

DUPLEX STEEL

UNS 31803 - 1.4462

**BORNMORE
METALS**



UNS 31803 - 1.4410

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
- General weldability

CHEMICAL PROPERTIES

Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)	Manganese (Mn)	Silicone (Si)	Copper (Cu)	Nitrogen (N)	Phosphorus (P)	Carbon (C)	Sulphur (S)
21-23%	4.5-6.5%	2.5-3.5%	2%	1%	0.5-1%	0.15%	0.035%	0.03%	0.02%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	500-700
Yield strength (N/mm ²)	170-220
Elongation (% in 4D)	40
Hardness - Rockwell C (HRC) max	92
Hardness - Brinell (HB) max	217

PHYSICAL PROPERTIES

Density (kg/m ³)	8000	
Modulus of elasticity (Gpa)	193	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	15.9
	0-350°C (µm/m/°C)	16.2
	0-538°C (µm/m/°C)	17.5
Thermal conductivity	at 100°C (W/m.K)	16.3
	at 500°C (W/m.K)	21.5
Specific Heat 0-100°C (J/kg.K)	500	
Electrical resistivity (nΩ.m)	740	
Melting point (°C)	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