TITANIUM-STABILISED AUSTENITIC STAINLESS STEEL

AISI 321 1.4541 / S32100 / SUS321

Titanium-stabilised austenitic stainless steel

Ti = 5×C	**400–800 °C**	**17–19 % Cr**	**EN 10204 3.1**
Stabilised	Service range	Austenitic	Every lot

GRADE AND STANDARDS

Item	Detail
Designations	AISI 321 / UNS S32100 / 1.4541 / SUS321 / X6CrNiTi18-10
Standards	ASTM A240, A312, A276; EN 10088-2
Delivery condition	Solution annealed, pickled, or bright annealed
Melt route	EAF + AOD refining; VD on request
Typical use	Exhaust systems, heat exchangers, furnace parts, welded pressure vessels
Certificate	EN 10204 3.1 with chemistry and intergranular corrosion test on request

CHEMICAL COMPOSITION (% BY MASS)

C	Si	Mn	P	S	Cr	Ni	Ti
≤0.08	≤0.75	≤2.00	≤0.045	≤0.030	17.0–19.0	9.0–12.0	5×C to 0.70

MECHANICAL PROPERTIES

Condition	Tensile MPa	0.2 % proof MPa	Elongation %	Hardness
Annealed	≥515	≥205	≥40	≤95 HRB
Annealed, 400 C	≥430	≥150	≥35	—
Annealed, 600 C	≥350	≥120	≥30	—

SUPPLY RANGE

Form	Size range	Condition
Hot rolled plate	Thickness 3–100 mm × width up to 2000 mm	Annealed, pickled
Cold rolled sheet	Thickness 0.3–3.0 mm × width up to 1250 mm	2B / BA
Round bar	Ø10–300 mm	Annealed / peeled
Seamless tube	OD 6–219 mm	Annealed, pickled

INSPECTION AND CERTIFICATION

- EN 10204 3.1 with chemistry including the Ti/C ratio
- Intergranular corrosion test to ASTM A262 Practice E on request
- Grain size and inclusion rating
- Surface finish report - 2B, BA or pickled
- Tensile test at the supplied condition

ORDERING INFORMATION

- Grade and standard
- Form and size - thickness x width x length, or diameter and cut length
- Quantity in pieces or kilograms
- Delivery condition and hardness window
- Certificate and inspection requirements

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EN 10204 3.1 mill certificate with every shipment
Chemistry · mechanical properties · test results · heat number

Hardness map and ultrasonic inspection on request.
Values are typical for the grade; the certificate of the actual heat governs.