

Haynes Hastelloy® N, weld metal as welded

Category : Metal , Nonferrous Metal , Nickel Alloy , Superalloy

Material Notes:

Applications include containers for molten fluoride salts. Good oxidation resistance to hot fluoride salts at 705-870°C (1300-1600°F), good oxidation resistance in air. Data provided by the manufacturer, Haynes International, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Haynes-Hastelloy-N-weld-metal-as-welded.php

Physical Properties	Metric	English	Comments
Density	8.86 g/cc	0.320 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	800 MPa	116000 psi	
	507 MPa @Temperature 649 °C	73500 psi @Temperature 1200 °F	
Elongation at Break	39.3 %	39.3 %	in 25.4 mm
	18.1 % @Temperature 649 °C	18.1 % @Temperature 1200 °F	in 25.4 mm
Modulus of Elasticity	122 GPa @Temperature 1049 °C	17700 ksi @Temperature 1920 °F	
	136 GPa @Temperature 1000 °C	19700 ksi @Temperature 1830 °F	
	143 GPa @Temperature 954 °C	20700 ksi @Temperature 1750 °F	
	151 GPa @Temperature 904 °C	21900 ksi @Temperature 1660 °F	
	157 GPa @Temperature 854 °C	22800 ksi @Temperature 1570 °F	
	163 GPa	23600 ksi	

Mechanical Properties	Metric @Temperature 800 Â°C	English @Temperature 1470 Â°F	Comments
	171 GPa	24800 ksi	
	@Temperature 700 Â°C	@Temperature 1290 Â°F	
	181 GPa	26300 ksi	
	@Temperature 577 Â°C	@Temperature 1070 Â°F	
	181 GPa	26300 ksi	
	@Temperature 632 Â°C	@Temperature 1170 Â°F	
	187 GPa	27100 ksi	
	@Temperature 500 Â°C	@Temperature 932 Â°F	
	192 GPa	27800 ksi	
	@Temperature 410 Â°C	@Temperature 770 Â°F	
	202 GPa	29300 ksi	
	@Temperature 221 Â°C	@Temperature 430 Â°F	
	219 GPa	31800 ksi	
	@Temperature 14.0 Â°C	@Temperature 57.2 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear	12.3 Âµm/m-Â°C	6.83 Âµin/in-Â°F	
	@Temperature 21.0 - 316 Â°C	@Temperature 69.8 - 601 Â°F	
	12.7 Âµm/m-Â°C	7.06 Âµin/in-Â°F	
	@Temperature 21.0 - 427 Â°C	@Temperature 69.8 - 801 Â°F	
	13.4 Âµm/m-Â°C	7.44 Âµin/in-Â°F	
	@Temperature 21.0 - 538 Â°C	@Temperature 69.8 - 1000 Â°F	
14.0 Âµm/m-Â°C	@Temperature 21.0 - 649 Â°C	@Temperature 69.8 - 1200 Â°F	
	14.7 Âµm/m-Â°C	8.17 Âµin/in-Â°F	
	@Temperature 21.0 - 760 Â°C	@Temperature 69.8 - 1400 Â°F	

Thermal Properties	15.3 Åµm/m-Å°C Metric	8.50 Åµin/in-Å°F English	Comments
	@Temperature 21.0 - 871 Å°C	@Temperature 69.8 - 1600 Å°F	
	15.8 Åµm/m-Å°C	8.78 Åµin/in-Å°F	
	@Temperature 21.0 - 982 Å°C	@Temperature 69.8 - 1800 Å°F	
Specific Heat Capacity	0.419 J/g-Å°C	0.100 BTU/lb-Å°F	
	@Temperature 100 Å°C	@Temperature 212 Å°F	
	0.440 J/g-Å°C	0.105 BTU/lb-Å°F	
	@Temperature 200 Å°C	@Temperature 392 Å°F	
	0.456 J/g-Å°C	0.109 BTU/lb-Å°F	
	@Temperature 300 Å°C	@Temperature 572 Å°F	
	0.469 J/g-Å°C	0.112 BTU/lb-Å°F	
	@Temperature 400 Å°C	@Temperature 752 Å°F	
	0.477 J/g-Å°C	0.114 BTU/lb-Å°F	
	@Temperature 480 Å°C	@Temperature 896 Å°F	
	0.485 J/g-Å°C	0.116 BTU/lb-Å°F	
	@Temperature 540 Å°C	@Temperature 1000 Å°F	
	0.523 J/g-Å°C	0.125 BTU/lb-Å°F	
	@Temperature 570 Å°C	@Temperature 1060 Å°F	
	0.565 J/g-Å°C	0.135 BTU/lb-Å°F	
	@Temperature 590 Å°C	@Temperature 1090 Å°F	
	0.578 J/g-Å°C	0.138 BTU/lb-Å°F	
	@Temperature 680 Å°C	@Temperature 1260 Å°F	
	0.578 J/g-Å°C	0.138 BTU/lb-Å°F	
	@Temperature 700 Å°C	@Temperature 1290 Å°F	
	0.582 J/g-Å°C	0.139 BTU/lb-Å°F	
	@Temperature 660 Å°C	@Temperature 1220 Å°F	
	0.586 J/g-Å°C	0.140 BTU/lb-Å°F	

Thermal Properties	@Temperature 620 Å°C Metric	@Temperature 1150 Å°F English	Comments
Thermal Conductivity	11.5 W/m-K	79.8 BTU-in/hr-ftÅ²- Å°F	RT
	13.1 W/m-K @Temperature 100 Å°C	90.9 BTU-in/hr-ftÅ²- Å°F @Temperature 212 Å°F	
	13.1 W/m-K @Temperature 200 Å°C	90.9 BTU-in/hr-ftÅ²- Å°F @Temperature 392 Å°F	
	14.4 W/m-K @Temperature 300 Å°C	99.9 BTU-in/hr-ftÅ²- Å°F @Temperature 572 Å°F	
	16.5 W/m-K @Temperature 400 Å°C	115 BTU-in/hr-ftÅ²-Å°F @Temperature 752 Å°F	
	18.0 W/m-K @Temperature 500 Å°C	125 BTU-in/hr-ftÅ²-Å°F @Temperature 932 Å°F	
	20.3 W/m-K @Temperature 600 Å°C	141 BTU-in/hr-ftÅ²-Å°F @Temperature 1110 Å°F	
	23.6 W/m-K @Temperature 700 Å°C	164 BTU-in/hr-ftÅ²-Å°F @Temperature 1290 Å°F	
Melting Point	1300 - 1400 Å°C	2370 - 2550 Å°F	
Solidus	1300 Å°C	2370 Å°F	
Liquidus	1400 Å°C	2550 Å°F	

Component Elements Properties	Metric	English	Comments
Al + Ti	<= 0.50 %	<= 0.50 %	
Carbon, C	<= 0.080 %	<= 0.080 %	
Chromium, Cr	7.0 %	7.0 %	
Cobalt, Co	<= 0.20 %	<= 0.20 %	
Copper, Cu	<= 0.35 %	<= 0.35 %	
Iron, Fe	<= 5.0 %	<= 5.0 %	

Manganese Mn Component Elements Properties	$\leq 0.80\%$ Metric	$\leq 0.80\%$ English	Comments
Molybdenum, Mo	16 %	16 %	
Nickel, Ni	71 %	71 %	
Silicon, Si	$\leq 1.0\%$	$\leq 1.0\%$	
Tungsten, W	$\leq 0.50\%$	$\leq 0.50\%$	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000120 ohm-cm	0.000120 ohm-cm	RT
	0.000124 ohm-cm	0.000124 ohm-cm	
	@Temperature 815 Å°C	@Temperature 1500 Å°F	
	0.000126 ohm-cm	0.000126 ohm-cm	
	@Temperature 705 Å°C	@Temperature 1300 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