1 Identification

- 1.1 Product identifier
  - Trade name: Wieland S40

- 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: C67420
  - 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.
- **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.
- **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>Chemical</th>
<th>PEL Long-term value:</th>
<th>REL Long-term value:</th>
<th>TLV Long-term value:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1* 0.1** mg/m³</td>
<td>1* 0.1** mg/m³</td>
<td>1* 0.2** mg/m³</td>
</tr>
<tr>
<td>7440-50-8 copper</td>
<td>as Cu *dusts and mists; **fume</td>
<td>as Cu *dusts and mists; **fume</td>
<td>as Cu *dusts and mists; **fume</td>
</tr>
<tr>
<td></td>
<td>Ceiling limit value:</td>
<td>Short-term value:</td>
<td>Long-term value:</td>
</tr>
<tr>
<td></td>
<td>5 mg/m³ as Mn</td>
<td>3 mg/m³ as Mn</td>
<td>1 mg/m³ as Mn</td>
</tr>
<tr>
<td>7439-96-5 manganese</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term value:</td>
<td>0.02* 0.1* mg/m³ as Mn; As respirable fraction</td>
<td></td>
</tr>
<tr>
<td>7429-90-5 aluminium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term value: 15*; 5** mg/m³</td>
<td>as Al; As respirable fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term value: 10* 5** mg/m³</td>
<td>as Al; Total dust; **Respirable fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term value: 1* mg/m³ as Al; As respirable fraction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Trade name: Wieland S40

### 7440-21-3 silicon

<table>
<thead>
<tr>
<th>PEL</th>
<th>Long-term value: 15* 5** mg/m³ *total dust **respirable fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL</td>
<td>Long-term value: 10* 5** mg/m³ *total dust **respirable fraction</td>
</tr>
<tr>
<td>TLV</td>
<td>TLV withdrawn</td>
</tr>
</tbody>
</table>

### 7440-02-0 nickel

<table>
<thead>
<tr>
<th>PEL</th>
<th>Long-term value: 1 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL</td>
<td>Long-term value: 0.015 mg/m³ as Ni; See Pocket Guide App. A</td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 1.5* mg/m³ *elemental, *inhalable fraction</td>
</tr>
</tbody>
</table>

* Long-term value: 10* 5** mg/m³ *total dust **respirable fraction

### 1314-13-2 zinc oxide

<table>
<thead>
<tr>
<th>PEL</th>
<th>Long-term value: 15* 5** mg/m³ *total dust **respirable fraction and fume</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL</td>
<td>Short-term value: 10** mg/m³ *dust only **fume</td>
</tr>
<tr>
<td></td>
<td>Ceiling limit value: 15* mg/m³</td>
</tr>
<tr>
<td>TLV</td>
<td>Short-term value: 10* mg/m³ *as respirable fraction</td>
</tr>
</tbody>
</table>

* Long-term value: 2* mg/m³

### 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: 875-910 °C (1607-1670 °F) (Lit.)
Trade name: Wieland S40

Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.
- Decomposition temperature: Not determined.
- Danger of explosion: Product does not present an explosion hazard.
- Density at 20 °C (68 °F): 8.12 g/cm³ (67.761 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)
      7440-02-0 nickel 2B
      7439-92-1 lead 2B
    - NTP (National Toxicology Program)
      7440-02-0 nickel R
      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.
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, ADN, 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
    7429-90-5 aluminium
    7440-02-0 nickel

(Contd. on page 7)
### 44.0 TSCA (Toxic Substances Control Act):
- All ingredients are listed.
- Proposition 65
- Chemicals known to cause cancer:
  - 7440-02-0 nickel
  - 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
- EPA (Environmental Protection Agency)
  - 7440-50-8 copper D
  - 7440-66-6 zinc D, I, II
  - 7439-96-5 manganese D
  - 7439-92-1 lead B2
- TLV (Threshold Limit Value established by ACGIH)
  - 7429-90-5 aluminium A4
  - 7440-02-0 nickel A5
  - 7439-92-1 lead A3
- NIOSH-Ca (National Institute for Occupational Safety and Health)
  - 7440-02-0 nickel

### 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.