

Haynes 25 alloy, cold worked sheet, 15 % cold reduction

Category : Metal , Nonferrous Metal , Cobalt Alloy , Superalloy

Material Notes:

Excellent high-temperature strength with good resistance to oxidizing environments up to 980Â°C for prolonged exposures and excellent resistance to sulfidation and excellent resistance to metal galling. Applications in the aerospace industry, including parts in military and commercial gas turbine engines. Data provided by the manufacturer, Haynes International, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Haynes-25-alloy-cold-worked-sheet-15-cold-reduction.php

Physical Properties	Metric	English	Comments
Density	9.13 g/cc	0.330 lb/inÂ³	at RT

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1145 MPa	166100 psi	
	275 MPa	39900 psi	
	@Temperature 980 Â°C	@Temperature 1800 Â°F	
	485 MPa	70300 psi	
	@Temperature 870 Â°C	@Temperature 1600 Â°F	
	715 MPa	104000 psi	
Tensile Strength, Yield	@Temperature 760 Â°C	@Temperature 1400 Â°F	
	890 MPa	129000 psi	
	@Temperature 650 Â°C	@Temperature 1200 Â°F	
	925 MPa	134000 psi	
	@Temperature 540 Â°C	@Temperature 1000 Â°F	
	855 MPa	124000 psi	
Tensile Strength, Yield	@Strain 0.200 %	@Strain 0.200 %	
	205 MPa	29700 psi	
	@Strain 0.200 %, Temperature 980 Â°C	@Strain 0.200 %, Temperature 1800 Â°F	
Tensile Strength, Yield	360 MPa	52200 psi	
	@Strain 0.200 %, Temperature 870 Â°C	@Strain 0.200 %, Temperature 1600 Â°F	

Mechanical Properties	Metric	English	Comments
	@Strain 0.200 %, Temperature 760 Â°C	@Strain 0.200 %, Temperature 1400 Â°F	
	740 MPa	107000 psi	
	@Strain 0.200 %, Temperature 540 Â°C	@Strain 0.200 %, Temperature 1000 Â°F	
	765 MPa	111000 psi	
	@Strain 0.200 %, Temperature 650 Â°C	@Strain 0.200 %, Temperature 1200 Â°F	
Elongation at Break	30 %	30 %	in 51 mm
	5.0 %	5.0 %	in 51 mm
	@Temperature 760 Â°C	@Temperature 1400 Â°F	
	5.0 %	5.0 %	in 51 mm
	@Temperature 980 Â°C	@Temperature 1800 Â°F	
	9.0 %	9.0 %	in 51 mm
	@Temperature 870 Â°C	@Temperature 1600 Â°F	
	15 %	15 %	in 51 mm
	@Temperature 650 Â°C	@Temperature 1200 Â°F	
	29 %	29 %	in 51 mm
	@Temperature 540 Â°C	@Temperature 1000 Â°F	
Reduction of Area	30 %	30 %	
	5.0 %	5.0 %	
	@Temperature 760 Â°C	@Temperature 1400 Â°F	
	5.0 %	5.0 %	
	@Temperature 980 Â°C	@Temperature 1800 Â°F	
	9.0 %	9.0 %	
	@Temperature 870 Â°C	@Temperature 1600 Â°F	
	15 %	15 %	

Mechanical Properties	@Temperature 650 Â°C Metric	@Temperature 1200 Â°F English	Comments
	29 %	29 %	
	@Temperature 540 Â°C	@Temperature 1000 Â°F	
Modulus of Elasticity	225 GPa	32600 ksi	RT
	146 GPa	21200 ksi	
	@Temperature 1000 Â°C	@Temperature 1830 Â°F	
	154 GPa	22300 ksi	
	@Temperature 900 Â°C	@Temperature 1650 Â°F	
	163 GPa	23600 ksi	
	@Temperature 800 Â°C	@Temperature 1470 Â°F	
	174 GPa	25200 ksi	
	@Temperature 700 Â°C	@Temperature 1290 Â°F	
	181 GPa	26300 ksi	
	@Temperature 600 Â°C	@Temperature 1110 Â°F	
	188 GPa	27300 ksi	
	@Temperature 500 Â°C	@Temperature 932 Â°F	
	197 GPa	28600 ksi	
	@Temperature 400 Â°C	@Temperature 752 Â°F	
	204 GPa	29600 ksi	
	@Temperature 300 Â°C	@Temperature 572 Â°F	
	214 GPa	31000 ksi	
	@Temperature 200 Â°C	@Temperature 392 Â°F	
	222 GPa	32200 ksi	
	@Temperature 100 Â°C	@Temperature 212 Â°F	
Charpy Impact	262 J	193 ft-lb	
	144 J	106 ft-lb	
	@Temperature 980 Â°C	@Temperature 1800 Â°F	

Mechanical Properties	^{148 J} Metric	^{109 ft-lb} English	Comments
	@Temperature -196 Â°C	@Temperature -321 Â°F	
	163 J	120 ft-lb	
	@Temperature 870 Â°C	@Temperature 1600 Â°F	
	182 J	134 ft-lb	
	@Temperature -138 Â°C	@Temperature -216 Â°F	
	194 J	143 ft-lb	
	@Temperature 760 Â°C	@Temperature 1400 Â°F	
	212 J	156 ft-lb	
	@Temperature -78.0 Â°C	@Temperature -108 Â°F	
	230 J	170 ft-lb	
	@Temperature 650 Â°C	@Temperature 1200 Â°F	
	243 J	179 ft-lb	
	@Temperature -29.0 Â°C	@Temperature -20.2 Â°F	
	273 J	201 ft-lb	
	@Temperature 540 Â°C	@Temperature 1000 Â°F	
	297 J	219 ft-lb	
	@Temperature 260 Â°C	@Temperature 500 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear	12.3 Âµm/m-Â°C	6.83 Âµin/in-Â°F	
	@Temperature 25.0 - 100 Â°C	@Temperature 77.0 - 212 Â°F	
	12.9 Âµm/m-Â°C	7.17 Âµin/in-Â°F	
	@Temperature 25.0 - 200 Â°C	@Temperature 77.0 - 392 Â°F	
	13.6 Âµm/m-Â°C	7.56 Âµin/in-Â°F	
	@Temperature 25.0 - 300 Â°C	@Temperature 77.0 - 572 Â°F	
	14.3 Âµm/m-Â°C	7.94 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 25.0 - 500 Â°C	@ Temperature 77.0 - 932 Â°F	
	14.3 Âµm/m-Â°C	7.94 Âµin/in-Â°F	
	@Temperature 25.0 - 400 Â°C	@Temperature 77.0 - 752 Â°F	
	14.6 Âµm/m-Â°C	8.11 Âµin/in-Â°F	
	@Temperature 25.0 - 600 Â°C	@Temperature 77.0 - 1110 Â°F	
	15.1 Âµm/m-Â°C	8.39 Âµin/in-Â°F	
	@Temperature 25.0 - 700 Â°C	@Temperature 77.0 - 1290 Â°F	
	15.8 Âµm/m-Â°C	8.78 Âµin/in-Â°F	
	@Temperature 25.0 - 800 Â°C	@Temperature 77.0 - 1470 Â°F	
	16.5 Âµm/m-Â°C	9.17 Âµin/in-Â°F	
	@Temperature 25.0 - 900 Â°C	@Temperature 77.0 - 1650 Â°F	
	17.0 Âµm/m-Â°C	9.44 Âµin/in-Â°F	
	@Temperature 25.0 - 1000 Â°C	@Temperature 77.0 - 1830 Â°F	
Thermal Conductivity	9.40 W/m-K	65.2 BTU-in/hr-ftÂ²-Â°F	RT
	10.9 W/m-K	75.6 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	12.9 W/m-K	89.5 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 200 Â°C	@Temperature 392 Â°F	
	14.8 W/m-K	103 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 300 Â°C	@Temperature 572 Â°F	
	16.8 W/m-K	117 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 400 Â°C	@Temperature 752 Â°F	
	18.7 W/m-K	130 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 500 Â°C	@Temperature 932 Â°F	
	20.7 W/m-K	144 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 600 Â°C	@Temperature 1110 Â°F	

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000886 ohm-cm	0.0000886 ohm-cm	RT
	0.0000950 ohm-cm	0.0000950 ohm-cm	
	@Temperature 1000 °C	@Temperature 1830 °F	
	0.0001011 ohm-cm	0.0001011 ohm-cm	
	@Temperature 900 °C	@Temperature 1650 °F	
	0.0001066 ohm-cm	0.0001066 ohm-cm	
	@Temperature 700 °C	@Temperature 1290 °F	
	0.0001078 ohm-cm	0.0001078 ohm-cm	
	@Temperature 800 °C	@Temperature 1470 °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