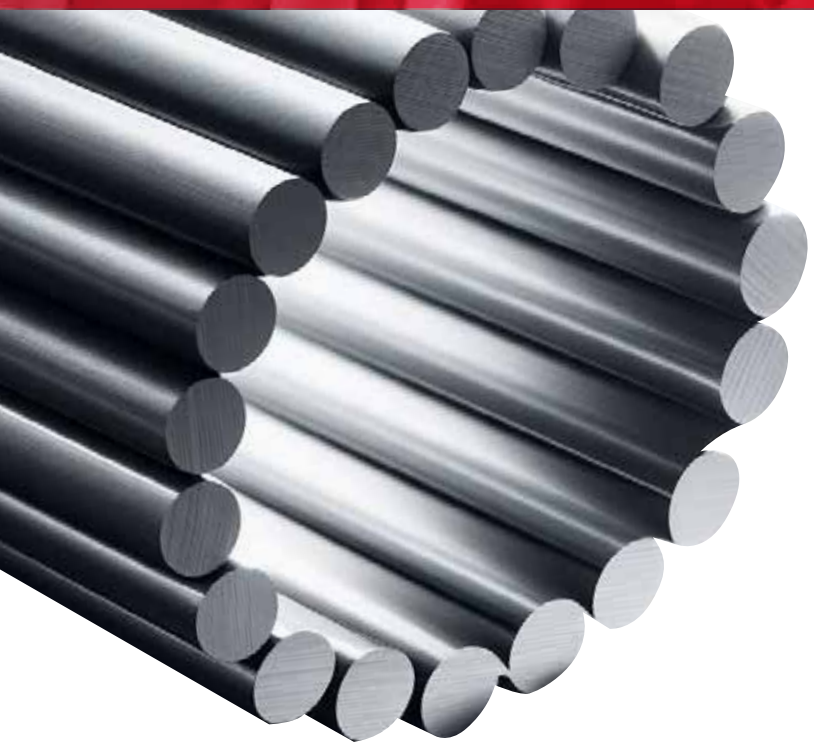
NICKEL ALLOY

625 - 2.4856



625 - 2.4856

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/mm²)	**827**
Yield strength (N/mm²)	**413**
Elongation (% in 4D)	**30**
Hardness - Rockwell (HRB) max	**100-110**
Hardness - Brinell (HB) max	**320**

PHYSICAL PROPERTIES

Density (kg/m³)		**8440**
Modulus of elasticity (Gpa)		**205**
Mean coefficient of thermal expansion	0-100ºC (µm/m/°C)	**12.8**
	0-350ºC (µm/m/°C)	**13.4**
	0-538ºC (µm/m/°C)	**14.1**
Thermal conductivity	at 100ºC (W/m.K)	**9.8**
	at 500ºC (W/m.K)	**12.7**
Specific Heat 0-100ºC (J/kg.K)		**410**
Electrical resistivity (nΩ.m)		**125**
Melting point (ºC)		**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

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