**NS103**

**Technical Datasheet**

**Nickel Silver Alloy**

**Typical Applications**
- Costume jewellery
- Nameplates
- Surgical instruments
- Light fittings
- Optical fittings
- Tableware
- Door kicking plates
- Trophies

**Product Description**
NS103 is a wrought nickel silver alloy containing 60-65% copper, with an alpha phase structure. The material is generally suitable for severe forming operations. NS103, which is slightly yellow in colour, offers good corrosion resistance in marine and rural environments. The alloy has good cold working properties but hot working properties are poor. NS103 is used in a diverse range of applications from tableware to surgical instruments.

**Key features**
- Suitable for severe forming operations
- Excellent cold working properties
- Poor hot working characteristics
- Good corrosion resistance to rural & marine atmospheres

**Corrosion resistance**
Good corrosion resistance

**Related material specifications**
- NS103
- CuNi10Zn27
- CW401J

**Availability**
Bar, sheet.

**Weldability**
Excellent soldering & brazing. Good oxy-acetylene welding.

**Machinability**
Good.

**Chemical Composition (weight %)**

<table>
<thead>
<tr>
<th></th>
<th>Cu</th>
<th>Ni</th>
<th>Mn</th>
<th>Zn</th>
</tr>
</thead>
<tbody>
<tr>
<td>min</td>
<td>61.0</td>
<td>9.0</td>
<td>Rem</td>
<td></td>
</tr>
<tr>
<td>max</td>
<td>65.0</td>
<td>11.0</td>
<td>0.50</td>
<td>Rem</td>
</tr>
</tbody>
</table>

**Mechanical Properties**

<table>
<thead>
<tr>
<th></th>
<th>Tensile Strength</th>
<th>Proof Stress 0.1%</th>
<th>Elongation on 2in.</th>
<th>Hardness Vickers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annealed condition</td>
<td>41 Kg/mm²</td>
<td>15.10 Kg/mm²</td>
<td>43%</td>
<td>85 HV</td>
</tr>
<tr>
<td>Extra hard cold rolled</td>
<td>68 Kg/mm²</td>
<td>56.10 Kg/mm²</td>
<td>3%</td>
<td>201 HV</td>
</tr>
</tbody>
</table>

**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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