Nickel

This very pure nickel alloy with good electrical properties and good thermal conductivity is well suited for applications in the electrical industry. Nickel shows high tensile strength and very good corrosion resistance. Nickel can be used at up to 600°C in air.

**COMPOSITION OF MATERIAL**

- Ni: ≥ 99,6%  
- Cu: ≤ 0,01%  
- Fe: ≤ 1%  
- C: ≤ 0,02%  
- Mn: ≤ 0,35%

**PHYSICAL PROPERTIES**

- Density: 8.9 g/cm³
- Melting point: 1445 °C
- Electrical conductivity: 11 m/Ω mm² (at 20 °C R370)
- Electrical resistivity: 0,09 Ω mm²/m (at 20 °C R370)
- Thermal conductivity: 79 W/K m (at 20 °C)
- Thermal capacity: 0,456 J/g K (at 20 °C)
- Coefficient of thermal expansion (linear): 13·10⁻⁶/K (at 20 to 300 °C)
- Modulus of elasticity (tensile): 205 GPa (at 20 °C R370)

**MANUFACTURING PROGRAM**

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>WIDTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,01 - 0,15 mm</td>
<td>1 - 640 mm</td>
</tr>
</tbody>
</table>

not all combinations of thickness and width are available

**TEMPER ACCORDING TO DIN EN 17750**

<table>
<thead>
<tr>
<th>Temper</th>
<th>Tensile strength Rm in MPa</th>
<th>Yield strength Rp0,2 in MPa</th>
<th>Elongation in % Lo = 100 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>R370</td>
<td>≥ 490</td>
<td>&lt; 380</td>
<td>&gt; 10</td>
</tr>
<tr>
<td>R490</td>
<td>≥ 560</td>
<td>&gt; 340</td>
<td>&lt; 15</td>
</tr>
<tr>
<td>R590</td>
<td>≥ 590</td>
<td>&gt; 550</td>
<td>&lt; 3</td>
</tr>
</tbody>
</table>

The values in the table are valid only for foils with thickness > 0,1 mm.

For further information please visit our website: [https://www.schlenk.com](https://www.schlenk.com)