

NICKEL ALLOY

200 - 2.4066

BORNMORE METALS



200 - 2.4066

Nickel Alloy 200, also known as UNS N02200 or W.Nr. 2.4066, is a solid-solution alloy with a high nickel content (>99%). It is commercially pure and has a microstructure consisting primarily of nickel atoms arranged in a face-centered cubic (FCC) crystal structure. The absence of significant alloying elements gives it unique properties suitable for a wide range of applications where corrosion resistance, thermal stability and electrical conductivity are critical.

KEY FEATURES

- High corrosion resistance
- Excellent electrical conductivity
- Superior thermal conductivity
- Good mechanical properties
- Ease of fabrication

CHEMICAL PROPERTIES

Nickel (Ni)	Iron (Fe)	Silicone (Si)	Manganese (Mn)	Carbon (C)	Sulphur (S)
99%	0.4%	0.35%	0.35%	0.15%	0.01%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	380-520
Yield strength (N/mm ²)	105-310
Elongation (% in 4D)	40-55
Hardness - Rockwell C (HRC) max	55
Hardness - Brinell (HB) max	85

PHYSICAL PROPERTIES

Density (kg/m ³)	8890	
Modulus of elasticity (Gpa)	204	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	13.3
	0-350°C (µm/m/°C)	14.0
	0-538°C (µm/m/°C)	14.8
Thermal conductivity	at 100°C (W/m.K)	65.0
	at 500°C (W/m.K)	45.0
Specific Heat 0-100°C (J/kg.K)	444	
Electrical resistivity (nΩ.m)	90	
Melting point (°C)	1440	

MARKET SECTORS



Electrical Industry

Contacts, connectors, anodes, cathodes, heating elements



Chemical Processing

Reactors, vessels, heat exchangers, valves, piping



Oil & Gas Industry

Downhole equipment, valves, fittings, pipelines



Marine Equipment

Shipbuilding, seawater piping systems, propeller shafts, pumps



Food & Beverage Industry

Cookware, brewing vats, food processing machinery



Aerospace Industry

Aircraft components, aerospace structures, gas turbines