1 Identification

1.1 Product identifier
- Trade name: Wieland G05

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 G05

- Components:
  
  | CAS: 7440-50-8  | copper | 83.0-87.0% |
  | EINECS: 231-159-6 |      |           |
  | RTECS: GL 5325000 |      |           |
  
  | CAS: 7440-31-5  | tin   | 4.0-6.0%  |
  | EINECS: 231-141-8 |      |           |
  | RTECS: XP 7320000 |      |           |
  
  | CAS: 7439-92-1  | lead  | 4.0-6.0%  |
  | EINECS: 231-100-4 |      |           |
  | RTECS: OF 7525000 |      |           |
  
  | CAS: 7440-02-0  | nickel | 0-2.0%    |
  | EINECS: 231-111-4 |      |           |
  
  | CAS: 7440-66-6  | zinc  | 4.0-6.0%  |
  | EINECS: 231-175-3 |      |           |
  | RTECS: ZG 8600000 |      |           |

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.
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

8.1 Control parameters
Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>PEL</th>
<th>Long-term value: 1 0.1** mg/m³ as Cu</th>
<th>REL</th>
<th>Long-term value: 1 0.1** mg/m³ as Cu</th>
<th>TLV</th>
<th>Long-term value: 1 0.2** mg/m³ *dusts and mists; **fume; as Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>PEL</td>
<td>Long-term value: 1 0.1** mg/m³ as Cu</td>
<td>REL</td>
<td>Long-term value: 1 0.1** mg/m³ as Cu</td>
<td>TLV</td>
<td>Long-term value: 1 0.2** mg/m³ *dusts and mists; **fume; as Cu</td>
</tr>
<tr>
<td>7440-31-5 tin</td>
<td>PEL</td>
<td>Long-term value: 2 mg/m³ metal</td>
<td>REL</td>
<td>Long-term value: 2 mg/m³</td>
<td>TLV</td>
<td>Long-term value: 2 mg/m³ metal</td>
</tr>
<tr>
<td>7439-92-1 lead</td>
<td>PEL</td>
<td>Long-term value: 0.05* mg/m³ *see 29 CFR 1910.1025</td>
<td>REL</td>
<td>Long-term value: 0.05* mg/m³ *8-hr TWA ;See PocketGuide App.C</td>
<td>TLV</td>
<td>Long-term value: 0.05* mg/m³ *and inorganic compounds, as Pb; BEI</td>
</tr>
<tr>
<td>7440-02-0 nickel</td>
<td>PEL</td>
<td>Long-term value: 1 mg/m³</td>
<td>REL</td>
<td>Long-term value: 0.015 mg/m³ as Ni; See Pocket Guide App. A</td>
<td>TLV</td>
<td>Long-term value: 1.5* mg/m³ elemental, *inhalable fraction</td>
</tr>
</tbody>
</table>
Trade name: **Wieland G05**

44.0 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>Ceiling limit</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>Long-term value: 5 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: 15* mg/m³</td>
<td>Ceiling limit value: 15* mg/m³</td>
<td>Short-term value: 10* mg/m³</td>
</tr>
<tr>
<td></td>
<td>*dust only **fume</td>
<td>Long-term value: 2* mg/m³</td>
<td>Ceiling limit value: 2* mg/m³</td>
<td>Long-term value: 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: copper red
    - Odor: Odorless
    - Odor threshold: Not determined.

- Change in condition
  - Melting point/Melting range: 860-930 °C (1580-1706 °F) (Lit.)
  - Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.
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 2B
  - 7440-02-0 nickel 2B

- **NTP (National Toxicology Program)**
  - 7439-92-1 lead R
  - 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.
  - 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.
Trade name: Wieland G05

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.