

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 21.08.2018

Version number 3

Revision: 21.08.2018

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

**1.1 Product identifier**

Trade name: **Copper nickel brass hard solder, Cu 773, B-Cu48ZnNi(Si)-890/920**  
**(L-CuNi10Zn42; CU 305)**  
**Neusilberhartlot**



**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 Hard solder**

**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](mailto: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](mailto: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)**

**1.3.4.1**

*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.*

*Otherwise, it would be labeled as follows to:*

*see chapter 16*

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**



*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*

**Signal word Warning**

**Hazard-determining components of labelling:**

*nickel*

**Hazard statements**

*H317 May cause an allergic skin reaction.*

**Precautionary statements**

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

*P280 Wear protective gloves.*

*P362+P364 Take off contaminated clothing and wash it before reuse.*

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

*P321 Specific treatment (see on this label).*

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

*(Contd. on page 2)*

*EU*

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 21.08.2018

Version number 3

Revision: 21.08.2018

**Trade name:** Copper nickel brass hard solder, Cu 773, B-Cu48ZnNi(Si)-890/920  
(L-CuNi10Zn42; CU 305)  
Neusilberhartlot

(Contd. of page 1)

**Additional information:***Contains nickel. May produce an allergic reaction.***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.

<b>Dangerous components:</b>			
CAS: 7440-50-8 EINECS: 231-159-6 Reg.nr.: 01-2119480154-42	copper	substance with a Community workplace exposure limit	46.0-50.0%
CAS: 7440-66-6 EINECS: 231-175-3 Reg.nr.: 01-2119467174-37	zinc	substance with a Community workplace exposure limit	38.8-44.85%
CAS: 7440-02-0 EINECS: 231-111-4 Reg.nr.: 01-2119438727-29	nickel	☒ Carc. 2, H351; STOT RE 1, H372; ☒ Skin Sens. 1, H317	9.0-11.0%

**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:** Call a doctor immediately.**After swallowing:** 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:**CO<sub>2</sub>, 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:** Wear self-contained 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.

**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.

(Contd. on page 3)

EU

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 21.08.2018

Version number 3

Revision: 21.08.2018

**Trade name:** Copper nickel brass hard solder, Cu 773, B-Cu48ZnNi(Si)-890/920  
(L-CuNi10Zn42; CU 305)  
Neusilberhartlot

(Contd. of page 2)

## 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.

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:** 13

**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:	
<b>7440-50-8 copper</b>	
MAK (Germany)	Long-term value: 0.01 A mg/m <sup>3</sup> als Cu
<b>7440-66-6 zinc</b>	
MAK (Germany)	Long-term value: 0.1A* 2E** mg/m <sup>3</sup> *alveolengängig; **einatembare
<b>7440-02-0 nickel</b>	
AGW (Germany)	Long-term value: 0.006A; 0.030E* mg/m <sup>3</sup> 8(II);AGS, 24, Sh, Y, 10*, 31*

#### Regulatory information

MAK (Germany): MAK- und BAT-Liste

AGW (Germany): TRGS 900

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

7440-50-8 copper: BIA 7755 (D), NIOSH 7301(E), MétroPol Fiche 003(F), MTA/MA-025/A92(ESP)

7440-66-6 zinc: NIOSH 7300, 7301, 7303(E), OSHA ID 121(E)

7440-02-0 nickel: NIOSH 7300, 7301, 7303(E), OSHA ID 121(E), OSHA ID 125G(E), BIA 8095(D), DFG 1(D,E), OSHA 1006(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.

#### 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 P3

#### Protection of hands:

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

#### Material of gloves

heat-resistant glove with nitrile inner glove.

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

Value for the permeation: Level  $\leq 6$

(Contd. on page 4)

EU

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 21.08.2018

Version number 3

Revision: 21.08.2018

**Trade name:** Copper nickel brass hard solder, Cu 773, B-Cu48ZnNi(Si)-890/920  
(L-CuNi10Zn42; CU 305)  
Neusilberhartlot

(Contd. of page 3)

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.

**Eye 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

##### Appearance:

Form:	Solid
Colour:	Silver grey
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not applicable.

##### Change in condition

Melting point/freezing point:	890-920 °C
Initial boiling point and boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gas):	Not determined.
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 applicable.
Density at 20 °C:	8.7 g/cm³
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with water:	Insoluble.

Partition coefficient: n-octanol/water:	Not determined.
---	-----------------

##### Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

##### Solvent content:

Organic solvents:	0.0 %
VOC (EC)	0.00 %
Solids content:	100.0 %

### 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 and stored according to specifications.

### 10.3 Possibility of hazardous reactions

Reacts with strong acids and oxidising agents.

Reacts with strong alkali.

### 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.

(Contd. on page 5)

EU

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 21.08.2018

Version number 3

Revision: 21.08.2018

**Trade name:** Copper nickel brass hard solder, Cu 773, B-Cu48ZnNi(Si)-890/920  
(L-CuNi10Zn42; CU 305)  
Neusilberhartlot

(Contd. of page 4)

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

#### 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** 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.

## 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:

Avoid transfer into the environment.

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.

### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Recommendation** Contact manufacturer for recycling information.

European waste catalogue	
17 04 07	mixed metals
15 01 01	paper and cardboard packaging
HP 13	Sensitising

#### Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

### 14.1 UN-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 Void

#### Class

ADR, IMDG, IATA Void

#### 14.4 Packing group

ADR, IMDG, IATA Void

#### 14.5 Environmental hazards:

Marine pollutant: No

(Contd. on page 6)

EU

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 21.08.2018

Version number 3

Revision: 21.08.2018

**Trade name:** Copper nickel brass hard solder, Cu 773, B-Cu48ZnNi(Si)-890/920  
 (L-CuNi10Zn42; CU 305)  
 Neusilberhartlot

(Contd. of page 5)

<b>14.6 Special precautions for user</b>	Not applicable.
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable. 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 (EC) No 1907/2006 ANNEX XVII** *Conditions of restriction: 27*

**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.

**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:**

09.01.2017: Section 1, 3, 8, 15 Adapted to Regulation 453/2010/EC, 830/2015/EU, 2012/18/EU

21.08.2018: Section 8.1, 13

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

Piktogramm: GHS08 + GHS07

Danger

H351 Causes skin irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

H317 May cause an allergic skin reaction.

**Relevant phrases**

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

**Recommended restriction of use** For commercial use only.

**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)

ICAO: International Civil Aviation Organisation

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

vPvB: very Persistent and very Bioaccumulative

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

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

**Safety data sheet SD3017**

EU