

Special Metals NIMONIC® Alloy PE16

Category : Metal , Nonferrous Metal , Nickel Alloy , Superalloy

Material Notes:

A precipitation-hardenable nickel-iron-chromium alloy with an addition of molybdenum for solid-solution strengthening. It has good strength and oxidation resistance at temperatures to about 1380°F (750°C). The alloy is designed to provide a precipitation-hardened material having excellent hot-working, cold-working, and welding characteristics. Used for gas-turbine components and in nuclear reactors. Standard product forms are round, flats, extruded section, sheet, strip, tube, and wire. Data provided by the manufacturer, Special Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Special-Metals-NIMONIC-Alloy-PE16.php

Physical Properties	Metric	English	Comments
Density	8.02 g/cc	0.290 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	720 MPa	104000 psi	Precipitation Hardened prior to test
	@Temperature 550 °C	@Temperature 1020 °F	
	900 MPa	131000 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength, Yield	450 MPa	65300 psi	Precipitation Hardened. Value at room temperature
	@Strain 0.200 %	@Strain 0.200 %	
	380 MPa	55100 psi	Precipitation Hardened prior to test
	@Strain 0.200 %, Temperature 550 °C	@Strain 0.200 %, Temperature 1020 °F	
Elongation at Break	28 %	28 %	Precipitation Hardened
	30 %	30 %	
	@Temperature 550 °C	@Temperature 1020 °F	Precipitation Hardened prior to test.

Thermal Properties	Metric	English	Comments
CTE, linear	13.8 µm/m-°C	7.67 µin/in-°F	
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
Specific Heat Capacity	0.544 J/g-°C	0.130 BTU/lb-°F	

Thermal Properties	Metric	English	Comments
Melting Point	1310 - 1355 Â°C	2390 - 2471 Â°F	
Solidus	1310 Â°C	2390 Â°F	
Liquidus	1355 Â°C	2471 Â°F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	1.1 - 1.3 %	1.1 - 1.3 %	
Boron, B	<= 0.0050 %	<= 0.0050 %	
Carbon, C	0.040 - 0.080 %	0.040 - 0.080 %	
Chromium, Cr	15.5 - 17.5 %	15.5 - 17.5 %	
Cobalt, Co	<= 2.0 %	<= 2.0 %	
Copper, Cu	<= 0.50 %	<= 0.50 %	
Iron, Fe	31 %	31 %	As remainder
Manganese, Mn	<= 0.20 %	<= 0.20 %	
Molybdenum, Mo	2.8 - 3.8 %	2.8 - 3.8 %	
Nickel, Ni	42 - 45 %	42 - 45 %	Including Cobalt
Silicon, Si	<= 0.50 %	<= 0.50 %	
Sulfur, S	<= 0.015 %	<= 0.015 %	
Titanium, Ti	1.1 - 1.3 %	1.1 - 1.3 %	
Zirconium, Zr	0.020 - 0.040 %	0.020 - 0.040 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000110 ohm-cm	0.000110 ohm-cm	
Magnetic Permeability	1.4	1.4	at 200 oersted (15.9 kA/m)

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China