Safety data sheet
according to 1907/2006/EC, Article 31 and 2020/878/EU

Printing date 12.09.2022 *Version number 4* *Revision: 12.09.2022*

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

1.1 Product identifier
Trade name: Sn100Ni+ Refill, Sn100Ni+ High-Ge-Refill, Sn100Ni+ Refill-LowGe
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: +49 208 8503529*
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

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: 7440-02-0 *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*	*<0.1%*
CAS: 7440-56-4 *EINECS: 231-164-3* *Reg.nr.: 01-2120761271-61*	*germanium* *Repr. 2, H361; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 2, H411*	*<0.01%*

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.*

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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 medical treatment.
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.
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 *Wear protective clothing.*
6.2 Environmental precautions: *No special measures required.*
6.3 Methods and material for containment and cleaning up: *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: *Store away from foodstuffs.*
Further information about storage conditions: *Store in dry conditions.*
Storage class: *13*
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:	
7440-31-5 tin	
MAK (Germany)	*vgl.Abschn.IIb*
OEL (Ireland)	*Short-term value: 0.2** mg/m³* *Long-term value: 2* 0.1** mg/m³* *IOELV,*metal, oxide, inorg.compds.,**org. compds.*
7440-56-4 germanium	
AGW (Germany)	*Long-term value: 0.850 E mg/m³* *2(II);AGS, 10*

Regulatory information
MAK (Germany): MAK- und BAT-Liste
OEL (Ireland): 2021 CoP for the Safety, Health and Welfare at Work
AGW (Germany): TRGS 900
recommended monitoring procedures in accordance with 2020/878/EU no. 8.1.2:
7440-31-5 tin: NIOSH 7300, 7301, 7303(E), OSHA ID-121, ISO15202(E,F), MTA/MA-025/A92(ESP)

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Additional information: *The lists valid during the making were used as basis.*

8.2 Exposure controls
Appropriate engineering controls *No further data; see item 7.*
Appropriate engineering controls:
Ensure adequate ventilation.
Removing the fumes by suitable suction devices.
Individual protection measures, such as personal protective equipment
General protective and hygienic measures: *Do not eat, drink, smoke or sniff while working.*
Respiratory protection:
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2
Hand protection
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
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.
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.
As protection from splashes gloves made of the following materials are suitable: *Nitrile rubber, NBR*
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-coloured*
Odour:	*Odourless*
Odour threshold:	*Not determined.*
Melting point/freezing point:	*227 °C*
Boiling point or initial boiling point and boiling range	*2620 °C*
Flammability	*Product is not flammable.*
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:	*7.3 g/cm³*
Relative density	*Not determined.*
Bulk density at 20 °C:	*4000 kg/m³*
Vapour density	*Not applicable.*
Particle characteristics	*See item 3.*

9.2 Other information

Appearance:	
Form:	*Solid*
Important information on protection of health and environment, and on safety.	
Auto-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 %*

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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 *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: *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.*
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.*

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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
Not hazardous for water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation *Contact manufacturer for recycling information.*
European waste catalogue
17 04 07: mixed metals

spool:
15 01 02: plastic packaging
overpack:
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, 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:	*Not applicable.*
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 listed.*

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.

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National regulations:

Information about limitation of use: *Employment restrictions concerning juveniles must be observed.*
Waterhazard class: *Generally not 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:
03.12.2018: section 13
06.05.2020: section 1, 11
12.09.2022: section 3, 7, 8, 15, 16
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.
H400 Very toxic to aquatic life.
H411 Toxic 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)
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 Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Safety data sheet *SD3377*