

NICKEL ALLOY

C22 - 2.4602



C22 - 2.4602

Nickel Alloy C22, also known as Hastelloy C22, is a nickel-chromium-molybdenum alloy with the UNS N06022 designation. It is known for its exceptional corrosion resistance in highly aggressive environments and is often chosen for applications where resistance to both oxidising and reducing acids is required, especially in marine and chemical environments.

KEY FEATURES

- Excellent corrosion resistance
- Highly versatile
- High temperature stability
- Good weldability

CHEMICAL PROPERTIES

Nickel (Ni)	Chromium (Cr)	Molybdenum (Mo)	Iron (Fe)	Tungsten (W)	Cobalt (Co)	Manganese (Mn)	Vanadium (V)	Phosphorus (P)	Silicone (Si)	Carbon (C)	Sulphur (S)
50-63%	20-22.5%	3-3.5%	2-6%	2.5-3.5%	2.5%	0.5%	0.35%	0.015%	0.01%	0.01%	0.01%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	765
Yield strength (N/mm ²)	359
Elongation (% in 4D)	25
Hardness - Rockwell (HRB) max	95
Hardness - Brinell (HB) max	320

PHYSICAL PROPERTIES

Density (kg/m ³)	8650	
Modulus of elasticity (Gpa)	206	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	6.9
	0-350°C (µm/m/°C)	7.2
	0-538°C (µm/m/°C)	7.5
Thermal conductivity	at 100°C (W/m.K)	10.2
	at 500°C (W/m.K)	13.1
Specific Heat 0-100°C (J/kg.K)	414	
Electrical resistivity (nΩ.m)	448	
Melting point (°C)	1400	

MARKET SECTORS



Pollution Control

Scrubbers, ducts, stacks in air pollution control systems



Chemical Processing

Reactors, vessels, piping systems



Oil & Gas Industry

Components for sour gas applications



Marine Industry

Marine shafts, valves, fasteners



Pharmaceutical Industry

Equipment for handling corrosive substances



Aerospace Industry

Valves, fasteners, electrical components