1 Identification

· 1.1 Product identifier
  · Trade name: Wieland-S34

· 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.: +49 731 944 0
    Fax: +49 731 944 2772
  · Information department:
    Environment & Management Systems
    stefan.priggemeyer@wieland.com
  · 1.4 Emergency telephone number:
    Factory security offices
    Phone: +49 731 944 2794 (Monday - Friday from 9 a.m. to 4 p.m.)

2 Hazard(s) identification

· 2.1 Classification of the substance or mixture
  · Classification according to Regulation (EC) No 1272/2008 (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: C67340
Trade name: Wieland-S34

- Information:
  The classifications listed below reflect the classification of the relevant alloying constituents and are only for information.
  Mentioned percentages are references values.
- Components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>RTECS</th>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>GL 5325000</td>
<td>copper</td>
<td>60.0-63.5%</td>
</tr>
<tr>
<td>7440-66-6</td>
<td>231-175-3</td>
<td>ZG 8600000</td>
<td>zinc</td>
<td>Balance%</td>
</tr>
<tr>
<td>7439-96-5</td>
<td>231-105-1</td>
<td>OO 9275000</td>
<td>manganese</td>
<td>1.5-2.0%</td>
</tr>
<tr>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>BD 0330000</td>
<td>aluminium</td>
<td>0.50-1.0%</td>
</tr>
<tr>
<td>7440-21-3</td>
<td>231-130-8</td>
<td>VW 0400000</td>
<td>silicon</td>
<td>0.50-1.0%</td>
</tr>
<tr>
<td>7439-89-6</td>
<td>231-096-4</td>
<td>NO 4565500</td>
<td>iron</td>
<td>0.20-0.7%</td>
</tr>
<tr>
<td>7440-02-0</td>
<td>231-111-4</td>
<td></td>
<td>nickel</td>
<td>0.20-0.6%</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>231-100-4</td>
<td>OF 7525000</td>
<td>lead</td>
<td>max. 0.10%</td>
</tr>
</tbody>
</table>

4 First-aid measures

- 4.1 Description of first aid measures
  - General information:
    First Aid information refer to any dust which is generated.
    The mixture in solid form does not pose any significant health hazard. However, melting or activates which produce metal dust, smoke or fumes can cause that metal dust enter the body in harmful amounts.
  - 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.
49.0

· 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:
Collect the material and if necessary dispose it as waste according to section 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.
· 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: Store in dry conditions.
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

- **Components with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7439-96-5 manganese</strong></td>
<td>Ceiling limit value: 5 mg/m³ as Mn</td>
<td>Short-term value: 3 mg/m³ Long-term value: 1 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><strong>7429-90-5 aluminium</strong></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>
<tr>
<td><strong>7439-92-1 lead</strong></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>
</tbody>
</table>

- **Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>Component</th>
<th>BEI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7439-92-1 lead</strong></td>
<td>30 µg/100 ml Medium: blood Time: not critical Parameter: Lead</td>
</tr>
<tr>
<td></td>
<td>10 µg/100 ml Medium: blood Time: not critical Parameter: Lead (women of child bearing potential)</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. of page 3)
Trade name: Wieland-S34

8.2 Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures:
    Keep away from foodstuffs, beverages and feed.
    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.
  - Material of gloves: Neoprene or leather
  - 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: 840-885 °C (1544-1625 °F)
  - 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): 8.15 g/cm³ (68.01175 lbs/gal)
- 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.
49.0 · 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

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

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-02-0 nickel</td>
</tr>
<tr>
<td>7439-92-1 lead</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.
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: Void
- ADR, ADN, IMDG, IATA: Void

14.3 Transport hazard class(es)
- DOT, ADR, ADN, IMDG, IATA: Void
- Class: Void

14.4 Packing group
- DOT, ADR, IMDG, IATA: Void

14.5 Environmental hazards:
- Not applicable.

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

(Contd. on page 8)
# Safety Data Sheet

## acc. to OSHA HCS

**Printing date**: 11/27/2019  
**Reviewed on**: 11/27/2019  
**Version**: No. 1

**Trade name:** Wieland-S34

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
<th>TSCA Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>7429-90-5</td>
<td>aluminium</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7440-02-0</td>
<td>nickel</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>lead</td>
<td>ACTIVE</td>
</tr>
</tbody>
</table>

### · TSCA (Toxic Substances Control Act):

<table>
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</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>copper</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7440-66-6</td>
<td>zinc</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7439-96-5</td>
<td>manganese</td>
<td>ACTIVE</td>
</tr>
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<td>7429-90-5</td>
<td>aluminium</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7440-21-3</td>
<td>silicon</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7439-89-6</td>
<td>iron</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7440-02-0</td>
<td>nickel</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>lead</td>
<td>ACTIVE</td>
</tr>
</tbody>
</table>

### · Hazardous Air Pollutants

<table>
<thead>
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<th>CAS No.</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-96-5</td>
<td>manganese</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>lead</td>
</tr>
</tbody>
</table>

### · Proposition 65

### · Chemicals known to cause cancer:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-02-0</td>
<td>nickel</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>lead</td>
</tr>
</tbody>
</table>

### · Chemicals known to cause reproductive toxicity for females:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1</td>
<td>lead</td>
</tr>
</tbody>
</table>

### · Chemicals known to cause reproductive toxicity for males:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1</td>
<td>lead</td>
</tr>
</tbody>
</table>

### · Chemicals known to cause developmental toxicity:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>7439-92-1</td>
<td>lead</td>
</tr>
</tbody>
</table>

### · Cancerrogenicity categories

#### · EPA (Environmental Protection Agency)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>copper</td>
<td>D</td>
</tr>
<tr>
<td>7440-66-6</td>
<td>zinc</td>
<td>D, I, II</td>
</tr>
<tr>
<td>7439-96-5</td>
<td>manganese</td>
<td>D</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>lead</td>
<td>B2</td>
</tr>
</tbody>
</table>

#### · TLV (Threshold Limit Value established by ACGIH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
<th>TLV Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>7429-90-5</td>
<td>aluminium</td>
<td>A4</td>
</tr>
<tr>
<td>7440-02-0</td>
<td>nickel</td>
<td>A5</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>lead</td>
<td>A3</td>
</tr>
</tbody>
</table>

#### · NIOSH-Ca (National Institute for Occupational Safety and Health)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical</th>
<th>NIOSH-Ca</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-02-0</td>
<td>nickel</td>
<td>US</td>
</tr>
</tbody>
</table>
16 Other information

- Chemical safety assessment void.

- 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: Environment & Management Systems

- Contact:
  
  Dr. Stefan Priggemeyer
  
  Phone (+)49 (0)731/944-2794

- Date of preparation / last revision 11/27/2019 / -