45/55 Ni Cu Electrical Resistance Wire

Key Features
Power resistors, shunts, thermocouples and wire-wound precision resistors having operating temperatures up to 400 °C (750 °F)

45/55 Ni Cu available in:-
- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

Packaging
- Coils
- Spools
- Bars or lengths

IMPORTANT
We will manufacture to your required mechanical properties.

key advantages to you, our customer
- Range: 0.025mm to 21mm (.001" to .827")
- Order: 3m to 3t (10 ft to 6000 Lbs)
- Delivery: within 3 weeks
- Wire to your spec
- E.M.S available
- Technical support
45/55 NiCu Electrical Resistance Wire

<table>
<thead>
<tr>
<th>Chemical Composition</th>
<th>Designations</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element</td>
<td>Min %</td>
<td>Max %</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>0.10</td>
</tr>
<tr>
<td>Si</td>
<td>-</td>
<td>0.50</td>
</tr>
<tr>
<td>Mn</td>
<td>-</td>
<td>1.00</td>
</tr>
<tr>
<td>Fe</td>
<td>-</td>
<td>1.00</td>
</tr>
<tr>
<td>Cu</td>
<td>55.00 nominal</td>
<td></td>
</tr>
<tr>
<td>Ni</td>
<td>BAL</td>
<td></td>
</tr>
</tbody>
</table>

- **Density**: 8.89 g/cm³ 0.321 lb/in³
- **Electrical Resistivity at 20 °C**: 49 microhm * cm 295 ohm * Circ * mil/ft
- **Maximum Operating Temperature**: 400 °C 750 °F
- **Melting Point**: 1270 °C 2320 °F
- **Coefficient of Expansion**: 14.7 µm/m °C (20 – 100 °C) 8.17 x 10⁻⁶ in/in °F (70 – 212 °F)

45/55 NiCu changes little in electrical resistance as temperature increases. It has a temperature-resistance factor of +0.00003/°C in the 20 – 100 °C range.