

Hoskins Manufacturing Chromel® Thermocouple Wire

Category : Metal , Nonferrous Metal , Nickel Alloy

Material Notes:

Used in Type E and Type K thermocouples. All values may vary dependent on specific design and usage. Chromel® is a registered trade name of Hoskins Manufacturing. Capabilities: Wire, Ribbon, Square, Insulated, Plated. Information provided by California Fine Wire.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hoskins-Manufacturing-Chromel-Thermocouple-Wire.php

Physical Properties	Metric	English	Comments
Density	8.730 g/cc	0.3154 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	655 MPa	95000 psi	Annealed
	1000 MPa	145000 psi	Stress relieved
	1030 MPa	150000 psi	Hard

Thermal Properties	Metric	English	Comments
CTE, linear	13.1 $\mu\text{m/m-}^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	7.28 $\mu\text{in/in-}^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	
Specific Heat Capacity	0.448 J/g- $^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	0.107 BTU/lb- $^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	
Thermal Conductivity	19.2 W/m-K	133 BTU-in/hr-ft ² - $^{\circ}\text{F}$	
Melting Point	1430 $^{\circ}\text{C}$	2606 $^{\circ}\text{F}$	
Maximum Service Temperature, Air	1260 $^{\circ}\text{C}$	2300 $^{\circ}\text{F}$	Operating Temperature

Component Elements Properties	Metric	English	Comments
Chromium, Cr	10 %	10 %	
Nickel, Ni	90 %	90 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000707 ohm-cm	0.0000707 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	0.00032 ohms/ohm-°C	0-100°C

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