

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

Printing date 20.03.2024

Version number 2

Revision: 20.03.2024

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

1.1 Product identifier

Trade name: Weichlotlegierung BiPbSn, SnPbBi

Soft solder BiPbSn, SnPbBi

Bi52,5Pb32Sn15,5, Bi52Pb32Sn16, Bi52Pb30Sn18

Bi50Sn25Pb25, Bi50Pb31,7Sn18,7

Sn50Pb40Bi10



UFI:

Bi52,5Pb32Sn15,5: 1AP9-N077-200K-Q4NH

Bi52Pb32Sn16: 1AP9-N077-200K-Q4NH

Bi52Pb30Sn18: V9V3-A3K7-V00Y-CRMP

Bi50Pb31Sn19: V9V3-A3K7-V00Y-CRMP

Bi50Pb31,7Sn18,7: V9V3-A3K7-V00Y-CRMP

Bi50Pb28Sn22: QFV3-A3Y1-G00Y-PEST

Sn50Pb40Bi10: 9JV3-U3NE-T00F-ASCV

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: *Tel: +49(0)208/85035-29*

Information which should have been included on the identification label.

(Annex I No. 1.3.4 REGULATION (EC) No 1272/2008)

Metals in massive form, alloys, mixtures containing polymers and mixtures containing elastomers do not require a label according to this Annex, if they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market, although classified as hazardous in accordance with the criteria of this Annex.

see chapter 2.2

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-H362 *May damage fertility. May damage the unborn child. May cause harm to breast-fed children.*

STOT RE 1 H372 *Causes damage to organs through prolonged or repeated exposure.*

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified according to the CLP regulation. A label is not required (CLP Annex I, 1.3.4.1.)
The information according to CLP Annex I, 1.3.4.2. will be announced in section 2.2.

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Hazard pictograms

GHS08

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

lead

Hazard statements

H360FD-H362 May damage fertility. May damage the unborn child. May cause harm to breast-fed children.

H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dusts or mists.

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:

Safety data sheet available on request.

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-H362; STOT RE 1, H372	<50%
CAS: 7440-31-5 EINECS: 231-141-8 Reg.nr.: 01-2119486474-28	tin	substance with a Community workplace exposure limit	<25%

SVHC

7439-92-1 lead

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****General information:**

Take affected persons out into the fresh air.

No special measures required.

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:**

Induce vomiting and call for medical help.

Rinse out mouth and then drink plenty of water.

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

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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:

CO₂, 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.

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.

Wear protective clothing.

6.2 Environmental precautions:

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.

Provide suction extractors if dust is formed.

Any unavoidable deposit of dust must be regularly removed.

Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.

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 ³
BOELV (EU)	Long-term value: 0.15 mg/m ³ as Pb
MAK (Germany)	Long-term value: 0.004E mg/m ³ vgl.Abschn.XII
OEL (Ireland)	Long-term value: 0.15 mg/m ³ Repr1A, BOELV

7440-31-5 tin

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

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Regulatory information

BOELV (EU): EU 2022/431

MAK (Germany): MAK- und BAT-Liste

OEL (Ireland): 2021 CoP for the Safety, Health and Welfare at Work

Ingredients with biological limit values:	
7439-92-1 lead	
BAT (EU)	70 µg/dl blood lead
BGW (Germany)	150 µg/l Untersuchungsmaterial: Vollblut Probennahmzeitpunkt: 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:**

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat, drink, smoke or sniff while working.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter P2

Hand protection

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

Material of gloves

Leather 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. As the product is a preparation of several substances, the resistance of the glove material cannot 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.

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.

Eye/face protection Safety glasses**Body protection:** Protective work clothing**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Colour:**

Silver grey

Odour:

Odourless

Odour threshold:

Not determined.

Melting point/freezing point:

Not applicable

Boiling point or initial boiling point and boiling range

Undetermined.

Flammability

Not determined.

Lower and upper explosion limit

Not determined.

Lower:

Not determined.

Upper:

Not determined.

Flash point:

Not applicable.

Decomposition temperature:

Not determined.

pH

Not applicable.

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Viscosity:	
Kinematic viscosity	<i>Not applicable.</i>
Dynamic:	<i>Not applicable.</i>
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:	<i>Not determined.</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not applicable.</i>
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:****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.***10.2 Chemical stability****Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.***10.3 Possibility of hazardous reactions***Toxic fumes may be released if heated above the decomposition point.**Reacts with strong acids and alkali.**Reacts with strong oxidising agents.***10.4 Conditions to avoid** *No further relevant information available.***10.5 Incompatible materials:** *No further relevant information available.*

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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.

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.

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 For information on endocrine disrupting properties see section 11.

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 09*: metal waste contaminated with hazardous substances

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

HP 10: Toxic for reproduction

Spule:

15 01 02: plastic packaging

Umverpackung:

15 01 01: paper and cardboard packaging

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Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information**

14.1 UN number or ID number	
ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Void
14.4 Packing group	
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
UN "Model Regulation":	Void

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.

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

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:**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**

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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: 20.03.2024: section 1, 2, 11, 12, 15, 16

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

Relevant phrases

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.

Contact: Dr. M. Probst

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

ELINCS: European List of Notified 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

Safety data sheet SD3498

EU —