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430 Stainless Steel

Ferritic Chromium Stainless, Non-Hardenable by Heat Treat • UNS S43000

430 stainless steel is a ferritic chromium grade with moderate corrosion resistance in suitable environments. Its ferritic structure makes it magnetic, and it cannot be hardened by conventional heat treatment; selection should account for corrosion conditions and available product form.

MATERIAL SPECIFICATIONS

Property / designation	Reference data / purchase requirement
Grade and UNS	Type 430 / UNS S43000
Alloy structure	Ferritic stainless
Chromium (Cr)	16.0–18.0 wt% (Carpenter reference)
Carbon (C)	0.12 wt% maximum
Manganese (Mn)	1.00 wt% maximum
Sulfur (S)	0.030 wt% maximum
Reference bar specification	ASTM A276 or ASTM A479 when applicable
Heat-treatment response	Cannot be hardened by thermal quench treatment
Magnetic behavior	Magnetic in typical ferritic condition
Processing variable	Cold work and finish requirements affect bar condition

SELECTED APPLICATIONS

Trim, hardware, and decorative machine components • Selected shafts and fittings in moderate environments • Custom machined ferritic stainless parts

GRADE SELECTION & FINISHING

430 and 430F are not identical: the 430F modification is oriented toward machining, with distinct sulfur-related properties. Compared with 304, 430 lacks nickel-rich austenitic structure and behaves differently in corrosion and fabrication.

For ferritic bar, verify straightness and finished OD separately. Assess any desired finish, polish or corrosion performance rather than inferring 304-equivalent behavior.

INFORMATION FOR A QUOTE

State UNS S43000, product specification and condition, diameter, tolerance, length, surface-finish needs, quantity and certificates.

Material: material/430-stainless-steel/

Technical source: Carpenter Technology, Alloy 430 overview

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.