



# Elgiloy Specialty Metals – Wire Products

## INCOLOY® 25-6MO alloy

UNS N08926  
W. Nr 1.4529

### Applicable Specifications

Wire & Bar | ASTM B649

**Description:** INCOLOY® 25-6MO alloy is an iron-base super-austenitic stainless steel with resistance to a wide range of corrosive environments. Alloying additions of molybdenum and nitrogen protect from pitting/crevice corrosion, and copper provides resistance to sulfuric acid conditions. INCOLOY® 25-6MO has improved performance compared to 316 stainless steel, while remaining a cost-effective alternative to other nickel-based alloys.

**Applications include:** Marine/offshore platform equipment, Desalination equipment, Heat exchangers, Pipes, Paper processing equipment, Caustic chloride systems, Springs

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

### Nominal Composition

	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	N	Fe
min	-	-	-	-	-	24.0	19.0	6.0	0.5	0.15	Bal
max	0.02	2.0	0.03	0.01	0.50	26.0	21.0	7.0	1.5	0.25	-

### Physical Properties

	At 70°F	At 20°C
Density	0.290 lb/in <sup>3</sup>	8.03 g/cm <sup>3</sup>
Modulus of Elasticity (E)	27.3 x 10 <sup>3</sup> ksi	188 GPa
Modulus of Rigidity (G)	10.3 x 10 <sup>3</sup> ksi	71 GPa
Coefficient of Expansion	9.26 μin/in-°F (70-1100°F)	16.7 μm/m-°C (25-600°C)
Electrical Resistivity	31.4 μohm-in	80 μohm-cm
Thermal Conductivity	79.8 Btu-in/ft <sup>2</sup> -hr-°F	11.5 W/m-°C

### Typical Mechanical Properties

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1950-2156°F (1066-1180°C)	90-120 ksi (620-827 MPa)	-320°F to 800°F (-196°C to 427°C)
Spring	Stress Relieve 800-900F (427-482°C)	190 ksi min (1034 MPa)	Up to 800°F (427°C)

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