

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 ³	8.03 g/cm ³
Modulus of Elasticity (E)	27.3 x 10 ³ ksi	188 GPa
Modulus of Rigidity (G)	10.3 x 10 ³ 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 ² -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)

INCOLOY® is a registered trademark of Special Metals Corporation group of companies.

Elgiloy Specialty Metals – Wire Products

356 North Cross Street
Sycamore, IL 60178 USA

www.elgiloy.com

LIMITATION OF LIABILITY AND DISCLAIMER OF WARRANTY:

The content in these data sheets is provided primarily by third-party melting mills and is provided for reference only. It is not intended for engineering or design.

Applications may be discussed, however, Elgiloy Specialty Metals does not recommend or endorse any material for any particular end use or application.

The data included in this data sheet are typical values and may vary.

Elgiloy Specialty Metals makes no representations or warranties, express or implied, as to the accuracy, completeness, condition, suitability, performance, fitness for a particular purpose, or merchantability of any information contained in any data sheet.

In no event will Elgiloy Specialty Metals be liable for any damages whatsoever arising from the use of the information included in the data sheets.