1 Identification

· 1.1 Product identifier
  · Trade name: Wieland SD1

· 1.2 Relevant identified uses of the substance or mixture and uses advised against
  · Application of the substance / the preparation: Semi-finished product

1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:
  Wieland-Werke AG
  Graf-Arco-Straße 36
  89079 Ulm (Germany)
  Tel.: +49 (0)731/944-0
  Fax: +49 (0)731/944-2799

· Information department:
  Department testing laboratories
  michael.ebner@wieland.de

· 1.4 Emergency telephone number:
  Factory security offices
  Phone: +49 (0) 731-944-3706

2 Hazard(s) identification

· 2.1 Classification of the substance or mixture
  · Classification according to Regulation (EC) No 1272/2008 (CLP-Regulation):
    For products there is no obligation to classify acc. to CLP -Regulation.
    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-determining components of labeling: Void
  · Hazard statements: Void

2.3 Other hazards

Semi-finished products from copper or copper-alloys, as offered for sale as manufactured present no health hazard to man or for the aquatic environment.

· Results of PBT and vPvB assessment
  · PBT: Not applicable to metals
  · vPvB: Not applicable to metals.

3 Composition/information on ingredients

· 3.2 Chemical characterization: Mixtures
  · Description: Metal in compact form.
  · UNS-number: -
  · Information:
    The classifications mentioned below reflect the respective pure substance and are for information only.
    Copper alloys are special preparations according to Regulation (EC) 1907/2006 (REACH Regulation).
    The classification of a pure substance is not applicable to its use as element of a copper alloy.
  · Components: Mentioned percentages are references values.

(Contd. on page 2)
Trade name: Wieland SD1

<table>
<thead>
<tr>
<th>CAS: 7440-50-8</th>
<th>EINECS: 231-159-6</th>
<th>RTECS: GL 53250000</th>
<th>copper</th>
<th>68%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 7440-66-6</td>
<td>EINECS: 231-175-3</td>
<td>RTECS: ZG 86000000</td>
<td>zinc</td>
<td>balance%</td>
</tr>
<tr>
<td>CAS: 7440-21-3</td>
<td>EINECS: 231-130-8</td>
<td>RTECS: VW 04000000</td>
<td>silicon</td>
<td>1%</td>
</tr>
</tbody>
</table>

4 First-aid measures

4.1 Description of first aid measures
- General information:
  No special measures required.
- First Aid information refer to any dust which is generated.
- After inhalation:
  Supply fresh air and to be sure call for a doctor.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- 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.

5 Fire-fighting measures

5.1 Extinguishing media
- Suitable extinguishing agents:
  Non-flammable. Use fire fighting measures that suit the environment.

5.2 Special hazards arising from the substance or mixture
No further relevant information available.

5.3 Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Not required.
6.2 Environmental precautions: Not required
6.3 Methods and material for containment and cleaning up:
  Dispose of the collected material 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 disposal information.

7 Handling and storage

7.1 Precautions for safe handling: No special measures required.
8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

8.1 Control parameters
· Components with limit values that require monitoring at the workplace:
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

<table>
<thead>
<tr>
<th>7440-50-8 copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
</tr>
<tr>
<td>REL</td>
</tr>
<tr>
<td>TLV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7440-21-3 silicon</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
</tr>
<tr>
<td>REL</td>
</tr>
<tr>
<td>TLV</td>
</tr>
</tbody>
</table>

1314-13-2 zinc oxide

| PEL | Long-term value: 15* 5** mg/m³ *total dust **respirable fraction and fume |
| REL | Short-term value: 10** mg/m³ 
| | Long-term value: 5 mg/m³ 
| | Ceiling limit value: 15* mg/m³ *dust only **fume |
| TLV | Short-term value: 10* mg/m³ 
| | Long-term value: 2* mg/m³ *as respirable fraction |

· Additional information: The lists that were valid during the creation were used as basis.

· 8.2 Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
Wash hands before breaks and at the end of work.
Do not inhale dust / smoke / mist.
· Breathing equipment: Use a suitable industrial gas mask when work-place-limits are exceeded.
· Protection of hands:
Protective gloves are recommended, depending upon how the semis are further processed.
· Eye protection:
Protective goggles are recommended, depending upon how the semis are further processed.
9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
    - **Form:** Solid
    - **Color:** metallic-yellow
    - **Odor:** Odorless
    - **Odor threshold:** Not determined.
  - **Change in condition**
    - Melting point/Melting range: 880-915 °C (1616-1679 °F) (Lit.)
    - Boiling point/Boiling range: Undetermined.
  - **Flash point:** Not applicable.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Density at 20 °C (68 °F):** 8.41 g/cm³ (70.181 lbs/g al) (Lit.)
  - **Solubility in / Miscibility with Water:** Not soluble.

- **9.2 Other information**
  No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity:** Not applicable.
- **10.2 Chemical stability:** Not applicable.
  - **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.

11 Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity:** Based on available data, the classification criteria are not met.
  - **Primary irritant effect:**
    - **on the skin:** Based on available data, the classification criteria are not met.
    - **on the eye:** Based on available data, the classification criteria are not met.
  - **Sensitization:** Based on available data, the classification criteria are not met.
  - **Additional toxicological information:**
    - When used and handled according to specifications, the article does not have any harmful effects to our experience and the information provided to us.
  - **Carcinogenic categories**
    - **IARC (International Agency for Research on Cancer)**
      - None of the ingredients is listed.
    - **NTP (National Toxicology Program)**
      - None of the ingredients is listed.
Trade name: Wieland SD1

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.
- Ecotoxicological effects:
  - Remark: Very toxic for fish
  - Additional ecological information
  - General notes:
    - For semi-finished products in copper or copper-alloys no information regarding ecology is suitable, as it is not soluble in water.
    - Very toxic for aquatic organisms
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable to metals.
  - vPvB: Not applicable to metals.
- 12.6 Other adverse effects: No further relevant information available.

13 Disposal considerations

- 13.1 Waste treatment methods
  - Recommendation: Contact manufacturer for recycling information.

14 Transport information

- 14.1 UN-Number
  - DOT, ADR, ADN, IMDG, IATA: Void
- 14.2 UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA: Void
- 14.3 Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA: Void
- 14.4 Packing group
  - DOT, ADR, IMDG, IATA: Void
- 14.5 Environmental hazards:
  - 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.
### 15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - Section 355 (extremely hazardous substances):
      - None of the ingredients is listed.
    - Section 313 (Specific toxic chemical listings):
      - 7440-50-8 copper
      - 7440-66-6 zinc
    - TSCA (Toxic Substances Control Act):
      - All ingredients are listed.
    - Proposition 65
      - Chemicals known to cause cancer:
        - None of the ingredients is listed.
      - Chemicals known to cause reproductive toxicity for females:
        - None of the ingredients is listed.
      - Chemicals known to cause reproductive toxicity for males:
        - None of the ingredients is listed.
      - Chemicals known to cause developmental toxicity:
        - None of the ingredients is listed.
    - Cancerogenity categories
      - EPA (Environmental Protection Agency)
        - 7440-50-8 copper D
        - 7440-66-6 zinc D, I, II
      - TLV (Threshold Limit Value established by ACGIH)
        - None of the ingredients is listed.
    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      - None of the ingredients is listed.
    - Chemical safety assessment void.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific article features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Department testing laboratories
- Contact:
  - Dr. Michael Ebner
  - Phone (+)49 (0)731/944-3706
- Date of preparation / last revision 08/24/2017 / 6
- * Data compared to the previous version altered.