

STAINLESS STEEL

410 - 1.4006



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410 stainless steel is a versatile martensitic stainless steel grade known for its high strength, hardness and moderate corrosion resistance. Its composition and properties make it suitable for various applications in industrial, automotive and consumer sectors where durability, strength and corrosion resistance are essential. It exhibits good magnetic properties, which makes it suitable for applications where magnetic characteristics are desirable.

KEY FEATURES

- High strength and hardness
- Good corrosion resistance
- Good magnetic properties
- Can be welded using standard techniques
- Good durability

CHEMICAL PROPERTIES

Chromium (Cr)	Manganese (Mn)	Silicone (Si)	Carbon (C)	Phosphorus (P)	Sulphur (S)	Iron (Fe)
11.5-13.5%	1%	1%	0.08-0.15%	0.04%	0.03%	rest

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	480-580
Yield strength (N/mm ²)	275
Elongation (% in 4D)	20
Hardness - Rockwell (HRB) max	88
Hardness - Brinell (HB) max	187-229

PHYSICAL PROPERTIES

Density (kg/m ³)	7750	
Modulus of elasticity (Gpa)	200	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	10.8
	0-350°C (µm/m/°C)	11.0
	0-538°C (µm/m/°C)	11.2
Thermal conductivity	at 100°C (W/m.K)	24.5
	at 500°C (W/m.K)	25.5
Specific Heat 0-100°C (J/kg.K)	460	
Electrical resistivity (nΩ.m)	570	
Melting point (°C)	1500	

MARKET SECTORS



Automotive Industry

Exhaust systems, fasteners, automotive trim



Chemical Processing

Valve components, pump shafts, bearings



Engineered Components

Fasteners, bolts, valves, tools, bearings



Architectural Applications

Structural elements, fasteners, fittings



Kitchen Appliances

Cookware handles, spatulas, knife blades, utensils



Medical Devices

Scalpel blades, surgical scissors, dental instruments