

# **Elgiloy Specialty Metals – Wire Products**

# INCOLOY<sup>®</sup> 925 alloy

UNS N09925

### Applicable Specifications

### Wire & Bar ASTM B637, NACE MR0175/ISO 15156, NACE MR0103

**Description:** INCOLOY<sup>®</sup> 925 is an age-hardenable nickel-iron-chromium alloy that has excellent corrosion resistance as well as good high strength properties. Alloying additions of molybdenum, copper, titanium, and aluminum provide resistance to pitting/crevice corrosion, chloride induced stress corrosion cracking, oxidizing environments, and reducing chemicals. The additions also allow age-hardening of the material via heat treatment for increased strength.

**Applications include:** Well components, Tubing, Valves, Hangers, Tool joints, Marine/Pump shafts, High-strength pipe **Industries supplied include:** Oil & Gas, Chemical Processing

Nominal Composition														
	С	Mn	S		Si	Ni	Cr	Мо	Ti	Cu	Al	Nb (Cb)	Fe	
min	-	-	-		-	42.0	19.5	2.5	1.9	1.5	0.1	-	22 Bal	
max	0.03	1.0	0.0	3	0.5	46.0	22.5	3.5	2.4	3.0	0.5	0.5	-	
Physical Properties														
				At 70°F						At 20°C				
Density				0.292 lb/in <sup>3</sup>						8.08 g/cm <sup>3</sup>				
Modulus of Elasticity (E)				28.9 x 10 <sup>3</sup> ksi						199 GPa				
Modu	lus of Rigio	dity (G)		11.2 x 10 <sup>3</sup> ksi						77 GPa				
Coeffi	icient of Ex	pansion		9.0 μin/in-°F (70-1200°F)						15.7 μm/m-°C (20-700°C)				
Electr	ical Resisti	vity		46.1 µohm-in						117 μohm-cm				
Thern	nal Conduc	tivity		83.1 Btu-in/ft <sup>2</sup> -hr-°F						12.0 W/m-°C				
Туріс	al Mecha	anical Pr	operti	es										
Condi	tion			Heat Treatment				Tensile Strength			Suggested Operating Conditions			
Annealed 17				00-1975°F (930-1080°C)				85-105 ksi (586-724 MPa)			Up to 1100°F (538°C)			
Aged FC agi			1350-1	0-1380°F (732-749°C) 6-9 hours				140 ksi min (965 MPa)			Up to 1100°F (538°C)			
			aging time of 18 hrs				ai 140							
INCOLOY® is a registered trademark of Special Metals Corporation group of companies.														
Elgiloy Specialty Metals – Wire Products														
356 North Cross Street														
Svcamore, IL 60178 USA														
Phone: 1-847-695-1900														
													04.02	
												REV 2024	04 02	

#### 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.