STAINLESS STEEL

316 - 1.4401 / 316L - 1.4404

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Stainless Steel 316 is one of the most widely used and versatile stainless steels, prized for its corrosion resistance and suitability for a broad range of applications. The 316L low carbon content helps reduce the susceptibility to sensitisation during welding, making 316L suitable for applications where post-welding annealing is not practical.

KEY FEATURES

- Excellent corrosion resistance
- Strength and mechanical properties
- Heat resistance
- General weldability

CHEMICAL PROPERTIES

	Chromium (Cr)	Nickel (Ni)	Manganese (Mn)	Molybdenum (Mo)	Silicone (Si)	Nitrogen (N)	Carbon (C)	Phosphorus (P)	Sulphur (S)
316	16-18%	10-12%	2%	2-3%	0.75%	0.1%	0.08%	0.045%	0.03%
316L	16-18%	10-12%	2%	2%	0.75%	0.1%	0.03%	0.045%	0.03%

MECHANICAL PROPERTIES

	316	316L
Tensile strength (N/mm²)	500-700	500-700
Yield strength (N/mm²)	170-220	170-220
Elongation (% in 4D)	40	40
Hardness - Rockwell (HRB) max	92	92
Hardness - Brinell (HB) max	217	217

PHYSICAL PROPERTIES

Density (kg/m³)		8000
Modulus of elasticity (Gpa)		193
Mean coefficient of thermal expansion	0-100ºC (µm/m/°C)	15.9
	0-350ºC (µm/m/°C)	16.2
	0-538ºC (µm/m/°C)	17.5
Thermal conductivity	at 100ºC (W/m.K)	16.3
	at 500ºC (W/m.K)	21.5
Specific Heat 0-100ºC (J/kg.K)		500
Electrical resistivity (nΩ.m)		740
Melting point (ºC)		1450

MARKET SECTORS

Food & Beverage Industry
Conveyors, mixers, brewing and distillation equipment

Chemical Processing
Reactors, storage tanks, piping systems, heat exchangers

Marine Equipment
Boat fittings, hardware, coastal structures

Medical Devices
Surgical instruments, implants, dental instruments

Pharmaceutical Industry
Vessels, reactors, piping systems, processing equipment

Aerospace Industry
Aircraft structural components, engine parts, hardware

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