

Outokumpu 4306 Cr-Ni Austenitic Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

General purpose steel with good corrosion resistance. Applications: Wide variety of applications in construction, chemical, petroleum, automobile, and domestic appliance markets. 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-4306-Cr-Ni-Austenitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.90 g/cc	0.285 lb/in ³	RT

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	155	155	Outokumpu Typical, 20°C, Cold rolled strip/sheet; EN 10003-1
	165	165	Outokumpu Typical, 20°C, Hot rolled plate (Quarto); EN 10003-1
Tensile Strength, Ultimate	580 MPa	84100 psi	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
	340 MPa	49300 psi	EN min.; EN 10002-5
	@Temperature 300 °C	@Temperature 572 °F	
	360 MPa	52200 psi	EN min.; EN 10002-5
	@Temperature 200 °C	@Temperature 392 °F	
	410 MPa	59500 psi	EN min.; EN 10002-5
	@Temperature 100 °C	@Temperature 212 °F	
Tensile Strength, Yield	200 MPa	29000 psi	EN min.,RT; EN 10002-1
	@Strain 0.200 %	@Strain 0.200 %	
	280 MPa	40600 psi	Outokumpu Typical,Hot Rolled Plate (Quarto); EN 10002-1
	@Strain 0.200 %	@Strain 0.200 %	
	320 MPa	46400 psi	Outokumpu Typical,Hot Rolled Plate (Quarto); EN 10002-1
	@Strain 1.00 %	@Strain 1.00 %	
	81.0 MPa	11700 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 500 °C	@Strain 0.200 %, Temperature 932 °F	
	89.0 MPa	12900 psi	EN min.; EN 10002-5

Mechanical Properties	Metric @Strain 0.200 %, Temperature 400 °C	English @Strain 0.200 %, Temperature 752 °F	Comments
	100 MPa	14500 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 300 °C	@Strain 0.200 %, Temperature 572 °F	
	109 MPa	15800 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 500 °C	@Strain 1.00 %, Temperature 932 °F	
	116 MPa	16800 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 400 °C	@Strain 1.00 %, Temperature 752 °F	
	118 MPa	17100 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 200 °C	@Strain 0.200 %, Temperature 392 °F	
	127 MPa	18400 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 300 °C	@Strain 1.00 %, Temperature 572 °F	
	147 MPa	21300 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 200 °C	@Strain 1.00 %, Temperature 392 °F	
	147 MPa	21300 psi	EN min.; EN 10002-5
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	
	181 MPa	26300 psi	EN min.; EN 10002-5
	@Strain 1.00 %, Temperature 100 °C	@Strain 1.00 %, Temperature 212 °F	
Elongation at Break	55 %	55 %	Outokumpu Typical, Hot Rolled Plate (Quarto); EN 10002-1
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	

Mechanical Properties	@Temperature 200 °C Metric	@Temperature 392 °F English	Comments
	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	16.0 µm/m-°C	8.89 µin/in-°F	
	@Temperature 100 °C	@Temperature 212 °F	
	16.5 µm/m-°C	9.17 µin/in-°F	
	@Temperature 200 °C	@Temperature 392 °F	
	17.0 µm/m-°C	9.44 µin/in-°F	
	@Temperature 300 °C	@Temperature 572 °F	
	17.5 µm/m-°C	9.72 µin/in-°F	
	@Temperature 400 °C	@Temperature 752 °F	
	18.0 µm/m-°C	10.0 µin/in-°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	0.020 %	0.020 %	
Chromium, Cr	18.2 %	18.2 %	
Iron, Fe	71.68 %	71.68 %	
Nickel, Ni	10.1 %	10.1 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000730 ohm-cm	0.0000730 ohm-cm	RT

Electrical Properties

Metric

English

Comments

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