

California Fine Wire Alloy 52 Nickel Iron Alloy

Category : Metal , Ferrous Metal , Nonferrous Metal , Nickel Alloy

Material Notes:

All values may vary dependent on specific design and usageCapabilities: WireRibbonSquareInsulatedPlatedInformation provided by California Fine Wire.

Order this product through the following link:
http://www.lookpolymers.com/polymer_California-Fine-Wire-Alloy-52-Nickel-Iron-Alloy.php

Physical Properties	Metric	English	Comments
Density	8.25 g/cc	0.298 lb/in³	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	483 MPa	70000 psi	Annealed
	896 MPa	130000 psi	Stress relieved
	1030 MPa	150000 psi	Hard
Tensile Strength, Yield	276 MPa	40000 psi	Annealed
	552 MPa	80000 psi	Stress relieved
	689 MPa	100000 psi	Hard

Thermal Properties	Metric	English	Comments
CTE, linear	9.80 µm/m-°C	5.44 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	0.481 J/g-°C	0.115 BTU/lb-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	13.2 W/m-K	91.6 BTU-in/hr-ft²-°F	
Melting Point	1430 °C	2600 °F	

Component Elements Properties	Metric	English	Comments
Iron, Fe	50 %	50 %	
Nickel, Ni	50 %	50 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000429 ohm-cm	0.0000429 ohm-cm	3% tolerance on sizes below 0.02, 5%

Electrical Properties	Metric	English	tolerance on sizes above 0.02 Comments
Descriptive Properties		Value	Comments
Magnetic		Strong	
Temperature Coefficient of Resistance		0.0035 ohms/ohm-°C	0-100°C

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