1 Identification

- 1.1 Product identifier
  - Trade name: Wieland S71
- 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):
    - 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 S71

CAS: 7440-50-8  
EINECS: 231-159-6  
RTECS: GL 5325000  
copper  65%

CAS: 7439-92-1  
EINECS: 231-100-4  
RTECS: OF 7525000  
lead  1.5%

CAS: 7429-90-5  
EINECS: 231-072-3  
RTECS: BD 0330000  
aluminium  1%

CAS: 7440-38-2  
EINECS: 231-148-6  
RTECS: CG 0525000  
arsenic  0.1%  
Aquatic Acute 1, H400; Aquatic Chronic 1, H410

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 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.
  See Section 8 for information on personal protection equipment.
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>Substance</th>
<th>PEL Long-term value</th>
<th>REL Long-term value</th>
<th>TLV Long-term value</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>
<tr>
<td>7439-92-1 lead</td>
<td>0.05* mg/m³</td>
<td>0.05* mg/m³</td>
<td>0.05* mg/m³</td>
</tr>
<tr>
<td>7429-90-5 aluminium</td>
<td>15*; 5** mg/m³</td>
<td>10* 5** mg/m³</td>
<td>1* mg/m³</td>
</tr>
</tbody>
</table>

- Ingredients with biological limit values:

7439-92-1 lead

See Section 13 for disposal information.
Trade name: Wieland S71

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Medium</th>
<th>Time</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>blood</td>
<td>not critical</td>
<td>30 µg/100 ml</td>
</tr>
<tr>
<td>Lead</td>
<td>blood</td>
<td>not critical</td>
<td>10 µg/100 ml</td>
</tr>
</tbody>
</table>

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

**1314-13-2 zinc oxide**

<table>
<thead>
<tr>
<th>Limit Value</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term</td>
<td>15* 5** mg/m³</td>
</tr>
<tr>
<td>REL Short-term</td>
<td>10** mg/m³</td>
</tr>
<tr>
<td>REL Long-term</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>REL Ceiling limit</td>
<td>15* mg/m³</td>
</tr>
<tr>
<td>REL Dust only</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>REL Fume</td>
<td>10* mg/m³</td>
</tr>
<tr>
<td>REL As respirable fraction</td>
<td>2* mg/m³</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: 884-934 °C (1623-1713 °F) (Lit.)
  - Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.

- Danger of explosion: Product does not present an explosion hazard.
Trade name: Wieland S71

- Density at 20 °C (68 °F): 8.38 g/cm³ (69.931 lbs/g al)
- 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.
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: Not applicable.
- 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

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1 lead</td>
<td>2B</td>
</tr>
<tr>
<td>7440-38-2 arsenic</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1 lead</td>
<td>R</td>
</tr>
<tr>
<td>7440-38-2 arsenic</td>
<td>K</td>
</tr>
</tbody>
</table>

- OSHA-Ca (Occupational Safety & Health Administration)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-38-2 arsenic</td>
<td></td>
</tr>
</tbody>
</table>

12 Ecological information

12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Bioaccumulative potential: No further relevant information available.
- 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.
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):
      All ingredients are listed.
    - 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

(Contd. of page 5)
Trade name: Wieland S71

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

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

- Cancerogenity categories
  - EPA (Environmental Protection Agency)
    - 7440-50-8 copper D
    - 7440-66-6 zinc D, I, II
    - 7439-92-1 lead B2
    - 7440-38-2 arsenic A
  - TLV (Threshold Limit Value established by ACGIH)
    - 7439-92-1 lead A3
    - 7429-90-5 aluminium A4
    - 7440-38-2 arsenic A1
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    - 7440-38-2 arsenic

- 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 / 5
- * Data compared to the previous version altered.