

1.4401 · AISI 316 · 316 is the marine and chemical grade of the austenitic family: 17 % chromium, 10–12 % nickel and 2–2.5 % molybdenum, material number 1.4401 (X5CrNiMo17-12-2). The molybdenum resists chloride pitting and crevice corrosion where 304 fails — sea air, pools, brine, detergents, many acids. We stock 1–6 mm in 2B and No.4 at Dilovası, plate to 30 mm to order; most stock is dual-certified 316/316L.

1.4401 · AISI 316	17 Cr · 11 Ni · 2 Mo	PREN ≈ 24	1–6 mm stock	Marine, pool, chemical
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The coast is where 304 tea-stains and 316 stays bright. Any stainless within a few kilometres of the sea, in a pool hall, a chemical plant or a dishwasher tunnel is 316 — and in the Gulf, where every project is coastal, it is the grade our stainless enquiries start with.

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S	Cr	Ni	Mo	N
max. % (ladle)	≤ 0.07	≤ 1.00	≤ 2.00	≤ 0.045	≤ 0.015	16.5–18.5	10.0–13.0	2.00–2.50	≤ 0.10

ASTM 316: C ≤ 0.08, Cr 16–18, Ni 10–14, Mo 2–3. PREN = Cr + 3.3 Mo + 16 N ≈ 24–26.

MECHANICAL PROPERTIES

Property	Requirement (EN 10088-2, cold-rolled)	Typical value	Note
Yield strength Rp0.2	≥ 240 MPa	270–330 MPa	
Tensile strength Rm	530–680 MPa	580–650 MPa	
Elongation A	≥ 40 %	45–55 %	
Hardness	—	≤ 215 HB	
Magnetic	no	slightly after cold work	

EQUIVALENT GRADES

System	Grade	Note
EN 10088	1.4401	material number
DIN	X5CrNiMo17-12-2	historic
AISI / ASTM A240	316	US designation
JIS G4304/4305	SUS 316	
GB/T 3280	06Cr17Ni12Mo2	
UNS	S31600	

FINISHES FOR MARINE AND ARCHITECTURAL USE

Finish	Ra (µm)	Coastal performance	Used for
BA (2R)	≤ 0.1	best — least tea-staining	cladding, lift doors, signage
Electropolished	≤ 0.3	best	railings, fixings, pool equipment
2B	0.1–0.5	good	tanks, ducts, hidden parts
HL hairline	0.3–0.5	good if lines run vertical (drains water)	façades, doors, columns
No.4 satin	0.3–0.6	fair — grooves hold salt	handrails, counters; rinse regularly
1D plate	2–6	poor untreated — pickle and passivate	structural, heavy tanks

Rule for the coast: the smoother and cleaner the surface, the longer 316 stays bright. Rough, ground or heat-tinted areas pit first.

STANDARDS

EN 10088-2 — 1.4401 (X5CrNiMo17-12-2) · ASTM A240 — Type 316 · EN 10028-7 — pressure use · EN 10204 3.1