Special Metals NIMONICÂ® Alloy PE11

Category : Metal , Nonferrous Metal , Nickel Alloy , Superalloy

Material Notes:

A nickel-iron-chromium alloy precipitation hardened by titanium and aluminum and solid-solution strengthened by an addition of molybdenum. It was developed as a high-strength sheet alloy for use at temperatures to 1020Â°F (550Â°C). The high iron content provides good workability and also relatively high tensile ductility, especially after welding. Used for components of gas turbines. Standard product forms are round, flats, extruded section, plate, sheet, 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-PE11.php

Physical Properties	Metric	English	Comments
Density	8.02 g/cc	0.290 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	950 MPa @Temperature 650 Â°C	138000 psi @Temperature 1200 Â°F	Precipitation Hardened prior to test
	1060 MPa @Temperature 23.0 Â°C	154000 psi @Temperature 73.4 Â°F	
Tensile Strength, Yield	700 MPa @Strain 0.200 %	102000 psi @Strain 0.200 %	Precipitation Hardened. Value at room temperature
	680 MPa @Strain 0.200 %, Temperature 650 Â°C	98600 psi @Strain 0.200 %, Temperature 1200 Â°F	Precipitation Hardened prior to test
Elongation at Break	20 %	20 %	Precipitation Hardened
	15 % @Temperature 650 Â°C	15 % @Temperature 1200 Â°F	Precipitation Hardened prior to test.

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.436 J/g-Â°C	0.104 BTU/lb-Â°F	
Melting Point	1280 - 1350 Â°C	2340 - 2460 Â°F	
Solidus	1280 Â°C	2340 Â°F	
Liquidus	1350 Â°C	2460 Â°F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	0.70 - 1.0 %	0.70 - 1.0 %	
Boron, B	<= 0.0010 %	<= 0.0010 %	
Carbon, C	0.030 - 0.080 %	0.030 - 0.080 %	
Chromium, Cr	17 - 19 %	17 - 19 %	
Cobalt, Co	<= 1.0 %	<= 1.0 %	
Copper, Cu	<= 0.50 %	<= 0.50 %	
Iron, Fe	32 %	32 %	As remainder
Manganese, Mn	<= 0.20 %	<= 0.20 %	
Molybdenum, Mo	4.75 - 5.75 %	4.75 - 5.75 %	
Nickel, Ni	37 - 41 %	37 - 41 %	
Silicon, Si	<= 0.50 %	<= 0.50 %	
Sulfur, S	<= 0.015 %	<= 0.015 %	
Titanium, Ti	2.2 - 2.5 %	2.2 - 2.5 %	
Zirconium, Zr	0.020 - 0.050 %	0.020 - 0.050 %	

Electrical Properties	Metric	English	Comments
Magnetic Permeability	1.021	1.021	at 300 oersted (23.9 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