 GHS09

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

lead

**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.

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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.

**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable

vPvB: Not applicable

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures**

Description: Mixture: consisting of the following components.

**Dangerous components:**

CAS: 7439-92-1 EINECS: 231-100-4 Index number: 082-014-00-7 Reg.nr.: 01-2119513221-59	lead ⚠ Repr. 1A, H360FD; Lact., H362; STOT RE 1, H372 ⚠ Aquatic Chronic 1, H410 (M=10)	50-100%
CAS: 7440-50-8 EINECS: 231-159-6 Index number: 029-026-00-0 Reg.nr.: 01-2119480154-42	copper ⚠ Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1)	0.8-1.2%
CAS: 7440-43-9 EINECS: 231-152-8 Index number: 048-002-00-0 Reg.nr.: <1t/year	cadmium ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.3-0.7%
CAS: 7440-38-2 EINECS: 231-148-6 Index number: 033-001-00-X	arsenic ⚠ Acute Tox. 3, H301; Acute Tox. 3, H331 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.3-0.8%
CAS: 7440-36-0 EINECS: 231-146-5 Reg.nr.: 01-2119475609-24	antimony substance with a Community workplace exposure limit	13-15%
CAS: 7440-31-5 EINECS: 231-141-8 Reg.nr.: 01-2119486474-28	tin substance with a Community workplace exposure limit	8-10%
<b>SVHC</b>		
7439-92-1	lead	
7440-43-9	cadmium	

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

## SECTION 4: First aid measures

**4.1 Description of first aid measures**

After inhalation: 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.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.**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: Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture** In case of fire, the following can be released:

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**5.3 Advice for firefighters****Protective equipment:** *Do not inhale explosion gases or combustion gases.***SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures***Use respiratory protective device against the effects of fumes/dust/aerosol.***6.2 Environmental precautions:***Inform respective authorities in case of seepage into water course or sewage system.**Do not allow to enter sewers/ surface or ground water.***6.3 Methods and material for containment and cleaning up:***Dispose contaminated material as waste according to section 13.***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.***Information about fire - and explosion protection:** *No special measures required.***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.***Further information about storage conditions:** *Store in dry conditions.***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> 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> vgl.Abschn.XII
OEL (Ireland)	Long-term value: 0.15 mg/m <sup>3</sup> Repr1A, BOELV

**7440-36-0 antimony**

WES (Australia)	Long-term value: 0.5 mg/m <sup>3</sup> as Sb
MAK (Germany)	vgl.Abschn.XII
WEL (Great Britain)	Long-term value: 0.5 mg/m <sup>3</sup> as Sb
OEL (Ireland)	Long-term value: 0.5 mg/m <sup>3</sup> as Sb

**7440-31-5 tin**

WES (Australia)	Long-term value: 2 mg/m <sup>3</sup>
MAK (Germany)	vgl.Abschn.IIb
OEL (Ireland)	Short-term value: 0.2** mg/m <sup>3</sup> Long-term value: 2* 0.1** mg/m <sup>3</sup> IOELV,*metal, oxide, inorg.compds.,**org. compds.

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<b>7440-50-8 copper</b>	
WES (Australia)	Long-term value: 1* 0.2** mg/m <sup>3</sup> *dust & mists (as Cu) **fume
AGW (Germany)	Long-term value: 0.045 (A) 0.200 (E) mg/m <sup>3</sup> 8 (II) (A) 4 (II) (E); AGS, 10, als Cu
WEL (Great Britain)	Short-term value: 2** mg/m <sup>3</sup> Long-term value: 0.2* 1** mg/m <sup>3</sup> *fume **dusts and mists (as Cu)
OEL (Ireland)	Long-term value: 0.2* 1** mg/m <sup>3</sup> *fume **dusts and mists
<b>7440-38-2 arsenic</b>	
WES (Australia)	Long-term value: 0.05 mg/m <sup>3</sup> Note (g); as As
MAK (Germany)	vgl. Abschn. XII
WEL (Great Britain)	Long-term value: 0.1 mg/m <sup>3</sup> as As; Carc

**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

WEL (Great Britain): EH40/2020

AGW (Germany): TRGS 900

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

7440-50-8 copper: BIA 7755 (D), NIOSH 7301(E), MétroPol Fiche 003(F), MTA/MA-025/A92(ESP)

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

7440-31-5 tin: NIOSH 7300, 7301, 7303(E), OSHA ID-121, ISO 15202(E,F), MTA/MA-025/A92(ESP)

7440-36-0 antimony: NIOSH 7300, 7301, 7303(E), OSHA ID-121(E); BIA Nr. 6175 Meßverfahren 1, 2(D)

**Ingredients with biological limit values:**

<b>7439-92-1 lead</b>	
BAT (EU)	70 µg/dl blood lead
BGW (Germany)	150 µg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: keine Beschränkung 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**

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:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

**Respiratory protection:** Filter P3**Hand protection**

Leather gloves



Protective gloves

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

**Material of gloves** Recommended thickness of the material: ≥ - mm**Penetration time of glove material** Value for the permeation: Level ≤ -

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**Eye/face 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**

Colour:	Grey
Odour:	Odourless
Odour threshold:	Not determined
Melting point/freezing point:	240-420 °C
Boiling point or initial boiling point and boiling range	Undetermined
Flammability	Not determined
Lower and upper explosion limit	
Lower:	Not determined
Upper:	Not determined
Flash point:	Not applicable
Decomposition temperature:	Not determined
pH	Not applicable
Viscosity:	
Kinematic viscosity	Not applicable
Dynamic:	Not applicable
Solubility	
water:	Insoluble.
Partition coefficient n-octanol/water (log value)	Not determined
Vapour pressure:	Not applicable
Density and/or relative density	
Density at 20 °C:	9.7 g/cm <sup>3</sup>
Relative density	Not determined
Vapour density	Not applicable
Particle characteristics	See section 3.

**9.2 Other information**

Appearance:	
Form:	Solid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Solvent content:	
VOC (EC)	0,00 %
Solids content:	100.0 %
Change in condition	
Evaporation rate	Not applicable.

**Information with regard to physical hazard classes**

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void

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<b>Oxidising solids</b>	Void
<b>Organic peroxides</b>	Void
<b>Corrosive to metals</b>	Void
<b>Desensitised explosives</b>	Void

## SECTION 10: Stability and reactivity

- 10.1 Reactivity** *No further relevant information available.*
- 10.2 Chemical stability**  
**Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- 10.3 Possibility of hazardous reactions** *No dangerous reactions known.*
- 10.4 Conditions to avoid** *No further relevant information available.*
- 10.5 Incompatible materials:** *No further relevant information available.*
- 10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

## 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.*

#### LD/LC50 values relevant for classification:

##### ATE (Acute Toxicity Estimates)

Oral	LD50	190,750 mg/kg (rat)
Inhalative	LC50/4 h	125 mg/l

#### 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.*
- 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

*None of the ingredients is listed.*

## SECTION 12: Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** *No further relevant information available.*

#### chronic aquatic toxicity:

*Classification conditions Copper (029-024-00-X) Environmental hazard not fulfilled.  
Classification conditions Copper (029-026-00-0) specific surface area < 0,67 mm<sup>2</sup>/mg.*

**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

**Remark:** *Harmful to fish*

#### Additional ecological information:

##### General notes:

*Harmful to aquatic organisms*

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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.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging: void.

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

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (lead)

IMDG, IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (lead)

### 14.3 Transport hazard class(es)

ADR, IMDG, IATA



Class

9 Miscellaneous dangerous substances and articles.

Label

9

### 14.4 Packing group

ADR, IMDG, IATA

III

### 14.5 Environmental hazards:

Marine pollutant:

No

Symbol (fish and tree)

Symbol (fish and tree)

Symbol (fish and tree)

Special marking (ADR):

Special marking (IATA):

### 14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles.

Hazard identification number (Kemler code):

90

EMS Number:

F-A,S-F

Stowage Category

A

Stowage Code

SW23 When transported in BK3 bulk container, see 7.6.2.12 and  
7.7.3.9.

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable

### Transport/Additional information:

ADR

Limited quantities (LQ)

5 kg

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 g

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)

Suspension of hazardous goods classification for solid lead (no  
environmental hazard) M366 'Environmentally hazardous metal  
alloys containing lead' (<https://unece.org/transport/road-transport/adr-multilateral-agreements>).

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**IMDG****Limited quantities (LQ)**

5 kg

**Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

**UN "Model Regulation":**UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (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** *None of the ingredients is listed.***Seveso category E1** *Hazardous to the Aquatic Environment***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: 23, 27, 30, 63, 72***Regulation (EU) No 649/2012**

7440-38-2 arsenic

Annex I Part 1

7439-92-1 lead

Annex I Part 1

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

7439-92-1 lead

**REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))***None of the ingredients is listed.***Annex II - REPORTABLE EXPLOSIVES PRECURSORS***None of the ingredients is listed.***Regulation (EC) No 273/2004 on drug precursors***None of the ingredients is listed.***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***None of the ingredients is listed.***National regulations:****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**

7440-43-9 cadmium

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:**

07.11.2018: section 2, 3, 15 SVHC

08.03.2024: section 1, 2, 11, 12, 15, 16

27.02.2025: section 1, 2, 3, 8, 13, 14, 15, 16 (21. ATP)

03.12.2025: section 14

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Information referred to in Annex I, point 1.3.4.2 of Regulation 1272/2008/EC:

**Relevant phrases***H301 Toxic if swallowed.**H331 Toxic if inhaled.**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.**H400 Very toxic to aquatic life.**H410 Very toxic to aquatic life with long lasting effects.***Recommended restriction of use** *For commercial users only***Contact:** *Dr. M. Probst***Version number of previous version:** 4**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**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**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**ATE: Acute toxicity estimate values**Acute Tox. 3: Acute toxicity – Category 3**Repr. 1A: Reproductive toxicity – Category 1A**STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1***Safety data sheet SD3476**