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316 Stainless Steel Bar

Molybdenum-Bearing Corrosion-Resistant Stainless • UNS S31600

316 stainless steel bar adds molybdenum to the chromium-nickel austenitic family, improving resistance to certain chloride pitting and crevice corrosion conditions compared with 304. It is widely used for machined fluid-system parts and more demanding service environments, although no stainless grade is immune to every corrosive exposure.

MATERIAL SPECIFICATIONS

Property / designation	Reference data / purchase requirement
UNS grade	S31600 (316) / S31603 (316L is separate)
European reference	EN 1.4401 (316); EN 1.4404 (316L)
Bar purchasing standard	Check ASTM A276 / ASTM A479 as applicable
Chromium (Cr)	16.0–18.0 wt% (Atlas grade reference)
Nickel (Ni)	10.0–14.0 wt% (Atlas grade reference)
Molybdenum (Mo)	2.00–3.00 wt% (Atlas grade reference)
Carbon (C)	0.08 wt% max (316, Atlas grade reference)
Typical annealed density	Approx. 8.00 g/cm³
Corrosion caution	Service-specific evaluation is essential in chlorides

SELECTED APPLICATIONS

Valve, pump and fluid-handling components • Machined fasteners and corrosion-resistant shafts • Laboratory and process-equipment hardware

GRADE SELECTION & FINISHING

316 and 316L are different carbon specifications. The lower-carbon L grade can be useful for welded assemblies and sensitization control; a bar is only dual certified if its actual chemistry and properties satisfy both purchase requirements. Neither 316 nor 316L is a substitute for medical 316LVM without confirming the implant-specific standard.

For 316/316L round bar, define finished size and surface roughness, mill condition, straightness, and documentation. Ground finish does not alone establish passivation or corrosion suitability.

INFORMATION FOR A QUOTE

Request UNS S31600 or S31603, governing bar standard, any dual certification, OD and tolerances, length, quantity and inspection needs.

Material: material/316-stainless-steel-bar/

Technical source: Atlas Steels, 316/316L/316H datasheet

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.