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347 Stainless Steel

Niobium-Stabilized Austenitic Stainless Bar • UNS S34700

347 stainless steel is a niobium-stabilized austenitic alloy used where sensitization resistance after heating is important. It is related to 321, but the stabilizer and purchasing requirements differ; grades should not be substituted without design and certification approval.

MATERIAL SPECIFICATIONS

Property / designation	Reference data / purchase requirement
Grade and UNS	Type 347 / UNS S34700
European comparison	EN 1.4550 / X6CrNiNb18-10 (verify)
Chromium (Cr)	17.0–19.0 wt% (ATI reference)
Nickel (Ni)	9.0–13.0 wt% (ATI reference)
Carbon (C)	0.08 wt% maximum (347, not 347H)
Stabilizing addition	Niobium / tantalum — controlled relative to carbon
Typical annealed density	Approx. 7.9 g/cm³
Thermal-treatment response	Not quench-hardenable like martensitic stainless
Bar purchasing standard	Check ASTM A276 / ASTM A479 or required EN standard
Grade distinction	347H is separate from 347; verify purchase requirements

SELECTED APPLICATIONS

High-temperature equipment fittings and couplings • Heat-transfer and processing-system hardware • Specialized corrosion-resistant machined shafts and pins

GRADE SELECTION & FINISHING

347 uses niobium (columbium), whereas 321 relies on titanium. When discussing elevated-temperature service, confirm the exact 347 versus 347H requirement; the H-grade carries different carbon/grain-size requirements.

Specify the mill condition and required inspection before grinding. Material requirements for elevated-temperature use may exceed basic bar chemistry; do not infer heat resistance solely from a generic alloy label.

INFORMATION FOR A QUOTE

Provide 347 vs 347H, governing specification, diameter/tolerance, length, condition, quantities, testing and certificate requirements.

Material: material/347-stainless-steel/
Technical source: ATI, 321/347/348 technical 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.