1 Identification

1.1 Product identifier
- Trade name: Wieland S47

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 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.

(Contd. on page 2)
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.
Trade name: Wieland S47

6.3 Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.

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.
Open and handle receptacle with care.
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:

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>0.1 mg/m³</td>
<td>0.1 mg/m³</td>
<td>0.2 mg/m³</td>
</tr>
</tbody>
</table>
* dusts and mists ** fume |
| 7439-92-1 lead | 0.05 mg/m³ | 0.05 mg/m³ | 0.05 mg/m³ |
* 8-hr TWA ;See PocketGuide App.C |
* and inorganic compounds, as Pb; BEI |

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Component</th>
<th>BEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1 lead</td>
<td>30 µg/100 ml</td>
</tr>
</tbody>
</table>
Medium: blood |
Time: not critical |
Parameter: Lead |
| 10 µg/100 ml |
Medium: blood |
Time: not critical |
Parameter: Lead (women of child bearing potential) |
Trade name: Wieland S47

- **Additional Occupational Exposure Limit Values for possible hazards during processing:**

<table>
<thead>
<tr>
<th>1314-13-2 zinc oxide</th>
<th></th>
</tr>
</thead>
</table>
| 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:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Store protective clothing separately.
- **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.
- **Body protection:**
  - Wear suitable protective clothing, depending upon how the semis are further processed.

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: 910-940 °C (1670-1724 °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):** 8.48 g/cm³ (70.766 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.
Trade name: Wieland S47

- 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)
      7439-92-1 lead 2B
      7440-38-2 arsenic 1
    - NTP (National Toxicology Program)
      7439-92-1 lead R
      7440-38-2 arsenic K
    - OSHA-Ca (Occupational Safety & Health Administration)
      7440-38-2 arsenic

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.
- Ecotoxical 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
      7439-92-1 lead
      7440-38-2 arsenic
    - TSCA (Toxic Substances Control Act):
      All ingredients are listed.
    - Proposition 65
      - Chemicals known to cause cancer:
        7439-92-1 lead
        7440-38-2 arsenic
      - Chemicals known to cause reproductive toxicity for females:
        7439-92-1 lead
      - Chemicals known to cause reproductive toxicity for males:
        7439-92-1 lead

(Contd. on page 7)
### 44.0 Chemicals known to cause developmental toxicity:
- 7439-92-1 lead

### Cancerogenity categories

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
<th>TLV (Threshold Limit Value established by ACGIH)</th>
<th>NIOSH-Ca (National Institute for Occupational Safety and Health)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>7439-92-1 lead</td>
<td>7440-38-2 arsenic</td>
</tr>
<tr>
<td>7440-66-6 zinc</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7440-38-2 arsenic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cancerogenity categories**
- D
- D, I, II
- B2
- A
- A3
- A1

### 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 / 8
- * Data compared to the previous version altered.