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")
- Delivery: within 3 weeks
- Order 3m to 3t (10 ft to 6000 Lbs)
- Wire to your spec
- E.M.S available
- Technical support

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## Chemical Composition

<table>
<thead>
<tr>
<th>Element</th>
<th>Min %</th>
<th>Max %</th>
</tr>
</thead>
<tbody>
<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>
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<td>1.00</td>
</tr>
<tr>
<td>Fe</td>
<td>-</td>
<td>1.00</td>
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<tr>
<td>Ni</td>
<td>BAL</td>
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## Designations

| WNr. 2.0842 | AWS 181 |

## Typical Applications

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

### 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.