1 Identification

1.1 Product identifier
- Trade name: Wieland SA5

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: C67300
- 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 SA5

### 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 contaminated material as waste according to item 13.

#### 6.4 Reference to other sections:
See Section 7 for information on safe handling.
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

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

8.1 Control parameters

<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>Long-term value: 1* 0.1** mg/m³ as Cu</td>
<td>Long-term value: 1* 0.1** mg/m³ as Cu</td>
<td>Long-term value: 1* 0.2** mg/m³ as Cu</td>
</tr>
<tr>
<td></td>
<td>Dusts and Mists</td>
<td>Fume</td>
<td></td>
</tr>
<tr>
<td>7439-96-5 manganese</td>
<td>Ceiling limit value: 5 mg/m³ as Mn</td>
<td>Short-term value: 3 mg/m³</td>
<td>Long-term value: 1 mg/m³ fume, as Mn</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long-term value: 0.02* 0.1* mg/m³ as Mn; respirable **inhalable fraction</td>
<td></td>
</tr>
<tr>
<td>7439-92-1 lead</td>
<td>Long-term value: 0.05* mg/m³ *see 29 CFR 1910.1025</td>
<td>Long-term value: 0.05* mg/m³ *8-hr TWA; See PocketGuide App.C</td>
<td>Long-term value: 0.05* mg/m³ *and inorganic compounds, as Pb; BEI</td>
</tr>
<tr>
<td>7440-21-3 silicon</td>
<td>Long-term value: 15* 5** mg/m³ *total dust **respirable fraction</td>
<td>Long-term value: 10* 5** mg/m³ *total dust **respirable fraction</td>
<td>TLV withdrawn</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
44.0

- Ingredients with biological limit values:

**7439-92-1 lead**

<table>
<thead>
<tr>
<th>BEI</th>
<th>Medium: blood</th>
<th>Time: not critical</th>
<th>Parameter: Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 µg/100 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Parameter: Lead (women of child bearing potential) |
| 10 µg/100 ml | Medium: blood | Time: not critical |

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

**1314-13-2 zinc oxide**

<table>
<thead>
<tr>
<th>PEL</th>
<th>Long-term value: 15* 5** mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*total dust **respirable fraction and fume</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REL</th>
<th>Short-term value: 10** mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term value: 5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Ceiling limit value: 15* mg/m³</td>
<td></td>
</tr>
<tr>
<td>*dust only **fume</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TLV</th>
<th>Short-term value: 10 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term value: 2* mg/m³</td>
<td></td>
</tr>
<tr>
<td>*as respirable fraction</td>
<td></td>
</tr>
</tbody>
</table>

- 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.
    - 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.
  - 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: 815-860 °C (1499-1580 °F) (Lit.)
  - Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.
Trade name: Wieland SA5

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)
      7439-92-1 lead 2B
    - NTP (National Toxicology Program)
      7439-92-1 lead R
    - OSHA-Ca (Occupational Safety & Health Administration)
      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:** 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

(Contd. on page 6)
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
- Class 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
  7439-96-5 manganese
  7439-92-1 lead

- TSCA (Toxic Substances Control Act):
  All ingredients are listed.

- Proposition 65

- Chemicals known to cause cancer:
  7439-92-1 lead

- Chemicals known to cause reproductive toxicity for females:
  7439-92-1 lead
### Chemicals known to cause reproductive toxicity for males:
- 7439-92-1 lead

### Chemicals known to cause developmental toxicity:
- 7439-92-1 lead

### Cancerogenity categories

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>D</td>
</tr>
<tr>
<td>7440-66-6 zinc</td>
<td>D, I, II</td>
</tr>
<tr>
<td>7439-96-5 manganese</td>
<td>D</td>
</tr>
<tr>
<td>7439-92-1 lead</td>
<td>B2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TLV (Threshold Limit Value established by ACGIH)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1 lead</td>
<td>A3</td>
</tr>
</tbody>
</table>

### 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 / 7
- * Data compared to the previous version altered.