1 Identification

- 1.1 Product identifier
  - Trade name: Wieland S12

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
  - No further relevant information available.
  - 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 enviroment.
  - 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: C42500
  - 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.

(Contd. on page 2)
Trade name: Wieland S12

Components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>RTECS</th>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>GL 5325000</td>
<td>copper</td>
<td>balance%</td>
</tr>
<tr>
<td>7440-66-6</td>
<td>231-175-3</td>
<td>ZG 8600000</td>
<td>zinc</td>
<td>1.5-3.5%</td>
</tr>
<tr>
<td>7440-31-5</td>
<td>231-141-8</td>
<td>XP 7320000</td>
<td>tin</td>
<td>7.5-10.0%</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.
44. Information about protection against explosions and fires: 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.
  - Further information about storage conditions: None.

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

8. Exposure controls/personal protection

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. At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>Constituent</th>
<th>PEL (mg/m³)</th>
<th>REL (mg/m³)</th>
<th>TLV (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>Long-term 1* 0.1**</td>
<td>Long-term 1* 0.1**</td>
<td>Long-term 1* 0.2**</td>
</tr>
<tr>
<td></td>
<td>as Cu dusts and mists **fume</td>
<td>as Cu dusts and mists **fume</td>
<td>as dusts and mists **fume; as Cu</td>
</tr>
<tr>
<td>7440-31-5 tin</td>
<td>Long-term 2</td>
<td>Long-term 2</td>
<td>Long-term 2</td>
</tr>
<tr>
<td></td>
<td>metal</td>
<td>metal</td>
<td>metal</td>
</tr>
</tbody>
</table>

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.

*Additional information: The lists that were valid during the creation were used as basis.
9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information
  - Appearance:
    - Form: Solid
    - Color: metallic-yellow
  - Odor: Odorless
  - Odor threshold: Not determined.

- Change in condition
  - Melting point/Melting range: 1010-1030 °C (1850-1886 °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): 8.82 g/cm³ (73.603 lbs/gal) (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.
## 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: 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.
    - 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.