

Combined Metals Material Datasheet

Alloy 410 Stainless Steel				UNS: S41000 EN DIN: 1.4006				
<p>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.</p> <p>Applications include: Turbine blades, Furnace parts, Valves, Cutlery, Fasteners, Screens, Pumps</p> <p>Industries supplied include: Oil & Gas, Power Generation, Chemical Processing, General Manufacturing</p>								
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								
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