

Safety data sheet

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

Printing date 22.01.2024

Version number 8 (replaces version 7)

Revision: 19.10.2023

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

1.1 Product identifier**Trade name:** ISO-Cream "Clear" lead free NiGe**Sn96,5Ag3Cu0,5; Sn95,75Ag3,5Cu0,75; Sn95,5Ag3,8Cu0,7;****Sn95,5Ag4Cu0,5; Sn96,5Ag3,5; Sn97Cu3;****Sn99Ag0,3Cu0,7, Sn100Ni+, Sn100-403C****UFI:**

Sn96,5Ag3Cu0,5: 7N99-T0C7-E008-RQDR

Sn95,75Ag3,5Cu0,75: 7N99-T0C7-E008-RQDR

Sn95,5Ag3,8Cu0,7: 7N99-T0C7-E008-RQDR

Sn95,5Ag4Cu0,5: 7N99-T0C7-E008-RQDR

Sn96,5Ag3,5: WM30-G3JR-N00E-DTQ0

Sn99Ag0,3Cu0,7: RQ30-0384-X00X-2592

Sn97Cu3: RS30-G3XJ-800E-QGV4

Sn100Ni+: SH30-Y3VC-A00X-QG3X

Sn100-403C: SH30-Y3VC-A00X-QG3X

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

Soldering flux

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

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**

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

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

GHS05

Signal word Danger

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Hazard-determining components of labelling:

2-(2-hexyloxyethoxy)ethanol

Hazard statements

H318 Causes serious eye damage.

Precautionary statements

P280 Wear eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

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

GHS05

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

2-(2-hexyloxyethoxy)ethanol

Hazard statements

H318 Causes serious eye damage.

Precautionary statements

P280 Wear eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

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: 112-59-4 EINECS: 203-988-3 Index number: 603-175-00-7 Reg.nr.: 01-2119945815-28	2-(2-hexyloxyethoxy)ethanol ☞ Eye Dam. 1, H318; ☞ Acute Tox. 4, H312	<10%
CAS: 144413-22-9 ELINCS: 434-230-1 Index number: 607-682-00-4 Reg.nr.: <1t/year	complex mixture of Chinese gum rosin post reacted with acrylic acid Aquatic Chronic 4, H413	<10%
CAS: 7440-22-4 EINECS: 231-131-3 Reg.nr.: 01-2119555669-21	silver substance with a Community workplace exposure limit	0-<5%
CAS: 7440-31-5 EINECS: 231-141-8 Reg.nr.: 01-2119486474-28	tin substance with a Community workplace exposure limit	50-100%

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:** Immediately remove any clothing soiled by the product.**After inhalation:** Supply fresh air; consult doctor in case of complaints.

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After skin contact:*Generally the product does not irritate the skin.**Clean with water and soap. If possible, also wash with polyethylene glycol 400.***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.**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:***CO₂, powder or water spray. Fight larger fire with alcohol resistant foam.**Use fire extinguishing methods suitable to surrounding conditions.***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** *Avoid skin and eye contact***6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.***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 good ventilation/exhaustion at the workplace.***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:***Do not store together with acids.**Store away from foodstuffs.***Further information about storage conditions:***Keep container tightly sealed.**Protect from humidity and water.**Protect from heat and direct sunlight.**Store in a cool place.***Storage class:** 11**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/m³Long-term value: 2* 0.1** mg/m³

IOELV, *metal, oxide, inorg. compds., **org. compds.

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7440-22-4 silver	
IOELV (EU)	Long-term value: 0.1 mg/m ³
AGW (Germany)	Long-term value: 0.1 E mg/m ³ 8(II);DFG, EU
WEL (Great Britain)	Long-term value: 0.1 mg/m ³
OEL (Ireland)	Long-term value: 0.1 mg/m ³ IOELV

Regulatory information

MAK (Germany): MAK- und BAT-Liste

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

IOELV (EU): (EU) 2019/1831

AGW (Germany): TRGS 900

WEL (Great Britain): EH40/2020

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)

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

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.

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:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter P2

Hand protection

Protective gloves

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

Material of gloves

Nitrile rubber, NBR

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: ≥ 0.22 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 16523-1:2015 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 **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Natural rubber, NR

Eye/face protection Safety glasses**Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Colour:	Silver grey
Odour:	Characteristic
Odour threshold:	Not determined.
Boiling point or initial boiling point and boiling range	259 °C
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	140 °C
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not determined.
Particle characteristics	
See section 3.	

9.2 Other information

Appearance:	
Form:	Fluid
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.
Change in condition	
Evaporation rate	Not determined.

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

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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)

Dermal	LD50	25,493 mg/kg (rabbit)
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Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye damage.

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 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 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

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

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*cleaned plastic can:**15 01 02: plastic packaging**overpack:**15 01 01: paper and cardboard packaging***Uncleaned packaging:** *15 01 10*: packaging containing residues of or contaminated by hazardous substances***Recommendation:***Disposal must be made according to official regulations.**Non contaminated packagings may be recycled.***Recommended cleansing agents:***mechanical scratching, clean with alkaline soap solution and subsequent rinsing with ethanol or isopropanol.*

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 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
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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 2 (Self-assessment): hazardous for water.***15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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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:

10/26/2015: Adapting to Regulation 453/2010/EC, 830/2015/EU and 18/2012/EU

10/27/2016: section 1 new alloy

04/09/2018: section 13

02/27/2020: section 1, 13

01/15/2021: section 1, 15, 16

11/30/2021: section 1, 3, 8, 15

27.09.2023: section 3

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

Relevant phrases

H312 Harmful in contact with skin.

H318 Causes serious eye damage.

H413 May cause long lasting harmful effects to aquatic life.

Contact: Dr. M. Probst

Version number of previous version: 7

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

Safety data sheet SD3362