

## Special Metals DURANICKEL<sup>®</sup> 301 (UNS N03301) Spring Wire, Aged

Category : Metal , Nonferrous Metal , Nickel Alloy

### Material Notes:

Tensile strength (ultimate) and elongation values reported here are typical for Spring Wire, Aged specifically. Other property values are typical of aged DURANICKEL<sup>®</sup> 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-Spring-Wire-Aged.php](http://www.lookpolymers.com/polymer_Special-Metals-DURANICKEL-301-UNS-N03301-Spring-Wire-Aged.php)

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

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1380 - 1650 MPa	200000 - 240000 psi	
Elongation at Break	5.0 - 10 %	5.0 - 10 %	
Modulus of Elasticity	207 GPa	30000 ksi	Tension
Poissons Ratio	0.31	0.31	
Shear Modulus	76.0 GPa	11000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	13.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	7.22 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	Mean
	@Temperature 21.0 - 100 $\text{Å}^\circ\text{C}$	@Temperature 69.8 - 212 $\text{Å}^\circ\text{F}$	
	14.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	7.78 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	Mean
	@Temperature 21.0 - 300 $\text{Å}^\circ\text{C}$	@Temperature 69.8 - 572 $\text{Å}^\circ\text{F}$	
CTE, linear	14.7 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	8.17 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	Mean
	@Temperature 21.0 - 500 $\text{Å}^\circ\text{C}$	@Temperature 69.8 - 932 $\text{Å}^\circ\text{F}$	
CTE, linear	16.6 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	9.22 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	Mean
	@Temperature 21.0 - 900 $\text{Å}^\circ\text{C}$	@Temperature 69.8 - 1650 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	23.8 W/m-K	165 BTU-in/hr-ft <sup>2</sup> - $\text{Å}^\circ\text{F}$	
Melting Point	1400 - 1440 $\text{Å}^\circ\text{C}$	2550 - 2620 $\text{Å}^\circ\text{F}$	
Solidus	1400 $\text{Å}^\circ\text{C}$	2550 $\text{Å}^\circ\text{F}$	

<b>Liquidus Thermal Properties</b>	<b>1440 Â°C Metric</b>	<b>2620 Â°F English</b>	<b>Comments</b>
------------------------------------	----------------------------	-----------------------------	-----------------

<b>Component Elements Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
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 %	

<b>Electrical Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Electrical Resistivity	0.0000424 ohm-cm	0.0000424 ohm-cm	
Curie Temperature	<= 95.0 Â°C	<= 203 Â°F	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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