

Special Metals DURANICKEL[®] 301 (UNS N03301) Cold-Drawn Rod and Bar

Category : Metal , Nonferrous Metal , Nickel Alloy

Material Notes:

Tensile strength (ultimate and yield), hardness, and elongation values reported here are typical for Cold-Drawn Rod and Bar specifically. Other property values are typical of annealed DURANICKEL[®] alloy 301 or the alloy in general. Data provided by the manufacturer, Special Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Special-Metals-DURANICKEL-301-UNS-N03301-Cold-Drawn-Rod-and-Bar.php

Physical Properties	Metric	English	Comments
Density	8.19 g/cc	0.296 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	185 - 300	185 - 300	3000 kg
Hardness, Rockwell B	>= 90	>= 90	
Hardness, Rockwell C	<= 40	<= 40	
Tensile Strength, Ultimate	689 - 1030 MPa	100000 - 150000 psi	
Tensile Strength, Yield	414 - 896 MPa @Strain 0.200 %	60000 - 130000 psi @Strain 0.200 %	
Elongation at Break	15 - 35 %	15 - 35 %	
Modulus of Elasticity	207 GPa	30000 ksi	Tension
Poissons Ratio	0.31	0.31	
Fatigue Strength	319 MPa @# of Cycles 1.00e+8	46300 psi @# of Cycles 1.00e+8	rotating beam
Shear Modulus	76.0 GPa	11000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	13.0 $\mu\text{m/m-}^\circ\text{C}$ @Temperature 21.0 - 100 $^\circ\text{C}$	7.22 $\mu\text{in/in-}^\circ\text{F}$ @Temperature 69.8 - 212 $^\circ\text{F}$	Mean; aged
	14.0 $\mu\text{m/m-}^\circ\text{C}$ @Temperature 21.0 - 300 $^\circ\text{C}$	7.78 $\mu\text{in/in-}^\circ\text{F}$ @Temperature 69.8 - 572 $^\circ\text{F}$	Mean; aged
	14.7 $\mu\text{m/m-}^\circ\text{C}$	8.17 $\mu\text{in/in-}^\circ\text{F}$	

Thermal Properties	Metric	English	Comments
	@Temperature 21.0 - 500 Å°C	@Temperature 69.8 - 932 Å°F	
	16.6 Åµm/m-Å°C	9.22 Åµin/in-Å°F	Mean; aged
	@Temperature 21.0 - 900 Å°C	@Temperature 69.8 - 1650 Å°F	
Specific Heat Capacity	0.435 J/g-Å°C	0.104 BTU/lb-Å°F	
	@Temperature 20.0 - 100 Å°C	@Temperature 68.0 - 212 Å°F	
Thermal Conductivity	23.8 W/m-K	165 BTU-in/hr-ftÅ²-Å°F	Age Hardened
Melting Point	1400 - 1440 Å°C	2550 - 2620 Å°F	
Solidus	1400 Å°C	2550 Å°F	
Liquidus	1440 Å°C	2620 Å°F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	4.0 - 4.75 %	4.0 - 4.75 %	
Carbon, C	<= 0.30 %	<= 0.30 %	
Copper, Cu	<= 0.25 %	<= 0.25 %	
Iron, Fe	<= 0.60 %	<= 0.60 %	
Manganese, Mn	<= 0.50 %	<= 0.50 %	
Nickel, Ni	>= 93 %	>= 93 %	Including Cobalt
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	<= 0.010 %	<= 0.010 %	
Titanium, Ti	0.25 - 1.0 %	0.25 - 1.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000424 ohm-cm	0.0000424 ohm-cm	Aged
Curie Temperature	15.0 - 50.0 Å°C	59.0 - 122 Å°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