1 Identification

· 1.1 Product identifier
  Trade name: Wieland-GB1
· 1.2 Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.
· Application of the article: Semi-finished product
· 1.3 Details of the supplier of the safety data sheet
  Manufacturer/Supplier:
  Wieland-Werke AG
  Graf-Arco-Str. 36
  89079 Ulm
  Information department:
  Associations & Management Systems
  stefan.priggemeyer@wieland.com
· 1.4 Telephone number: +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):
  GHS08 Health hazard
  Carc. 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.
  Repr. 1A H360 May damage fertility or the unborn child.
  STOT RE 1 H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

  ! GHS07
  Skin Sens. 1 H317 May cause an allergic skin reaction.
· 2.2 Label elements:
· Labelling according to Regulation (EC) No 1272/2008:
  The product is classified and labeled according to the CLP regulation.
· Hazard pictograms: GHS07, GHS08
· Signal word: Danger
· Hazard statements:
  H317 May cause an allergic skin reaction.
  H351 Suspected of causing cancer. Route of exposure: Inhalation.
  H360 May damage fertility or the unborn child.
  H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
· Precautionary statements
  P260 Do not breathe dust/fume/gas/mist/vapors/spray.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
3 Composition/information on ingredients

3.2 Chemical characterization: Mixtures
- Description: Metal in massive form.
- Material Code (CEN/TS 13388): CuSn12Ni2-C
- Material number (CEN/TS 13388): CC484K
- UNS-number: -
- Information:
  The classifications listed below reflect the classification of the relevant alloying constituents and are only for information. Mentioned percentages are references values.

Alloy components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>copper</td>
<td>84.5-87.5%</td>
</tr>
<tr>
<td>7440-31-5</td>
<td>tin</td>
<td>11.0-13.0%</td>
</tr>
<tr>
<td>7440-02-0</td>
<td>nickel</td>
<td>1.5-2.5%</td>
</tr>
<tr>
<td>7439-92-1</td>
<td>lead</td>
<td>0-0.3%</td>
</tr>
<tr>
<td>7723-14-0</td>
<td>phosphorus</td>
<td>0.05-0.4%</td>
</tr>
<tr>
<td>231-111-4</td>
<td>Carc. 2, H351; STOT RE 1, H372; Skin Sens. 1, H317</td>
<td></td>
</tr>
<tr>
<td>231-768-7</td>
<td>Flam. Liq. 2, H225; Flam. Sol. 1, H228; Aquatic Chronic 3, H412</td>
<td></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 activities which produce metal dust, smoke or fumes can cause that metal dust enter the body in harmful amounts.
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.

6.1 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.

7.1 Precautions for safe handling: 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.
Trade name: **Wieland-GB1**

7.3 Specific end use(s): No further relevant information available.

### 8 Exposure controls/personal protection

8.1 Control parameters

**Additional information about design of technical systems:** No further data; see item 7.

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

#### 7440-50-8 copper

- PEL Long-term value: 1* 0.1** mg/m³ as Cu *dusts and mists **fume
- REL Long-term value: 1* 0.1** mg/m³ as Cu *dusts and mists **fume
- TLV Long-term value: 1* 0.2** mg/m³ *dusts and mists; **fume; as Cu

#### 7440-31-5 tin

- PEL Long-term value: 2 mg/m³ metal
- REL Long-term value: 2 mg/m³
- TLV Long-term value: 2* mg/m³ metal, *inh. fraction

#### 7440-02-0 nickel

- PEL Long-term value: 1 mg/m³
- REL Long-term value: 0.015 mg/m³ as Ni; See Pocket Guide App. A
- TLV Long-term value: 1.5* mg/m³ elemental, *inhalable fraction, A5, BEI

#### 7439-92-1 lead

- PEL Long-term value: 0.05* mg/m³ *see 29 CFR 1910.1025
- REL Long-term value: 0.05* mg/m³ *8-hr TWA ;see PocketGuide App.C
- TLV Long-term value: 0.05* mg/m³ *and inorganic compds., as Pb; BEI, A3

**Ingredients with biological limit values:**

#### 7440-02-0 nickel

- BEI 5 μg/L
  - Medium: urine
  - Time: post-shift at end of workweek
  - Parameter: Nickel (background)

- 30 μg/L
  - Medium: urine
  - Time: post-shift at end of workweek
  - Parameter: Nickel (background)
Trade name: Wieland-GB1

7439-92-1 lead
BEI 200 µg/L
  Medium: blood
  Time: not critical
  Parameter: Lead

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

· 8.2 Exposure controls
  · 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:
    · Copper red
  · Odor:
    · Odorless
  · Odor threshold:
    · Not determined.

· Change in condition
  · Melting point/Melting range: 730-1010 °C (1346-1850 °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):
    · 8.9 g/cm³ (74.2705 lbs/gal)
  · Solubility in / Miscibility with water at 20 °C (68 °F):
    · Not soluble.

· Solvent separation test
  · VOC content: 0.00 %
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

- **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**: May cause an allergic skin reaction.
- **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 Aquatic toxicity**: No further relevant information available.
Trade name: Wieland-GB1

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.
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:
   Must not be disposed of together with household garbage.
   Contact manufacturer for recycling information.

14 Transport information
14.1 UN-Number
   DOT, ADR, IMDG, IATA: Void
14.2 UN proper shipping name
   DOT, ADR, 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:
   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):
   7723-14-0 phosphorus
Section 313 (Specific toxic chemical listings):
7440-50-8 copper
7440-02-0 nickel
7723-14-0 phosphorus
7439-92-1 lead

TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.

Hazardous Air Pollutants:
7723-14-0 phosphorus
7439-92-1 lead

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

Cancerogenity categories
EPA (Environmental Protection Agency):
7440-50-8 copper: D
7723-14-0 phosphorus: D
7439-92-1 lead: B2

TLV (Threshold Limit Value established by ACGIH):
7440-02-0 nickel: A5
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: Associations & Management Systems
Contact:
Dr. Stefan Priggemeyer
Email: stefan.priggemeyer@wieland.com

* Data compared to the previous version altered.