

410 Stainless Steel

Smiths Advanced Metals

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Martensitic Stainless Steel

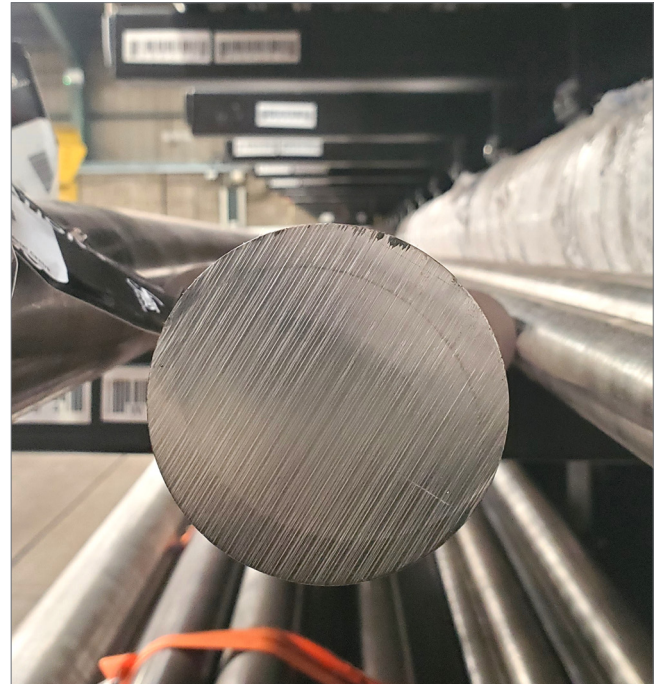
For highly stressed components

Type 410 martensitic stainless steel is ideal for general engineering applications.

The alloy provides good atmospheric corrosion-resistant properties, further enhanced by additional processes such as hardening, tempering and polishing.

The alloy offers impressive hardening capabilities, particularly once heat-treated, although corrosion resistance is not as impressive compared to austenitic stainless steels. The alloy's strength reduces at elevated temperatures, and ductility is lost at sub-zero temperatures.

410 stainless steel is widely used in the production of highly stressed components, including fasteners, valves, pumps, and gas turbines.



Grades / Specifications

- AMS 5613
- ASTM A276
- ASTM A479
- ASTM A493
- ASTM A580
- ASTM F899
- QQ-S-763

Benefits

- Impressive hardening capabilities
- Good atmospheric corrosion resistance
- It can be used in temperatures up to 1200° C
- Suitable for producing highly stressed parts

+ Chemical Composition (weight, %)

	C	P	Si	Fe	Mn	S	Cr
Min				Bal			11.5
Max	0.15	0.040	1.00	Bal	1.00	0.030	13.5

* As per ASTM A479

Machinability

The best results are achieved when the alloy is machined in the heat-treated or cold-drawn condition. If improved mechanical properties are required, the alloy may be machined successfully up to Rockwell C 35. When machined in the soft condition, the material becomes more problematic, with chip build-up on the tool.

Corrosion Resistance

Annealed and heat-treated 410 stainless steel offers good atmospheric corrosion resistance as long as conditions are mild. Once hardened, the alloy also offers reasonable resistance to sulfide stress cracking and is moderately resistant to nitric acid, salt spray, sodium hydroxide, and humidity.

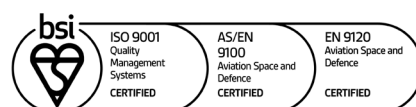
www.smithadvanced.com

info@smithsadvanced.com



Stratton Business Park, London
Road, Biggleswade, Bedford-
shire SG18 8QB

Tel: +44 (0) 1767 604710



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