sales@mozaicprecision.com
847-637-8379

410 Stainless Steel

Heat-Treatable Martensitic Stainless for Machined Parts • UNS S41000

410 stainless steel is a chromium martensitic grade that can be hardened and tempered for strength and wear performance. Its corrosion resistance is more limited than many austenitic grades, so condition and service environment matter in supplier selection.

MATERIAL SPECIFICATIONS

Property / designation	Reference data / purchase requirement
Grade and UNS	Type 410 / UNS S41000
Alloy family	Martensitic stainless
Chromium (Cr)	11.5–13.5 wt% (ATI reference)
Carbon (C)	0.08–0.15 wt% (ATI reference)
Manganese (Mn)	1.00 wt% maximum
Sulfur (S)	0.030 wt% maximum
Density	Approx. 7.75 g/cm³
Bar specification	ASTM A276 when applicable; verify exact product
Heat treatment	Annealed, hardened or tempered — properties are condition-specific
Use caution	Not a default choice for chlorides or aggressive acids

SELECTED APPLICATIONS

Industrial valve stems, shafts and pump components • Mechanically loaded fasteners and pins • Precision machined parts with specified hardening requirements

GRADE SELECTION & FINISHING

Compared with sulfur-modified 416, 410 generally provides improved welding/forming and corrosion characteristics but lower machinability in many cutting operations. 420 is a related hardenable grade with different carbon and achievable hardness behavior.

410 mechanical properties and dimensional stability depend on its heat-treatment condition. Review machining allowances, final grinding, straightness and finishing order before quoting a tight-tolerance component.

INFORMATION FOR A QUOTE

State 410/UNS S41000, delivery condition/hardness, ASTM or customer specification, OD and tolerance, length, finish, quantity and mill documentation.

Material: material/410-stainless-steel/

Technical source: ATI, 410 martensitic stainless

Reference values only; the specified product standard, material condition and mill test report govern.

Not a mill test report or stock availability guarantee. Confirm actual heat, condition and specification.