sales@mozaicprecision.com
847-637-8379

302 Stainless Steel

Cold-Workable Chromium-Nickel Austenitic Stainless • UNS S30200

302 stainless steel is a chromium-nickel austenitic grade related to 304 but with a higher permitted carbon limit. It is widely specified for formed and cold-worked parts; where round bar is requested, the delivery condition and product standard must be confirmed separately from flat-product data.

MATERIAL SPECIFICATIONS

Property / designation	Reference data / purchase requirement
Grade and UNS	Type 302 / UNS S30200
Alloy family	Cr-Ni austenitic stainless
Chromium (Cr)	17.0–19.0 wt% (Carpenter grade reference)
Nickel (Ni)	8.0–10.0 wt% (Carpenter grade reference)
Carbon (C)	0.15 wt% maximum
Manganese (Mn)	2.00 wt% maximum
Sulfur (S)	0.030 wt% maximum
Applicable bar specification	ASTM A276 / ASTM A479 when required by the purchase order
Heat treatment response	Not hardenable by conventional quench-and-temper treatment
Key ordering variable	Annealed versus cold-worked condition; verify actual bar properties

SELECTED APPLICATIONS

Cold-worked wire-form and spring-related components where grade 302 is specified • Pins, shafts and special-machined bar parts • Stainless brackets and general industrial hardware

GRADE SELECTION & FINISHING

302 and 304 have related alloy systems but distinct carbon limits. For many general-purpose bar orders, 304 is the more common alternative. A change of grade or product form must be approved against the applicable drawings, chemistry and MTR.

For 302 round bar, identify the required starting condition; cold working changes magnetism, strength and finishing behavior. Control finished OD, bar length, straightness and surface finish as separate specifications.

INFORMATION FOR A QUOTE

Specify Type 302 / UNS S30200, governing bar standard, required condition, finished OD and tolerance, length, quantity and test certificate.

Material: material/302-stainless-steel-2/

Technical source: Carpenter Technology, Alloy 302 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.