

## 45/55 Ni Cu Resistance Wire

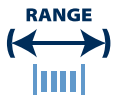
### Key Features

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

### IMPORTANT

We will manufacture to your required mechanical properties.

## key advantages to you, *our customer*



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 Ni Cu available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

### Packaging

- Coils
- Spools
- Bars or lengths



# 45/55 Ni Cu Resistance Wire



Chemical Composition			Designations	Typical Applications
Element	Min %	Max %	W.Nr. 2.0842 AWS 181	Power resistors, shunts, thermocouples and wire-wound precision resistors having operating temperatures up to 400 °C (750 °F)
C	-	0.10		
Si	-	0.50		
Mn	-	1.00		
Fe	-	1.00		
Cu	55.00 nominal			
Ni	BAL			

<b>Density</b>	8.89 g/cm <sup>3</sup>	0.321 lb/in <sup>3</sup>
<b>Electrical Resistivity at 20 °C</b>	49 microhm * cm	295 ohm * Circ * mil/ft
<b>Maximum Operating Temperature</b>	400 °C	750 °F
<b>Melting Point</b>	1270 °C	2320 °F
<b>Coefficient of Expansion</b>	14.7 µm/m °C (20 – 100 °C)	8.17 x 10 <sup>-6</sup> 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.