

Hoskins Manufacturing Alumel® Thermocouple Wire Type K - Std

Category : Metal , Nonferrous Metal , Nickel Alloy

Material Notes:

All values may vary dependent on specific design and usage. Alumel® 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-Alumel-Thermocouple-Wire-Type-K-Std.php

Physical Properties	Metric	English	Comments
Density	8.61 g/cc	0.311 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	586 MPa	85000 psi	Annealed
	1030 MPa	150000 psi	Stress relieved
	1170 MPa	170000 psi	Hard

Thermal Properties	Metric	English	Comments
CTE, linear	12.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	6.67 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
Specific Heat Capacity	0.523 J/g- $\text{Å}^\circ\text{C}$	0.125 BTU/lb- $\text{Å}^\circ\text{F}$	
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	29.7 W/m-K	206 BTU-in/hr-ft ² - $\text{Å}^\circ\text{F}$	
Melting Point	1260 $\text{Å}^\circ\text{C}$	2300 $\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	1260 $\text{Å}^\circ\text{C}$	2300 $\text{Å}^\circ\text{F}$	Operating Temperature

Component Elements Properties	Metric	English	Comments
Aluminum, Al	2.0 %	2.0 %	
Manganese, Mn	2.0 %	2.0 %	
Nickel, Ni	95 %	95 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000294 ohm-cm	0.0000294 ohm-cm	3% tolerance on sizes below 0.02, 5% tolerance on sizes above 0.02

Electrical Properties Descriptive Properties	Metric	English Value	Comments Comments
Magnetic		Strong	
Temperature Coefficient of Resistance		0.00188 ohms/ohm-°C	0-100°C

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