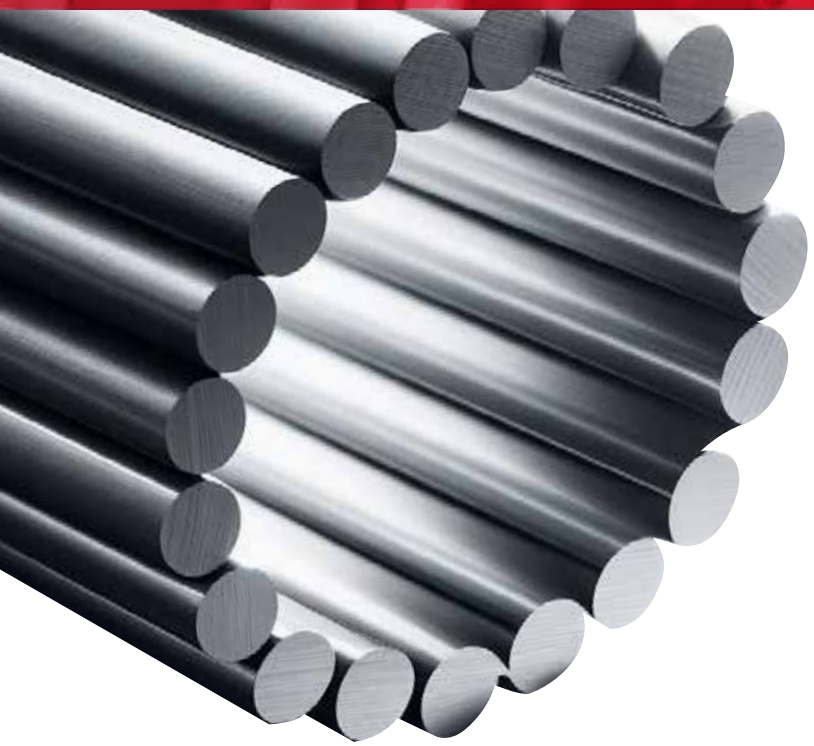
NICKEL ALLOY

X750 - 2.4669



X750 - 2.4669

Nickel Alloy X750 is a high-strength and versatile nickel-chromium alloy with excellent corrosion and oxidation resistance at elevated temperatures. It can be precipitation-hardened through heat treatment, and the alloy can be easily fabricated using standard techniques for nickel-based alloys. However, its high strength may require special considerations during machining.

KEY FEATURES

- Good corrosion resistance
- Resistance to oxidation
- Good high temperature strength
- Easily fabricated

CHEMICAL PROPERTIES

Nickel (Ni)	Chromium (Cr)	Iron (Fe)	Titanium (Ti)	Manganese (Mn)	Cobalt (Co)	Niobium (Nb)	Aluminium (Al)	Silicone (Si)	Copper (Cu)	Carbon (C)	Sulphur (S)
70%	**14-17%**	**5-9%**	**2.25-2.75%**	**1%**	**1%**	**0.7-1.2%**	**0.4-1%**	**0.5%**	**0.5%**	**0.08%**	**0.01%**

MECHANICAL PROPERTIES

Tensile strength (N/mm²)	**744**
Yield strength (N/mm²)	**365**
Elongation (% in 4D)	**30**
Hardness - Rockwell C (HRC) max	**20-30**
Hardness - Brinell (HB) max	**320**

PHYSICAL PROPERTIES

Density (kg/m³)		**8260**
Modulus of elasticity (Gpa)		**195**
Mean coefficient of thermal expansion	0-100ºC (µm/m/ºC)	**14.2**
	0-350ºC (µm/m/ºC)	**15.2**
	0-538ºC (µm/m/ºC)	**15.5**
Thermal conductivity	at 100ºC (W/m.K)	**10.0**
	at 500ºC (W/m.K)	**12.9**
Specific Heat 0-100ºC (J/kg.K)		**430**
Electrical resistivity (nΩ.m)		**122**
Melting point (ºC)		**1425**

MARKET SECTORS

Fasteners & Fixings
High performance springs, connectors, valves

Chemical Processing
Heat exchangers, chemical processing vessels

Oil & Gas Industry
Downhole tools, wellhead components, valves

Automotive Industry
Exhaust systems components, turbocharger parts, valves

Nuclear Industry
Reactors for components, control rod components

Aerospace Industry
Gas turbine engines, turbine blades, seals, discs, casings

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