

Outokumpu 4828 High Temperature Austenitic Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

Standardized high temperature steel for service at temperatures of up to 950-1000°C in dry air. Utilization in the temperature range of 600-900°C can lead to embrittlement. Applications: Heat and creep resistance. For use over 550°C for equipment and components within: Iron, steel, and non-ferrous industries Engineering industry Energy conservation plants Cement industry Available in hot rolled plate (Quarto), hot rolled strip/sheet (CPP), cold rolled strip/sheet, cold rolled narrow strip, bar, and rod forms.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Outokumpu-4828-High-Temperature-Austenitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.80 g/cc	0.282 lb/in ³	RT

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	610 MPa	88500 psi	Outokumpu Typical, Cold Rolled Strip/Sheet; EN 10002-1
	320 MPa	46400 psi	EN min.; EN 10002-5
	@Temperature 600 °C	@Temperature 1110 °F	
	370 MPa	53700 psi	EN min.; EN 10002-5
	@Temperature 500 °C	@Temperature 932 °F	
	400 MPa	58000 psi	EN min.; EN 10002-5
	@Temperature 400 °C	@Temperature 752 °F	
Tensile Strength, Yield	410 MPa	59500 psi	EN min.; EN 10002-5
	@Temperature 300 °C	@Temperature 572 °F	
	430 MPa	62400 psi	EN min.; EN 10002-5
	@Temperature 200 °C	@Temperature 392 °F	
	470 MPa	68200 psi	EN min.; EN 10002-5
	@Temperature 100 °C	@Temperature 212 °F	
	270 MPa	39200 psi	Outokumpu Typical, Cold Rolled Strip/Sheet; EN 10002-1
	@Strain 0.200 %	@Strain 0.200 %	
	310 MPa	45000 psi	Outokumpu Typical, Cold Rolled Strip/Sheet; EN 10002-1
	@Strain 1.00 %	@Strain 1.00 %	
	82.0 MPa	11900 psi	EN min.; EN 10002-5
	@Strain 0.200 %,	@Strain 0.200 %,	

Mechanical Properties	Temperature 600 °C Metric	Temperature 1110 °F English	Comments
	85.0 MPa	12300 psi	
	@Strain 0.200 %, Temperature 500 °C	@Strain 0.200 %, Temperature 932 °F	EN min.; EN 10002-5
	91.0 MPa	13200 psi	
	@Strain 0.200 %, Temperature 400 °C	@Strain 0.200 %, Temperature 752 °F	EN min.; EN 10002-5
	100 MPa	14500 psi	
	@Strain 0.200 %, Temperature 300 °C	@Strain 0.200 %, Temperature 572 °F	EN min.; EN 10002-5
	114 MPa	16500 psi	
	@Strain 1.00 %, Temperature 600 °C	@Strain 1.00 %, Temperature 1110 °F	EN min.; EN 10002-5
	116 MPa	16800 psi	
	@Strain 0.200 %, Temperature 200 °C	@Strain 0.200 %, Temperature 392 °F	EN min.; EN 10002-5
	121 MPa	17500 psi	
	@Strain 1.00 %, Temperature 500 °C	@Strain 1.00 %, Temperature 932 °F	EN min.; EN 10002-5
	126 MPa	18300 psi	
	@Strain 1.00 %, Temperature 400 °C	@Strain 1.00 %, Temperature 752 °F	EN min.; EN 10002-5
	139 MPa	20200 psi	
	@Strain 1.00 %, Temperature 300 °C	@Strain 1.00 %, Temperature 572 °F	EN min.; EN 10002-5
	140 MPa	20300 psi	
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	EN min.; EN 10002-5
	154 MPa	22300 psi	
	@Strain 1.00 %, Temperature 200 °C	@Strain 1.00 %, Temperature 392 °F	EN min.; EN 10002-5
	185 MPa	26800 psi	
	@Strain 1.00 %, Temperature 100 °C	@Strain 1.00 %, Temperature 212 °F	EN min.; EN 10002-5
Elongation at Break	55 %	55 %	Outokumpu Typical, Cold Rolled Strip/Sheet; EN 10002-1
Rupture Strength	8.50 MPa	1230 psi	
	@Temperature 900 °C,	@Temperature 1650 °F,	

Mechanical Properties	Time 3.60e+7 sec Metric	Time 10000 hour English	Comments
	13.0 MPa	1890 psi	
	@Temperature 850 °C, Time 3.60e+7 sec	@Temperature 1560 °F, Time 10000 hour	
	18.0 MPa	2610 psi	
	@Temperature 800 °C, Time 3.60e+7 sec	@Temperature 1470 °F, Time 10000 hour	
	24.0 MPa	3480 psi	
	@Temperature 750 °C, Time 3.60e+7 sec	@Temperature 1380 °F, Time 10000 hour	
	36.0 MPa	5220 psi	
	@Temperature 700 °C, Time 3.60e+7 sec	@Temperature 1290 °F, Time 10000 hour	
	70.0 MPa	10200 psi	
	@Temperature 650 °C, Time 3.60e+7 sec	@Temperature 1200 °F, Time 10000 hour	
	120 MPa	17400 psi	
	@Temperature 600 °C, Time 3.60e+7 sec	@Temperature 1110 °F, Time 10000 hour	
Modulus of Elasticity	196 GPa	28400 ksi	RT
	120 GPa	17400 ksi	
	@Temperature 1000 °C	@Temperature 1830 °F	
	158 GPa	22900 ksi	
	@Temperature 500 °C	@Temperature 932 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	18.4 µm/m-°C	10.2 µin/in-°F	
	@Temperature 500 °C	@Temperature 932 °F	
	20.0 µm/m-°C	11.1 µin/in-°F	
	@Temperature 1000 °C	@Temperature 1830 °F	
Specific Heat Capacity	0.470 J/g-°C	0.112 BTU/lb-°F	RT
	0.530 J/g-°C	0.127 BTU/lb-°F	
	@Temperature 500 °C	@Temperature 932 °F	
Thermal Conductivity	12.6 W/m-K	87.4 BTU-in/hr-ft²-°F	RT

Thermal Properties	20.5 W/m-K Metric	142 BTU-in/hr-ft²-°F English	Comments
	@Temperature 500 °C	@Temperature 932 °F	
	27.5 W/m-K	191 BTU-in/hr-ft²-°F	
	@Temperature 1000 °C	@Temperature 1830 °F	
Maximum Service Temperature, Air	1000 °C	1830 °F	Dry Air

Component Elements Properties	Metric	English	Comments
Carbon, C	0.040 %	0.040 %	
Chromium, Cr	20 %	20 %	
Iron, Fe	65.96 %	65.96 %	
Nickel, Ni	12 %	12 %	
Silicon, Si	2.0 %	2.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000870 ohm-cm	0.0000870 ohm-cm	RT

Processing Properties	Metric	English	Comments
Annealing Temperature	1010 - 1040 °C	1850 - 1900 °F	Stress Relief Annealing (min. 0.5 h)
	1050 - 1150 °C	1920 - 2100 °F	Solution 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