



Combined Metals Company, LLC

Data Sheet

Alloy 410 Stainless Steel

UNS: S41000
EN DIN: 1.4006

Description: 410 Stainless Steel is a general purpose hardenable stainless steel with good corrosion and heat resistance. The alloy is tempered in the range 450-1350°F depending upon the hardness, strength, toughness, or corrosion resistance required. 410 stainless is resistant to atmosphere corrosion, fresh water, and various alkalis & mild acids. The alloy can be formed by most cold working methods in the annealed condition.

Applications include: Turbine blades, Furnace parts, Valves, Cutlery, Fasteners, Screens, Pumps

Industries supplied include: Oil & Gas, Power Generation, Chemical Processing, General Manufacturing

Nominal Composition

	C	Mn	P	S	Si	Cr	Ni	Fe
min	.080	-	-	-	-	11.50	-	BAL
max	.15	1.0	0.040	0.030	1.00	13.50	0.75	-

Physical Properties

	At 70°F	At 20°C
Density	0.280 lb/in ³	7.73 g/cm ³
Modulus of Elasticity (E)	29.0 x 10 ³ ksi	200 GPa
Coefficient of Expansion	5.5 μin/in-°F (32-212°F)	9.9 μm/m-°C (0-100°C)
Electrical Resistivity	22.4 μohm-in	57 μohm-cm
Thermal Conductivity	173 Btu-in/ft ² -hr- °F (212°F)	24.9 W/m-K (100°C)

Applicable Specifications

Strip & Sheet | ASTM A240, AMS 5504

Typical Mechanical Properties Typical Room Temperature Mechanical Properties

Condition	Tensile Strength (UTS)	0.2% Offset Yield	Elongation in 2" (50.8 mm)	Hardness Rockwell
Annealed	70 ksi (448 MPa)	45 ksi (276 MPa)	25%	80 HRBW

Typical mechanical properties are based on ASTM A240

For more information
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