NICKEL ALLOY

200 - 2.4066

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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/mm²)	**380-520**
Yield strength (N/mm²)	**105-310**
Elongation (% in 4D)	**40-55**
Hardness - Rockwell (HRB) max	**55**
Hardness - Brinell (HB) max	**85**

PHYSICAL PROPERTIES

Density (kg/m³)		**8890**
Modulus of elasticity (Gpa)		**204**
Mean coefficient of thermal expansion	0-100ºC (µm/m/ºC)	**13.3**
	0-350ºC (µm/m/ºC)	**14.0**
	0-538ºC (µm/m/ºC)	**14.8**
Thermal conductivity	at 100ºC (W/m.K)	**65.0**
	at 500ºC (W/m.K)	**45.0**
Specific Heat 0-100ºC (J/kg.K)		**444**
Electrical resistivity (nΩ.m)		**90**
Melting point (ºC)		**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

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