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

- Date of compilation: 13.05.2011
- 1.1 Product identifier
  - Trade name: SN100C - Alloys
  - Article number(s): bz001
  - Synonym(s): SN100C - Legierungen
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:
  - No further relevant information available.
- 1.3 Details of the supplier of the safety data sheet
  - Manufacturer / Supplier: Balver Zinn
    Josef Jost GmbH & Co.KG
    Blintroper Weg 11
    D-58802 Balve · Germany
    Phone: +49 2375 915 – 0
    Fax: +49 2375 915 – 114
    E-Mail: Info@BalverZinn.com
  - E-mail address of the competent person responsible for the Safety Data Sheet: kontakt@trabaserio.eu
  - Informing department: Technical Support of the Supplier
- 1.4 Emergency telephone number:
  - Giftnotruf Berlin Phone: +49 30 / 30686 790 - Helpdesk in German and English

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.
  - Classification according to Directive 67/548/EEC or Directive 1999/45/EC void
- 2.2 Label elements
- 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: Solder alloy
Safety data sheet according to 1907/2006/EC, Article 31

Trade name: SN100C - Alloys

DANGEROUS COMPONENTS:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Substance with a Community workplace exposure limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>Copper (Cu)</td>
</tr>
<tr>
<td>7440-56-4</td>
<td>231-164-3</td>
<td>Germanium (Ge)</td>
</tr>
<tr>
<td>7440-02-0</td>
<td>231-111-4</td>
<td>Nickel (Ni)</td>
</tr>
</tbody>
</table>

OTHER COMPONENTS:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Substance activity %</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-31-5</td>
<td>231-141-8</td>
<td>Tin (Sn) &gt; 90%</td>
</tr>
</tbody>
</table>

ADDITIONAL INFORMATION: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Measures are only required if dusts, vapours or fumes are formed during use.

After inhalation:
If dust or other particles are generated during processing, it is necessary to provide adequate ventilation and/or respiration protection. If dust/particles have been respired call physician for safety reasons.

After skin contact: The product is not skin irritating.

After eye contact: Unlikely route of exposure.

After swallowing: Unlikely route of exposure.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

Information for doctor: Treat symptomatically

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
Dry sand
Fire-extinguishing powder
Special powder for metal fires. Do not use water.

5.2 Special hazards arising from the substance or mixture:

Can be released in case of fire:
Toxic or harmful metal oxides

5.3 Advice for firefighters

Protective equipment:
Do not inhale combustion gases.
If necessary put on respirator.

Additional information: Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Not required

6.2 Environmental precautions: No special measures required.
Safety data sheet  
according to 1907/2006/EC, Article 31

Printing date: 13.06.2013  
Revision: 6  
Revision: 13.06.2013

Trade name: SN100C - Alloys

6.3 Methods and material for containment and cleaning up:
Collect mechanically.
Dispose of the material collected according to regulations.

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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure that suitable extractors are available on processing machines.
If dust/smoke is developed, avoid breathing dust/smoke.
Make sure that all applicable workplace limits are observed.
Avoid prolonged or repeated skin contact.

Information about protection against explosions and fires: none

7.2 Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers:
Observe all local and national regulations for storage of water polluting products.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: none

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with critical values that require monitoring at the workplace:
Respirable dusts cannot be liberated from the product as delivered.

7440-50-8 Copper (Cu)

WEL (Great Britain)  
Short-term value: 2** mg/m³  
Long-term value: 0.2* 1** mg/m³  
*fume **dusts and mists (as Cu)

DNELs not applicable
PNECs not applicable
Additional information: The lists that were valid during the compilation were used as basis.

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures
Do not inhale dust / smoke / mist.
Avoid close or long term contact with the skin.
Use skin protection cream for preventive skin protection.
Wash hands during breaks and at the end of the work.

Breathing equipment: Breathing equipment necessary if dusts or fumes are formed.

Protection of hands:
Heat resistant gloves
Preventive skin protection by use of skin-protecting agents is recommended.

Material of gloves
Carry heat insulating gloves by rough soldering work.
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 Protective gloves should be replaced at first signs of wear.
Trade name: SN100C - Alloys

- **Eye protection:** Safety glasses recommended during soldering works.
- **Body protection:**
  Wear heat-resistant protective clothing when handling hot/molten product.
  Protective clothing should be selected specifically for the working place.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:** solid
    - **Colour:** metallic
      - silver-coloured
    - **Smell:** odourless
    - **Odour threshold:** not applicable
    - **pH-value:** not applicable
  - **Change in condition**
    - Melting point/Melting range: 227 °C (Eutektikum SnCu0,7%)
    - Boiling point/Boiling range: not applicable
  - **Flash point:** not applicable
  - **Inflammability (solid, gaseous)**
    - The product is not flammable.
  - **Ignition temperature:** not applicable
  - **Decomposition temperature:** no data available
  - **Self-inflammability:** The product/the substance is not selfigniting.
  - **Danger of explosion:** Product is not explosive.
  - **Critical values for explosion:**
    - Lower: not applicable
    - Upper: not applicable
  - **Oxidizing properties**
    - Not classified as oxidising.
  - **Vapour pressure:** not applicable
  - **Density**
    - 7.26 kg/dm³
  - **Settled apparent density**
    - not applicable
  - **Relative density**
    - no data available
  - **Vapour density (AIR = 1)**
    - not applicable
  - **Evaporation rate**
    - not applicable
  - **Solubility in / Miscibility with**
    - **Water:** insoluble
    - **Organic solvents:** insoluble
  - **Partition coefficient (n-octanol/water):** not applicable
  - **Viscosity:**
    - **dynamic:** not applicable
    - **kinematic:** not applicable
  - **9.2 Other information**
    - See technical data sheet.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** see 10.3
- **10.2 Chemical stability** Stable, under normal conditions.
Trade name: SN100C - Alloys

- 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: Toxic or harmful metal oxides

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
    - on the skin: No irritant effect known.
    - on the eye: No irritant effect known.
  - Sensitization: Contains a sensitising substance. May produce an allergic reaction.
  - Additional toxicological information:
    When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
  - CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
    According to present knowledge no CMR-effects known.

SECTION 12: Ecological information

- 12.1 Toxicity
  - Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability
  Anorganic product, is not eliminable from water by means of biological cleaning processes.
- 12.3 Bioaccumulative potential Does not accumulate in organisms.
- Additional ecological information:
  - Chemical Oxygen Demand (COD-value): not applicable
  - BOD5-value: not applicable
  - AOX-indication: The product does not contain organically bounded halogens (AOX-free).
  - According to recipe contains the following heavy metals and compounds according to EC guideline NO. 76/464 EC:

    > 90% Sn
    0 - 5% Cu
    0 - 0.2% Ni
    0 - 1% Ge

- 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
    - Disposal must be made according to official regulations.
    - Contact manufacturer for recycling information.
  - Waste disposal key number: According to local/national regulations.

- European waste catalogue:
  16 03 04 inorganic wastes other than those mentioned in 16 03 03

(Contd. on page 6)
Trade name: SN100C - Alloys

- Uncleaned packagings:
  - Recommendation: Dispose of packaging according to regulations on the disposal of packagings.

### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1 UN-Number</th>
<th>Void</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR, ADN, IMDG, IATA</td>
<td></td>
</tr>
</tbody>
</table>

| 14.2 UN proper shipping name | Void |
| ADR, ADN, IMDG, IATA | |

| 14.3 Transport hazard class(es) | Void |
| ADR, ADN, IMDG, IATA | |

| 14.4 Packing group | Void |
| ADR, IMDG, IATA | |

| 14.5 Environmental hazards: | not applicable |
| Marine pollutant: | NO |

| 14.6 Special precautions for user: | not applicable |

| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: | not applicable |

| Additional Transportinformation: | Not dangerous according to the above specifications. |

| UN "Model Regulation": | - |

### SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- National regulations

- Decree to be applied in case of technical fault: Directive 96/82/EC does not apply.

- Other regulations, limitations and prohibitive regulations
  Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Reasons for changes:
The Material Safety Data Sheet has been revised. Changes in the respective chapters are characterized in the left side edge by *.

- Relevant phrases:
  
  - H228 Flammable solid.
  - H317 May cause an allergic skin reaction.
  - H351 Suspected of causing cancer.
  - H372 Causes damage to organs through prolonged or repeated exposure.
  - R11 Highly flammable.
  - R40 Limited evidence of a carcinogenic effect.
  - R43 May cause sensitisation by skin contact.
  - R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
Trade name: SN100C - Alloys

- **Department issuing MSDS:**
  TRABASERIO S.L.
  C./Isabel II, N° 67, Pl. Baja A
  07100 Sóller / Spain
  Tel. & Fax: +34 971 63 34 64 · E-Mail: kontakt@trabaserio.eu

- **Abbreviations and acronyms:**
  RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  ICAO: International Civil Aviation Organization
  GGVSEB (Gefahrgutverordnung Straße, Eisenbahn und Binnenschifffahrt): Ordinance on the national and international carriage of dangerous goods by road, rail, and inland waterways
  ADR: Accord Européen 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 Harmonized System of Classification and Labelling of Chemicals
  CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures
  DNEL: Derived No-Effect Level (REACH)
  PNEC: Predicted No-Effect Concentration (REACH)

- *Data compared to the previous version altered.*