

NICKEL ALLOY

625 - 2.4856



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Nickel Alloy 625, also known by its material number 2.4856, is a corrosion-resistant nickel-chromium-molybdenum alloy with an addition of niobium, with significant strength and toughness. It is often referred to simply as Inconel 625, and it exhibits excellent resistance to a wide range of corrosive environments, making it suitable for various applications.

KEY FEATURES

- Highly corrosion resistant
- Excellent resistance to oxidation
- Resistance to pitting and crevice corrosion
- High temperature strength

CHEMICAL PROPERTIES

Chromium (Cr)	Molybdenum (Mo)	Iron (Fe)	Niobium (Nb)	Cobalt (Co)	Manganese (Mn)	Silicone (Si)	Carbon (C)	Nickel (Ni)
21-23%	8-10%	5%	3.2-3.8%	1%	0.5%	0.4%	0.03%	rest

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	827
Yield strength (N/mm ²)	413
Elongation (% in 4D)	30
Hardness - Rockwell (HRB) max	100-110
Hardness - Brinell (HB) max	320

PHYSICAL PROPERTIES

Density (kg/m ³)	8440	
Modulus of elasticity (Gpa)	205	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	12.8
	0-350°C (µm/m/°C)	13.4
	0-538°C (µm/m/°C)	14.1
Thermal conductivity	at 100°C (W/m.K)	9.8
	at 500°C (W/m.K)	12.7
Specific Heat 0-100°C (J/kg.K)	410	
Electrical resistivity (nΩ.m)	125	
Melting point (°C)	1350	

MARKET SECTORS



Marine Equipment

Propeller blades, seawater piping systems, valves



Chemical Processing

Reactors, vessels, piping, heat exchangers



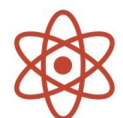
Oil & Gas Industry

Equipment for sour gas, downhole tubing and casing



Power Generation

Steam turbine shroud rings, seals, components



Nuclear Industry

Reactors components, fuel handling systems



Aerospace Industry

Ducting systems, exhaust systems, rocket motors