

## Alloy 2507 Stainless Steel

UNS S32750  
W. Nr 1.4410

### Applicable Specifications

Strip and Foil | ASTM A240, NACE MR0175/ISO 15156

**Description:** Alloy 2507 is a super-duplex (austenitic/ferritic) stainless steel designed for applications which require exceptional strength and corrosion resistance surpassing that of 304 and 316 stainless steels. The alloy has excellent resistance to stress corrosion cracking as well as pitting, crevice, and erosion corrosion. Alloy 2507 also has high thermal conductivity, a low coefficient of thermal expansion, and good weldability.

**Applications include:** Desalination equipment, Saltwater handling, Flue gas desulfurization, Food processing equipment, Heat exchangers, Pulp mill bleach systems, and Oil distillation

**Industries supplied include:** Chemical Processing, Food Processing, Oil & Gas, and Power Generation

### Nominal Composition

	C	Si	Mn	P	S	Cr	Ni	Mo	N	Cu
min	-	-	-	-	-	24.0	6.0	3.0	0.24	-
max	0.030	0.80	1.20	0.035	0.020	26.0	8.0	5.0	0.32	0.50

### Physical Properties

	At 70°F	At 20°C
Density	0.280 lb/in <sup>3</sup>	7.8 g/cm <sup>3</sup>
Modulus of Elasticity (E)	29.0 x 10 <sup>3</sup> ksi	200 GPa
Modulus of Rigidity (G)	10.9 x 10 <sup>3</sup> ksi	75 GPa
Coefficient of Expansion	7.2 μin/in-°F (70-212°F)	12.96 μm/m-°C (20-100°C)
Electrical Resistivity	32.7 μohm-in	83.0 μohm-cm
Thermal Conductivity	118 Btu-in/ft <sup>2</sup> -hr-°F	17.0 W/m-°C

### Typical Mechanical Properties

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1920-2100°F (1050-1150°C)	1150-145 ksi (800-1000 MPa)	-58°F to 572°F (-50°C to 300°C)

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