

STAINLESS STEEL

410S - 1.4000



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410S is a ferritic stainless steel grade with a lower carbon content and the addition of nickel, which improves weldability and formability compared to standard 410 stainless steel. It offers moderate corrosion resistance and is suitable for applications where these properties, along with cost-effectiveness, are advantageous. 410S stainless steel has excellent weldability due to its lower carbon content and the addition of nickel.

KEY FEATURES

- Good corrosion resistance
- Good formability
- Easily welded using standard techniques
- Magnetic properties
- Cost-effectiveness

CHEMICAL PROPERTIES

Chromium (Cr)	Manganese (Mn)	Silicone (Si)	Nickel (Ni)	Carbon (C)	Phosphorus (P)	Sulphur (S)	Iron (Fe)
11.5-13.5%	1%	1%	0.6%	0.08%	0.04%	0.03%	rest

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	380-515
Yield strength (N/mm ²)	205
Elongation (% in 4D)	20
Hardness - Rockwell (HRB) max	70-85
Hardness - Brinell (HB) max	183

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)	11.2
	0-538°C (µm/m/°C)	11.5
Thermal conductivity	at 100°C (W/m.K)	24.2
	at 500°C (W/m.K)	25.9
Specific Heat 0-100°C (J/kg.K)	460	
Electrical resistivity (nΩ.m)	600	
Melting point (°C)	1500	

MARKET SECTORS



Heat exchanger tubes, annealing covers, furnace parts



Exhaust systems, mufflers, automotive trim



Boiler tubes, exhaust systems, components



Architectural trim, decorative panels, interior fittings



Oven linings, range hoods, washing machine components



Tooling components, fasteners, machinery parts