Outokumpu SAF 2507® Duplex Stainless Steel

Category : Metal , Ferrous Metal , Duplex , Stainless Steel

Material Notes:

Applications: Pulp and paper industryDesalination plantsFlue-gas cleaningCargo tanks and pipe systems in chemical tankersSeawater systemsFirewalls and blast walls on offshore platformsBridgesComponents for structural designStorage tanksPressure vesselsHeat exchangersWater heatersRotors, impellers and shaftsAvailable in hot rolled plate (Quarto) and cold rolled strip/sheet forms.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Outokumpu-SAF-2507-Duplex-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.80 g/cc	0.282 lb/in³	RT

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	830 MPa	120000 psi	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
	630 MPa @Temperature 250 °C	91400 psi @Temperature 482 °F	EN min.; EN 10002-5
	640 MPa @Temperature 200 °C	92800 psi @Temperature 392 °F	EN min.; EN 10002-5
	660 MPa @Temperature 150 °C	95700 psi @Temperature 302 °F	EN min.; EN 10002-5
	680 MPa @Temperature 100 °C	98600 psi @Temperature 212 °F	EN min.; EN 10002-5
Tensile Strength, Yield	530 MPa @Strain 0.200 %	76900 psi @Strain 0.200 %	EN min.,RT; EN 10002-1
	590 MPa @Strain 0.200 %	85600 psi @Strain 0.200 %	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
	380 MPa @Strain 0.200 %, Temperature 250 °C	55100 psi @Strain 0.200 %, Temperature 482 °F	EN min.; EN 10002-5
	400 MPa @Strain 0.200 %, Temperature 200 °C	58000 psi @Strain 0.200 %, Temperature 392 °F	EN min.; EN 10002-5
	420 MPa @Strain 0.200 %,	60900 psi @Strain 0.200 %,	EN min.; EN 10002-5

Mechanical Properties	Temperature 150 °C Metric	Temperature 302 °F English	Comments
	450 MPa @Strain 0.200 %, Temperature 100 °C	65300 psi @Strain 0.200 %, Temperature 212 °F	EN min.; EN 10002-5
Elongation at Break	35 %	35 %	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
Modulus of Elasticity	200 GPa	29000 ksi	RT
	172 GPa @Temperature 400 °C	24900 ksi @Temperature 752 °F	
	180 GPa @Temperature 300 °C	26100 ksi @Temperature 572 °F	
	186 GPa @Temperature 200 °C	27000 ksi @Temperature 392 °F	
	194 GPa @Temperature 100 °C	28100 ksi @Temperature 212 °F	
Poissons Ratio	0.30	0.30	RT
Fatigue Strength	802 MPa	116000 psi	R=smin/smax=0.1; 2 million cycles, F50
	550 MPa @# of Cycles 2.00e+6	79800 psi @# of Cycles 2.00e+6	R=smin/smax=0.1;RT; 50% probability of failure
	565 MPa @Strain 0.200 %	81900 psi @Strain 0.200 %	R=smin/smax=0.1; 2 million cycles, F50
Shear Modulus	77.0 GPa	11200 ksi	calculated
Impact Test	>= 60.0 J	>= 44.3 ft-lb	EN 10045-1
	>= 40.0 J @Temperature -40.0 °C	>= 29.5 ft-lb @Temperature -40.0 °F	EN 10045-1

Thermal Properties	Metric	English	Comments
CTE, linear	13.0 µm/m-°C @Temperature 100 °C	7.22 µin/in-°F @Temperature 212 °F	
	13.5 µm/m-°C @Temperature 200 °C	7.50 µin/in-°F @Temperature 392 °F	
	14.0 µm/m-°C	7.78 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@Temperature 300 °C	@Temperature 572 °F	
	14.5 µm/m-°C	8.06 µin/in-°F	
	@Temperature 400 °C	@Temperature 752 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	RT
	0.530 J/g-°C	0.127 BTU/lb-°F	
	@Temperature 100 °C	@Temperature 212 °F	
	0.560 J/g-°C	0.134 BTU/lb-°F	
	@Temperature 200 °C	@Temperature 392 °F	
	0.590 J/g-°C	0.141 BTU/lb-°F	
	@Temperature 300 °C	@Temperature 572 °F	
Thermal Conductivity	15.0 W/m-K	104 BTU-in/hr-ft²-°F	RT
	16.0 W/m-K	111 BTU-in/hr-ft²-°F	
	@Temperature 100 °C	@Temperature 212 °F	
	17.0 W/m-K	118 BTU-in/hr-ft²-°F	
	@Temperature 200 °C	@Temperature 392 °F	
	18.0 W/m-K	125 BTU-in/hr-ft²-°F	
	@Temperature 300 °C	@Temperature 572 °F	
	20.0 W/m-K	139 BTU-in/hr-ft²-°F	
	@Temperature 400 °C	@Temperature 752 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.020 %	0.020 %	
Chromium, Cr	25 %	25 %	
Iron, Fe	63.71 %	63.71 %	
Molybdenum, Mo	4.0 %	4.0 %	
Nickel, Ni	7.0 %	7.0 %	
Nitrogen, N	0.27 %	0.27 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000800 ohm-cm	0.0000800 ohm-cm	RT

Electrical Properties	Metric	English	Comments
	0.0000850 ohm-cm @Temperature 100 °C	0.0000850 ohm-cm @Temperature 212 °F	
	0.0000900 ohm-cm @Temperature 200 °C	0.0000900 ohm-cm @Temperature 392 °F	
	0.000100 ohm-cm @Temperature 300 °C	0.000100 ohm-cm @Temperature 572 °F	

Processing Properties	Metric	English	Comments
Annealing Temperature	1040 - 1120 °C	1900 - 2050 °F	Quench Annealing
	1040 - 1120 °C	1900 - 2050 °F	Stress Relief Annealing

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