1 Identification

· 1.1 Product identifier
  · Trade name: Wieland GB2

· 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.

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)
### Trade name: Wieland GB2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>copper</td>
<td>tin</td>
<td>lead</td>
<td>nickel</td>
<td>zinc</td>
</tr>
<tr>
<td>83.0-87.0%</td>
<td>4.0-6.0%</td>
<td>4.0-6.0%</td>
<td>0-2.0%</td>
<td>4.0-6.0%</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 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.
- **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></th>
<th>7440-50-8 copper</th>
<th></th>
<th>7440-31-5 tin</th>
<th></th>
<th>7439-92-1 lead</th>
<th></th>
<th>7440-02-0 nickel</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 1* 0.1** mg/m³</td>
<td>as Cu; **dusts and mists; fume</td>
<td>Long-term value: 2 mg/m³</td>
<td>metal</td>
<td>Long-term value: 0.05* mg/m³</td>
<td>*see 29 CFR 1910.1025</td>
<td>Long-term value: 1 mg/m³</td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>as Cu; **dusts and mists; fume</td>
<td></td>
<td>Long-term value: 2 mg/m³</td>
<td>metal</td>
<td>*8-hr TWA; See PocketGuide App. C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 1* 0.1** mg/m³</td>
<td></td>
<td>Long-term value: 2 mg/m³</td>
<td>metal</td>
<td>Long-term value: 0.05* mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 1* 0.2** mg/m³</td>
<td>*dusts and mists; **fume; as Cu</td>
<td>Long-term value: 2 mg/m³</td>
<td>metal</td>
<td>Long-term value: 0.05* mg/m³</td>
<td>*and inorganic compounds, as Pb; BEI</td>
<td>Long-term value: 1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

(Contd. on page 4)
Trade name: Wieland GB2

- Ingredients with biological limit values:

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

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

<table>
<thead>
<tr>
<th>Chemical</th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1314-13-2 zinc oxide</td>
<td>Long-term value: 15* 5** mg/m³</td>
<td>Short-term value: 10** mg/m³</td>
<td>Short-term value: 10* mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction and fume</td>
<td>Long-term value: 5 mg/m³</td>
<td>Long-term value: 2* mg/m³</td>
</tr>
<tr>
<td></td>
<td>Ceiling limit value: 15* mg/m³</td>
<td>*dust only **fume</td>
<td>*as respirable fraction</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.
  - 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: copper red
      - Odor: Odorless
      - Odor threshold: Not determined.
  - Change in condition
    - Melting point/Melting range: 860-1030 °C (1580-1886 °F) (Lit.)
    - Boiling point/Boiling range: Undetermined.
  - Flash point: Not applicable.
Trade name: Wieland GB2

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
    - 7440-02-0 nickel
  - NTP (National Toxicology Program)
    - 7439-92-1 lead
    - 7440-02-0 nickel
  - 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: Toxic for fish
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
      7440-02-0 nickel
  - TSCA (Toxic Substances Control Act):
    All ingredients are listed.
## 44.0 Proposition 65

- **Chemicals known to cause cancer:**
  - 7439-92-1 lead
  - 7440-02-0 nickel

- **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

- **EPA (Environmental Protection Agency)**
  - 7440-50-8 copper D
  - 7440-66-6 zinc D, I, II
  - 7439-92-1 lead B2

- **TLV (Threshold Limit Value established by ACGIH)**
  - 7439-92-1 lead A3
  - 7440-02-0 nickel A5

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  - 7440-02-0 nickel

### 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 08/23/2017 / 7
- * Data compared to the previous version altered.