

Safety data sheet

according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 12.07.2018

Version number 6

Revision: 12.07.2018

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

1.1 Product identifier

Trade name: ISO-Cream "EL3201" SnPbAg, SnPb
Sn62Pb36Ag2, Sn63P37E, Sn60Pb40E

**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

Soldering flux

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 hr. emergency information:

Poison emergency call Berlin

"Giftnotruf Berlin"

Tel.: 0049-30-30686 790

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.



GHS09 environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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

GHS07 GHS08 GHS09

Signal word *Danger*

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Hazard-determining components of labelling:

lead

Rosin

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H317 May cause an allergic skin reaction.

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.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dusts or mists.

P263 Avoid contact during pregnancy and while nursing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

Restricted to professional users.

Labelling of packages where the contents do not exceed 125 ml**Hazard pictograms**

GHS07 GHS08 GHS09

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

lead

Rosin

Hazard statements

H317 May cause an allergic skin reaction.

H360FD May damage fertility. May damage the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures****Description:** Mixture: consisting of the following components.

Dangerous components:		
CAS: 7439-92-1 EINECS: 231-100-4 Reg.nr.: 01-2119513221-59	lead ⚠ Repr. 1A, H360FD-H362; STOT RE 1, H372; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	<50%
CAS: 8050-09-7 EINECS: 232-475-7 Reg.nr.: 01-2119480418-32	Rosin ⚠ Skin Sens. 1, H317	<10%
CAS: 112-34-5 EINECS: 203-961-6 Reg.nr.: 01-2119475104-44	2-(2-butoxyethoxy)ethanol ⚠ Eye Irrit. 2, H319	<5%
CAS: 7440-22-4 EINECS: 231-131-3 Reg.nr.: 01-2119555669-21	silver substance with a Community workplace exposure limit	<2%

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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.**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:***After contact with the molten product, cool rapidly with cold water.**Do not pull solidified product off the skin.**Seek medical treatment.**Immediately wash with water and soap and rinse thoroughly.***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.**Call for a doctor immediately.***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:** *CO₂, powder or water spray. Fight larger fire with 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.**Mouth respiratory protective device.*

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:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).**Dispose contaminated material as waste according to item 13.**Ensure adequate ventilation.***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.**Ensure good ventilation/exhaustion at the workplace.**Open and handle receptacle with care.**Prevent formation of aerosols.***Information about fire - and explosion protection:** *Keep respiratory protective device available.*

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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 under lock and key and with access restricted to technical experts or their assistants only.

Protect from frost.

Prevent from drying out.

Keep container tightly sealed.

Storage class: 6.1 C

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

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

7440-31-5 tin

MAK (Germany) vgl. Abschn. IIb

7439-92-1 lead

AGW (EU) Long-term value: 0.15 mg/m³

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

MAK (Germany) vgl. Abschn. XII

8050-09-7 Rosin

MAK (Germany) vgl. Abschn. IV

112-34-5 2-(2-butoxyethoxy)ethanol

IOELV (EU) Short-term value: 101.2 mg/m³, 15 ppm

Long-term value: 67.5 mg/m³, 10 ppm

AGW (Germany) Long-term value: 67 mg/m³, 10 ppm
1.5(l); EU, DFG, Y, 11

7440-22-4 silver

IOELV (EU) Long-term value: 0.1 mg/m³

AGW (Germany) Long-term value: 0.1 E mg/m³
8(II); DFG, EU

Regulatory information

MAK (Germany): MAK- und BAT-Liste

BOELV (EU): 98/24/EG

IOELV (EU): (EU) 2017/164

AGW (Germany): TRGS 900

recommended monitoring procedures in accordance with 453/2010/EU no. 8.1.2:

112-34-5 2-(2-butoxyethoxy)ethanol: BIA 6450(D), OSHA PV 2095(E)

7440-22-4 silver: ISO 15202(F, E), BIA 8600(D), NIOSH 7301(E)

Ingredients with biological limit values:

7439-92-1 lead

BAT (EU) 70 µg/dl
blood
lead

BGW (Germany) 300 µg/l
Untersuchungsmaterial: Vollblut
Probennahmezeitpunkt: keine Beschränkung
Parameter: Blei Frauen < 45 J.

400 µg/l
Untersuchungsmaterial: Vollblut
Probennahmezeitpunkt: keine Beschränkung
Parameter: Blei

Regulatory information BGW (Germany): TRGS 903

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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.

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.

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:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter P3

Protection of hands:



Protective gloves

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

Material of gloves

Butyl rubber, BR

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.

Recommended thickness of the material: ≥ 0.4 mm

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 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

Value for the permeation: Level ≤ 6

Eye protection: *Goggles recommended during refilling*

Body protection: *Protective work clothing*

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	<i>Pasty</i>
Colour:	<i>Grey</i>
Odour:	<i>Characteristic</i>
Odour threshold:	<i>Not determined.</i>
pH-value:	<i>Not determined.</i>

Change in condition

Melting point/freezing point: *Not determined*

Initial boiling point and boiling range: *Undetermined.*

Flash point: *Not applicable.*

Flammability (solid, gas): *Not applicable.*

Decomposition temperature: *Not determined.*

Auto-ignition temperature: *Product is not selfigniting.*

Explosive properties: *Product does not present an explosion hazard.*

Explosion limits:

Lower: *Not determined.*

Upper: *Not determined.*

Vapour pressure: *Not determined.*

Density: *Not determined.*

Relative density *Not determined.*

Vapour density *Not determined.*

Evaporation rate *Not determined.*

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Solubility in / Miscibility with water:

Not miscible or difficult to mix.

Partition coefficient: n-octanol/water:

Not determined.

Viscosity:

Dynamic:

Not determined.

Kinematic:

Not determined.

Solvent content:

Organic solvents:

ca. 4 %

VOC (EC)

0.00 %

9.2 Other information

No further relevant information available.

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 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

Irritant gases/vapours

Leadoxide vapour

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

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

May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

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.*

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.*

Additional ecological information:

General notes:

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

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

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12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

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

European waste catalogue

16 03 03*	inorganic wastes containing hazardous substances
06 04 05*	wastes containing other heavy metals
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6	Acute Toxicity
HP 10	Toxic for reproduction
HP 14	Ecotoxic

Uncleaned packaging: 15 01 10*: packaging containing residues of or contaminated by hazardous substances

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Diluted caustic solution.

SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA

UN3077

14.2 UN proper shipping name

ADR

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

IMDG

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

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:

Product contains environmentally hazardous substances:
lead

Marine pollutant:

No

Symbol (fish and tree)

Special marking (ADR):

Symbol (fish and tree)

Special marking (IATA):

Symbol (fish and tree)

14.6 Special precautions for user

Danger code (Kemler):

Warning: Miscellaneous dangerous substances and articles.

EMS Number:

90

Stowage Category

F-A,S-F

Stowage Code

A

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

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

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

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Tunnel restriction code

E

Remarks:

special provision 375 (these substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR)

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

IATA

Remarks:

special provision A 197

(Air Waybill: „not restricted“)

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 (EC) No 1907/2006 ANNEX XVII *Conditions of restriction: 55, 63, 30*

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 1 (Self-assessment): slightly 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:

23.06.2015: *adaption to regulation 453/2010/EC appendix 2*08.10.2015: *chapter 1, 8, 15 adaption to regulation 830/2015/EU, 18/2012/EU*08.11.2016: *chapter 14*30.01.2018: *chapter 2 adaption to 9th ATP*12.07.2018: *chapter 3, 15 SVHC*

Relevant phrases

H302 *Harmful if swallowed.*H317 *May cause an allergic skin reaction.*H319 *Causes serious eye irritation.*H332 *Harmful 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.*H410 *Very toxic to aquatic life with long lasting effects.*Recommended restriction of use *For commercial use only.*

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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 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

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

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

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

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