



Combined Metals of Chicago Bellwood Service Center

Alloy 301 Stainless Steel

UNS: S30100
EN-DIN: 1.4310

Austenitic chromium-nickel stainless steel. Its high strength and corrosion resistance makes it versatile alloy for a wide variety of applications. Typical applications include appliances, automotive applications, utensils, and high strength structural parts.

Nominal Composition

	C	Mn	P	S	Si	Cr	Ni	N	Fe		
min	-	-	-	-	-	16.0	6.0	-	-		
max	0.15	2.0	0.045	0.030	1.00	18.0	8.0	0.10	BAL		

Physical Properties

	At 70°F	At 20°C
Density	0.285 lb./in ³	7.88 g/cm ³
Modulus of Elasticity (E)	28.0 x 10 ³ ksi	193 x 10 ³ MPa
Coefficient of Expansion	9.4 x 10 ⁻⁶ microinches/in.-°F (70-600°F)	16.9 μm/m-°C (20-300°C)
Electrical Resistivity	27.4 μ ohm.in	69.5 μ ohm.cm
Thermal Conductivity	9.4 Btu-in./ft. ² hr.-°F	16.2 W/m-K

Applicable Specifications

ASTM A240, ASTM A666

Typical Mechanical Properties – Typical Room Temperature Mechanical Properties

Condition	Tensile Strength Min (UTS)	0.2% YS Min	Elongation% in 2" Min (50.8 mm)	Hardness Rockwell
Annealed (Min)	75 ksi (515 MPa)	30 ksi (205 MPa)	40%	95 HRBW (Max)

Typical mechanical properties are based on ASTM A240

Tempered Properties available upon request

For further information email:
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