

Special Metals NI-SPAN-CÂ® Alloy 902

Category : Metal , Superalloy , Iron Base

Material Notes:

A nickel-iron-chromium alloy made precipitation hardenable by additions of aluminum and titanium. The titanium content also helps provide a controllable thermoelastic coefficient, which is the alloy's outstanding characteristic. The alloy can be processed to have a constant modulus of elasticity at temperatures from -50Â°F to 150Â°F (-45 to 65Â°C). Used for precision springs, mechanical resonators, and other precision elastic components. Standard product forms are round, strip, tube, pipe, and wire. Data provided by the manufacturer, Special Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Special-Metals-NI-SPAN-C-Alloy-902.php

Physical Properties	Metric	English	Comments
Density	8.05 g/cc	0.291 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1210 MPa	175000 psi	Precipitation Hardened
Tensile Strength, Yield	760 MPa @Strain 0.200 %	110000 psi @Strain 0.200 %	Precipitation Hardened
Elongation at Break	25 %	25 %	Precipitation Hardened
Modulus of Elasticity	165 - 200 GPa	23900 - 29000 ksi	
Shear Modulus	62.0 - 69.0 GPa	8990 - 10000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	7.60 Âµm/m-Â°C @Temperature 20.0 - 100 Â°C	4.22 Âµin/in-Â°F @Temperature 68.0 - 212 Â°F	
Specific Heat Capacity	0.500 J/g-Â°C	0.120 BTU/lb-Â°F	
Thermal Conductivity	12.1 W/m-K	84.0 BTU-in/hr-ftÂ²-Â°F	
Melting Point	1450 - 1480 Â°C	2640 - 2700 Â°F	
Solidus	1450 Â°C	2640 Â°F	
Liquidus	1480 Â°C	2700 Â°F	

Component Elements Properties	Metric	English	Comments
-------------------------------	--------	---------	----------

Aluminum, Al Component Elements Properties	0.30 - 0.80 % Metric	0.30 - 0.80 % English	Comments
Carbon, C	<= 0.060 %	<= 0.060 %	
Chromium, Cr	4.9 - 5.75 %	4.9 - 5.75 %	
Iron, Fe	47 %	47 %	As remainder
Manganese, Mn	<= 0.80 %	<= 0.80 %	
Nickel, Ni	41 - 43.5 %	41 - 43.5 %	Including Cobalt
Phosphorous, P	<= 0.040 %	<= 0.040 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	<= 0.040 %	<= 0.040 %	
Titanium, Ti	2.2 - 2.75 %	2.2 - 2.75 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000102 ohm-cm	0.000102 ohm-cm	
Curie Temperature	190 Â°C	374 Â°F	

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