THAMES STOCKHOLDERS
A Division of SMITHS

410 Stainless

MARTENSITIC STAINLESS STEEL

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

THAMES STOCKHOLDERS
A Division of SMITHS

Thames Stockholders
Unit 5W. Woodall Road, Redburn Industrial Estate
Ponders End, Enfield, Middlesex EN3 4LQ

Tel: +44 (0)20 8805 3282

sales@thamesstock.com

www.thamesstock.com

bsi ISO 9001 Quality Management Systems CERTIFIED

SCAN ME

All information in our data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading.

© Thames Stockholders 2026