



THAMES
STOCKHOLDERS

410 Stainless

MARTENSITIC STAINLESS STEEL

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Product Overview

410 stainless steel alloy is a popular material grade containing 11.5% chromium.

The martensitic alloy is supplied in the hardened condition, and the inclusion of chromium gives the alloy good corrosion resistance under atmospheric conditions, although general resistance is limited. The hardness of the alloy is excellent after heat treatment, and the material is machinable, although this proves more difficult at hardnesses above 30HRC. 410 stainless steel finds suitability in producing highly stressed parts, although weldability is poor.

We stock and supply 410 stainless steel alloy in solid round bars and plates.

Key Features

- Excellent hardness properties after heat treatment
- For fabrication of highly stressed parts
- Still machinable after hardening
- Good atmospheric corrosion resistance

Applications

- Valves & pumps
- Fasteners
- Gas & steam turbines
- Petroleum fractioning structures

* Chemical Composition (weight, %)

	C	Mn	Si	P	S	Cr	Ni
Min.	0.08					11.50	
Max.	0.15	1.50	1.00	0.04	0.03	13.50	0.75

* Properties as per BS EN 10088-3, 1.4006

* Mechanical Properties

Tensile strength	650 - 850	MPa
Yield Strength	450 min	N/mm ²
Elongation A5	15	%

* Properties as per BS EN 10088-3, 1.4006 (QT650)

Physical Properties

Density	7800	kg/m ³
Melting Point	1400	°C
Modulus of Elasticity	200	GPa
Electrical Resistivity	570	n Ω.m
Thermal Conductivity at 100°C	24.9	W/m.K



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