1 Identification

1.1 Product identifier
- Trade name: Wieland U17

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 Corporate EHS and Standardization Affairs
  stefan.priggemeyer@wieland.com
- Emergency telephone number:
  Factory security offices
  Phone: +49 (0) 731-944-2794

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.
- Components:
  Mentioned percentages are references values.
Trade name: Wieland U17

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.
  · 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:
      Keep receptacle tightly sealed.
      Store in cool, dry conditions in well sealed receptacles.

· **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</td>
<td>1* 0.1** mg/m³ as Cu</td>
<td>1* 0.2** mg/m³ as Cu</td>
</tr>
<tr>
<td></td>
<td>*dusts and mists **fume</td>
<td>*dusts and mists **fume</td>
<td>*dusts and mists; **fume; as Cu</td>
</tr>
<tr>
<td>7429-90-5 aluminium</td>
<td>15*; 5** mg/m³</td>
<td>10* 5** mg/m³ as Al</td>
<td>1* mg/m³ as Al; *as respirable fraction</td>
</tr>
<tr>
<td></td>
<td>*Total dust; ** Respirable fraction</td>
<td>as Al; Total dust; **Respirable/pyro powd./welding f.</td>
<td></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</td>
<td>Long-term value: 0.02* 0.1** mg/m³ as Mn; *respirable **inhalable fraction</td>
</tr>
<tr>
<td></td>
<td>as Mn</td>
<td>as Mn; * as Mn</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.
  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
  - Form: Solid
  - Color: metallic-yellow
  - Odor: Odorless
  - Odor threshold: Not determined.
- Change in condition
  - Melting point/Melting range: 1025-1060 °C (1,877-1,940 °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): 7.58 g/cm³ (63.2551 lbs/gal) (Lit.)
- Solubility in / Miscibility with
  - Water: Not soluble.
  - VOC content: 0.00 %

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.
(Contd. on page 5)
Trade name: Wieland U17

- 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

- NTP (National Toxicology Program)
  7440-02-0 nickel 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.
  - 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.

- 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
Trade name: Wieland U17

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
    7429-90-5 aluminium
    7440-02-0 nickel
    7439-96-5 manganese
  - TSCA (Toxic Substances Control Act):
    All ingredients are listed.
  - Proposition 65
    - Chemicals known to cause cancer:
      7440-02-0 nickel
    - Chemicals known to cause reproductive toxicity for females:
      None of the ingredients is listed.
    - Chemicals known to cause reproductive toxicity for males:
      None of the ingredients is listed.
    - Chemicals known to cause developmental toxicity:
      None of the ingredients is listed.
  - Cancerogenity categories
    - EPA (Environmental Protection Agency)
      7440-50-8 copper D
      7439-96-5 manganese D
    - TLV (Threshold Limit Value established by ACGIH)
      7429-90-5 aluminium A4
      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 Corporate EHS and Standardization Affairs
<table>
<thead>
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<tbody>
<tr>
<td>· <strong>Contact:</strong></td>
</tr>
<tr>
<td>Dr. Stefan Prigemeyer</td>
</tr>
<tr>
<td>Phone (+)49 (0)731/944-2794</td>
</tr>
<tr>
<td>· <strong>Date of preparation / last revision</strong> 02/02/2018 / 8</td>
</tr>
<tr>
<td>· * Data compared to the previous version altered.</td>
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</table>