1 Identification

· 1.1 Product identifier
  · Trade name: Wieland GA9

· 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 enviroment.

· 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 GA9

- Components:

| CAS: 7440-50-8 | RTECS: GL 5325000 | copper | 70.0-78.0% |
| EINECS: 231-159-6 | | | |
| CAS: 7439-92-1 | RTECS: OF 7525000 | lead | 18.0-23.0% |
| EINECS: 231-100-4 | | | |
| CAS: 7440-31-5 | RTECS: XP 7320000 | tin | 4.0-6.0% |
| EINECS: 231-141-8 | | | |
| CAS: 7440-02-0 | EINECS: 231-111-4 | nickel | 0.5-2.5% |

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 stabley 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.
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 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>Long-term value: 1* 0.1** mg/m³ as Cu</td>
<td>Long-term value: 1* 0.1** mg/m³ as Cu</td>
<td>Long-term value: 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</td>
</tr>
<tr>
<td>7439-92-1 lead</td>
<td>Long-term value: 0.05* mg/m³ *see 29 CFR 1910.1025</td>
<td>Long-term value: 0.05* mg/m³ *8-hr TWA ;See PocketGuide App.C</td>
<td>Long-term value: 0.05* mg/m³ *and inorganic compounds, as Pb; BEI</td>
</tr>
<tr>
<td>7440-31-5 tin</td>
<td>Long-term value: 2 mg/m³ metal</td>
<td>Long-term value: 2 mg/m³ metal</td>
<td>Long-term value: 2 mg/m³ metal</td>
</tr>
<tr>
<td>7440-02-0 nickel</td>
<td>Long-term value: 1 mg/m³ elemental</td>
<td>Long-term value: 0.015 mg/m³ as Ni; See Pocket Guide App. A</td>
<td>Long-term value: 1.5* mg/m³ elemental, *inhalable fraction</td>
</tr>
</tbody>
</table>
Trade name: **Wieland GA9**

### 44.0 Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Substance</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>10 µg/100 ml</td>
<td></td>
<td>blood</td>
<td>not critical</td>
<td>Lead (women of child bearing potential)</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: 915-980 °C (1679-1796 °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):** 9.2 g/cm³ (76.774 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.
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

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th>2B</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1 lead</td>
<td>2B</td>
</tr>
<tr>
<td>7440-02-0 nickel</td>
<td>2B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1 lead</td>
<td>R</td>
</tr>
<tr>
<td>7440-02-0 nickel</td>
<td>R</td>
</tr>
</tbody>
</table>

- 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

- **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
    - 7439-92-1 lead
    - 7440-02-0 nickel

  - TSCA (Toxic Substances Control Act):
    - All ingredients are listed.

  - 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

- **Carcinogenicity categories**

  - EPA (Environmental Protection Agency)
    - 7440-50-8 copper
    - 7439-92-1 lead

  - TLV (Threshold Limit Value established by ACGIH)
    - 7439-92-1 lead
Trade name: Wieland GA9

<table>
<thead>
<tr>
<th>7440-02-0 nickel</th>
<th>A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>· NIOSH-Ca (National Institute for Occupational Safety and Health)</td>
<td></td>
</tr>
<tr>
<td>· Chemical safety assessment void.</td>
<td></td>
</tr>
</tbody>
</table>

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 / 6
· * Data compared to the previous version altered.