

Outokumpu 4571 Cr-Ni-Mo Austenitic Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

Very good corrosion resistance, weldable, and resistant to sensitization. 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-4571-Cr-Ni-Mo-Austenitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	8.00 g/cc	0.289 lb/in ³	RT

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	165	165	Outokumpu Typical, 20°C, Hot rolled plate (Quarto)/Cold rolled strip/sheet; EN 10003-1
Tensile Strength, Ultimate	570 MPa	82700 psi	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
	360 MPa @Temperature 500 °C	52200 psi @Temperature 932 °F	EN min.; EN 10002-5
	375 MPa @Temperature 300 °C	54400 psi @Temperature 572 °F	EN min.; EN 10002-5
	375 MPa @Temperature 400 °C	54400 psi @Temperature 752 °F	EN min.; EN 10002-5
	390 MPa @Temperature 200 °C	56600 psi @Temperature 392 °F	EN min.; EN 10002-5
	440 MPa @Temperature 100 °C	63800 psi @Temperature 212 °F	EN min.; EN 10002-5
	840 MPa @Temperature -80.0 °C	122000 psi @Temperature -112 °F	EN min; EN 10002-5
	1200 MPa @Temperature -196 °C	174000 psi @Temperature -321 °F	EN min; EN 10002-5
Tensile Strength, Yield	220 MPa @Strain 0.200 %	31900 psi @Strain 0.200 %	EN min.,RT; EN 10002-1
	270 MPa	39200 psi	Outokumpu Typical,Hot Rolled Plate

Mechanical Properties	@Strain 0.200 % Metric	@Strain 0.200 % English	(Quarto); EN 10002-1 Comments
	310 MPa	45000 psi	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
	@Strain 1.00 %	@Strain 1.00 %	
	129 MPa	18700 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 500 °C	@Strain 0.200 %, Temperature 932 °F	
	135 MPa	19600 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 400 °C	@Strain 0.200 %, Temperature 752 °F	
	145 MPa	21000 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 300 °C	@Strain 0.200 %, Temperature 572 °F	
	158 MPa	22900 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 500 °C	@Strain 1.00 %, Temperature 932 °F	
	164 MPa	23800 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 400 °C	@Strain 1.00 %, Temperature 752 °F	
	167 MPa	24200 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 200 °C	@Strain 0.200 %, Temperature 392 °F	
	175 MPa	25400 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 300 °C	@Strain 1.00 %, Temperature 572 °F	
	185 MPa	26800 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	
	196 MPa	28400 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 200 °C	@Strain 1.00 %, Temperature 392 °F	
	218 MPa	31600 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 100 °C	@Strain 1.00 %, Temperature 212 °F	
	275 MPa	39900 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature -80.0 °C	@Strain 0.200 %, Temperature -112 °F	
	350 MPa	50800 psi	

Mechanical Properties	Metric @Strain 0.200 %, Temperature -196 °C	English @Strain 0.200 %, Temperature -321 °F	EN min.: EN 10002-5 Comments
	355 MPa	51500 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature -80.0 °C	@Strain 1.00 %, Temperature -112 °F	
	450 MPa	65300 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature -196 °C	@Strain 1.00 %, Temperature -321 °F	
Elongation at Break	50 %	50 %	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
	35 %	35 %	EN min
	@Temperature -196 °C	@Temperature -321 °F	
	40 %	40 %	EN min
	@Temperature -80.0 °C	@Temperature -112 °F	
Modulus of Elasticity	200 GPa	29000 ksi	RT
	165 GPa	23900 ksi	
	@Temperature 500 °C	@Temperature 932 °F	
	172 GPa	24900 ksi	
	@Temperature 400 °C	@Temperature 752 °F	
	179 GPa	26000 ksi	
	@Temperature 300 °C	@Temperature 572 °F	
	186 GPa	27000 ksi	
	@Temperature 200 °C	@Temperature 392 °F	
	194 GPa	28100 ksi	
	@Temperature 100 °C	@Temperature 212 °F	
Poissons Ratio	0.30	0.30	RT
Shear Modulus	77.0 GPa	11200 ksi	calculated
Impact Test	>= 60.0 J	>= 44.3 ft-lb	Hot rolled plate/Cold rolled strip/sheet, 10x10mm test pieces; EN 10045-1

Thermal Properties	Metric	English	Comments
CTE, linear	16.5 $\mu\text{m}/\text{m}\cdot\text{°C}$	9.17 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 100 °C	@Temperature 212 °F	

Thermal Properties	Metric	English	Comments
	17.5 $\mu\text{m}/\text{m}^{\circ}\text{C}$	9.72 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 200 °C	@Temperature 392 °F	
	18.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	10.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 300 °C	@Temperature 572 °F	
	18.5 $\mu\text{m}/\text{m}^{\circ}\text{C}$	10.3 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 400 °C	@Temperature 752 °F	
	19.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	10.6 $\mu\text{in}/\text{in}^{\circ}\text{F}$	
	@Temperature 500 °C	@Temperature 932 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	RT
Thermal Conductivity	15.0 W/m-K	104 BTU-in/hr-ft ² -°F	RT
	20.0 W/m-K	139 BTU-in/hr-ft ² -°F	
	@Temperature 400 °C	@Temperature 752 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.040 %	0.040 %	
Chromium, Cr	16.8 %	16.8 %	
Iron, Fe	70.16 %	70.16 %	
Molybdenum, Mo	2.1 %	2.1 %	
Nickel, Ni	10.9 %	10.9 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000750 ohm-cm	0.0000750 ohm-cm	RT

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