NS106
Technical Datasheet

Nickel Silver Alloy

**Typical Applications**
- Telecommunications
- Architectural panelling
- Pressure sensitive devices
- Camera parts
- Jewellery
- Relay and contact springs
- Connectors & connector pins
- Musical instruments

**Product Description**
NS106 is a nickel silver alloy which contains an alpha phase structure. The alloy offers good corrosion resistance to many organic products, waters and corrosive atmospheres but poor resistance to oxidising acids. NS106 has excellent cold formability and is widely used in the production of telecommunications equipment. Due to the alloy's aesthetically appealing colour (silver, blue & white), NS106 is also used for architectural purposes in panelling and fascias.

**Key features**
- Good corrosion resistance
- Excellent cold working properties
- Attractive silver-blue-white colour
- Not resistant to oxidising acids
- Much lower sensitivity to stress corrosion cracking than in brass

**Corrosion resistance**
Good corrosion resistance

**Related material specifications**
- CuNi18Zn20 • CW409J

**Availability**
Bar, sheet.

**Weldability**
Can be brazed or welded.

**Machinability**
Poor.

**Chemical Composition (weight %)**

<table>
<thead>
<tr>
<th></th>
<th>Cu</th>
<th>Ni</th>
<th>Mn</th>
<th>Zn</th>
</tr>
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<tbody>
<tr>
<td>min</td>
<td>60.0</td>
<td>17.0</td>
<td>Rem</td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>65.0</td>
<td>19.0</td>
<td>0.50</td>
<td>Rem</td>
</tr>
</tbody>
</table>

**Physical Properties**

| Density at 20 °C | 8375 | 1060 - 1110 g/cm³ |
| Coefficient of thermal expansion at: | 0.000 015 | 0.000 016 °C |
| 20 to 100°C | 0.10 | per °C |
| 20 to 300°C | 15 | cal/g °C |
| Specific heat (thermal capacity) at 20°C | 17 | Btu ft² ft² h °F |
| Thermal conductivity at: | | Btu ft² ft² h °F |
| 20°C | | |
| 200°C | | |

**Technical Assistance**
Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

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