### 1 Identification

- **1.1 Product identifier**
  - Trade name: **Wieland S35**

- **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)
Trade name: Wieland S35

- Components:
  - CAS: 7440-50-8
    EINECS: 231-159-6
    RTECS: GL 5325000
    copper 58.0-60.0%
  - CAS: 7440-02-0
    EINECS: 231-111-4
    nickel 2.0-3.0%
  - CAS: 7439-96-5
    EINECS: 231-105-1
    manganese 1.5-2.5%
  - CAS: 7429-90-5
    EINECS: 231-072-3
    aluminium 0.3-1.3%
  - CAS: 7440-66-6
    EINECS: 231-175-3
    zinc balance%
  - CAS: 7439-92-1
    EINECS: 231-100-4
    lead 0.2-0.8%

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.
Trade name: Wieland S35

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

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>1* 0.1** mg/m³ as Cu dusts and mists **fume</td>
<td>1* 0.1** mg/m³ as Cu dusts and mists **fume</td>
<td>1* 0.2** mg/m³ dusts and mists **fume as Cu</td>
</tr>
<tr>
<td>7440-02-0 nickel</td>
<td>1 mg/m³</td>
<td>0.015 mg/m³ as Ni; See Pocket Guide App. A</td>
<td>1.5* mg/m³ elemental, *inhalable fraction</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 fume, as Mn</td>
<td>Long-term value: 0.02* 0.1* mg/m³ as Mn; *respirable **inhalable fraction</td>
</tr>
<tr>
<td>7429-90-5 aluminium</td>
<td>Long-term value: 15*; 5** mg/m³ *Total dust; **Respirable fraction</td>
<td>Long-term value: 10* 5** mg/m³ as Al*Total dust**Respirable/pyro powd./welding f.</td>
<td>Long-term value: 1* mg/m³ as Al; *as respirable fraction</td>
</tr>
</tbody>
</table>
Trade name: Wieland S35

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

<table>
<thead>
<tr>
<th>Substance</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* mg/m³ <strong>total dust</strong></td>
<td>Long-term value: 5 mg/m³</td>
<td>Long-term value: 2* mg/m³</td>
</tr>
<tr>
<td></td>
<td>Short-term value: 10** mg/m³ **respirable fraction and fume</td>
<td>Ceiling limit value: 15* mg/m³</td>
<td>Long-term value: 2* mg/m³ **as respirable fraction</td>
</tr>
</tbody>
</table>

*total dust **respirable fraction and fume

- 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: 870-900 °C (1598-1652 °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): 8.24 g/cm³ (68.763 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.
  — 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
  — 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
  - 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):
    - All ingredients are listed.

  - 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
44. 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)
  - 7440-02-0 nickel: A5
  - 7429-90-5 aluminium: A4
  - 7439-92-1 lead: A3

- 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 08/24/2017 / 7
- * Data compared to the previous version altered.