

## California Fine Wire Nickel Alloy 180 Copper Nickel Resistance Wire

Category : Metal , Electronic/Magnetic Alloy , Nonferrous Metal , Copper Alloy

### Material Notes:

All values may vary dependent on specific design and usage Capabilities: WireRibbonSquareInsulatedPlated Information provided by California Fine Wire.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_California-Fine-Wire-Nickel-Alloy-180-Copper-Nickel-Resistance-Wire.php](http://www.lookpolymers.com/polymer_California-Fine-Wire-Nickel-Alloy-180-Copper-Nickel-Resistance-Wire.php)

Physical Properties	Metric	English	Comments
Density	8.89 g/cc	0.321 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	345 MPa	50000 psi	Annealed
	689 MPa	100000 psi	Hard

Thermal Properties	Metric	English	Comments
CTE, linear	15.8 $\mu\text{m}/\text{m}\cdot\text{C}$	8.78 $\mu\text{in}/\text{in}\cdot\text{F}$	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	0.385 J/g-°C	0.0920 BTU/lb-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	35.0 W/m-K	243 BTU-in/hr-ft <sup>2</sup> -°F	
Melting Point	1100 °C	2012 °F	
Maximum Service Temperature, Air	1000 °C	1830 °F	Operating Temperature

Component Elements Properties	Metric	English	Comments
Copper, Cu	78 %	78 %	
Nickel, Ni	22 %	22 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000299 ohm-cm	0.0000299 ohm-cm	3% tolerance on sizes below 0.02, 5% tolerance on sizes above 0.02

Descriptive Properties	Value	Comments
Magnetic	None	

Temperature Coefficient of Resistance Descriptive Properties	0.00018 ohms/ohm-°C Value	0-100°C Comments
Thermal EMF vs. Copper	-0.037	

## Contact Songhan Plastic Technology Co.,Ltd.

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