

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

Printing date 25.06.2024

Version number 7

Revision: 25.06.2024

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

1.1 Product identifier

Trade name: Soft solder alloy

Weichlotlegierung Sn100-403C, Sn100-403Ce, Sn100-403CS,
 Sn100-403CL, Sn100-403CLS, Sn100-403CS(+), Sn100CeS(+)
 SnCu07NiGe0,0055; SnCu07NiGe0,01; SnCu0,7Ni0,05Ge0,025

UFI: not applicable.



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

EuPCs: PC-TEC-24

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The product is not classified, according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

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: 7440-31-5 EINECS: 231-141-8 Reg.nr.: 01-2119486474-28	tin substance with a Community workplace exposure limit	50-100%
CAS: 7440-50-8 EINECS: 231-159-6 Index number: 029-024-00-X Reg.nr.: 01-2119480154-42	copper ☒ Aquatic Chronic 2, H411	<1%
CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7 Reg.nr.: 01-2119438727-29	nickel (massive) ☒ Carc. 2, H351; STOT RE 1, H372; ☒ Skin Sens. 1, H317	<0.06%

(Contd. on page 2)

EU

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

Printing date 25.06.2024

Version number 7

Revision: 25.06.2024

Trade name: Soft solder alloy

Weichlotlegierung Sn100-403C, Sn100-403Ce, Sn100-403CS,
 Sn100-403CL, Sn100-403CLS, Sn100-403CS(+), Sn100CeS(+)
 SnCu07NiGe0,0055; SnCu07NiGe0,01; SnCu0,7Ni0,05Ge0,025

(Contd. of page 1)

CAS: 7440-56-4	germanium	<0.007%
EINECS: 231-164-3		
Reg.nr.: 01-2120761271-61	◆ Repr. 2, H361; STOT RE 2, H373; Aquatic Chronic 3, H412	

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.

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. If symptoms persist, consult a doctor.

After swallowing: 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.

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.

For safety reasons unsuitable extinguishing agents: Water with full jet

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

Not required.

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

Ensure that suitable extractors are available on processing machines

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: Not required.

Further information about storage conditions: Store in dry conditions.

Storage class: 13

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

(Contd. on page 3)

EU —

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

Printing date 25.06.2024

Version number 7

Revision: 25.06.2024

Trade name: Soft solder alloy

Weichlotlegierung Sn100-403C, Sn100-403Ce, Sn100-403CS,
 Sn100-403CL, Sn100-403CLS, Sn100-403CS(+), Sn100CeS(+)
 SnCu07NiGe0,0055; SnCu07NiGe0,01; SnCu0,7Ni0,05Ge0,025

(Contd. of page 2)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

7440-31-5 tin

MAK (Germany) | vgl. Abschn. IIb

7440-50-8 copper

MAK (Germany) | Long-term value: 0.01 A mg/m³
 als Cu

Regulatory information MAK (Germany): MAK- und BAT-Liste

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)

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:

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter P2

Hand protection Heat resistant gloves

Material of gloves Recommended thickness of the material: ≥ - mm

Penetration time of glove material Value for the permeation: Level ≤ -

As protection from splashes gloves made of the following materials are suitable: Nitrile rubber, NBR

Eye/face protection in cases of application: protective goggles

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Colour:	Silver-coloured
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	227 °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:	7.265 g/cm ³
Relative density	Not determined.

(Contd. on page 4)

EU

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

Printing date 25.06.2024

Version number 7

Revision: 25.06.2024

Trade name: Soft solder alloy

Weichlotlegierung Sn100-403C, Sn100-403Ce, Sn100-403CS,
 Sn100-403CL, Sn100-403CLS, Sn100-403CS(+), Sn100CeS(+)
 SnCu07NiGe0,0055; SnCu07NiGe0,01; SnCu0,7Ni0,05Ge0,025

(Contd. of page 3)

Vapour density

Not applicable.

Particle characteristics

See section 3.

9.2 Other information**Appearance:****Form:**

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**

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

Oxidising solids

Void

Organic peroxides

Void

Corrosive to metals

Void

Desensitised explosives

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.

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

Mixture was subjected to an investigation according to DIN 1811 - nickel permeability.

Sample number: 2016-03780

Result: <0.50 µg / cm² / week

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

(Contd. on page 5)

EU

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

Printing date 25.06.2024

Version number 7

Revision: 25.06.2024

Trade name: Soft solder alloy

Weichlotlegierung Sn100-403C, Sn100-403Ce, Sn100-403CS,
 Sn100-403CL, Sn100-403CLS, Sn100-403CS(+), Sn100CeS(+)
 SnCu07NiGe0,0055; SnCu07NiGe0,01; SnCu0,7Ni0,05Ge0,025

(Contd. of page 4)

Reproductive toxicity Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**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***The product does not contain substances with endocrine disrupting properties.***12.7 Other adverse effects****Additional ecological information:****General notes:***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.***SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation** Contact manufacturer for recycling information.**European waste catalogue**

17 04 06: tin

spool:

15 01 02: plastic packaging

packaging:

15 01 01: paper and cardboard packaging

Uncleaned packaging: void.**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

(Contd. on page 6)

EU —

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

Printing date 25.06.2024

Version number 7

Revision: 25.06.2024

Trade name: Soft solder alloy

Weichlotlegierung Sn100-403C, Sn100-403Ce, Sn100-403CS,
 Sn100-403CL, Sn100-403CLS, Sn100-403CS(+), Sn100CeS(+)
 SnCu07NiGe0,0055; SnCu07NiGe0,01; SnCu0,7Ni0,05Ge0,025

(Contd. of page 5)

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.**None of the ingredients is listed.***REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)** *None of the ingredients are included.***DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II***None of the ingredients is listed.***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 juveniles must be observed.**Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**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:

23.02.2016: adaption to Regulation 453/2010/EG, 830/2015/EU, 2012/18/EU

31.01.2018: section 9, 13

02.08.2019: section 1 new product description

22.04.2021: section 1, 3, 15, 16

06.07.2021: section 1, 11

25.06.2024: section 3, 15

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

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Contact: Dr. M. Probst**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)

(Contd. on page 7)

EU

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

Printing date 25.06.2024

Version number 7

Revision: 25.06.2024

Trade name: Soft solder alloy

Weichlotlegierung Sn100-403C, Sn100-403Ce, Sn100-403CS,
Sn100-403CL, Sn100-403CLS, Sn100-403CS(+), Sn100CeS(+)
SnCu07NiGe0,0055; SnCu07NiGe0,01; SnCu0,7Ni0,05Ge0,025

(Contd. of page 6)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

Safety data sheet SD3304

EU —