

1.4307 · AISI 304L · 304L is 304 with carbon limited to 0.03 % — material number 1.4307 (X2CrNi18-9) — so that welding does not precipitate chromium carbides at the grain boundaries and the heat-affected zone stays corrosion-resistant without post-weld annealing. It is the grade for welded tanks, vessels, pipework and heavy fabrication; strength is a little lower than 304. We supply 1–6 mm sheet from stock (dual-certified 304/304L where the heat allows) and plate to 30 mm to order.

1.4307 · AISI 304L

C ≤ 0.03 %

Welding grade

1–6 mm stock · plate to 30 mm

Dual-certified 304/304L

A welded stainless tank is only as good as its heat-affected zone, and 304L is what keeps that zone from rusting along the weld years later. Most modern 304 coil is melted to 304L limits anyway and dual-certified; where the specification says 304L, we supply the certificate that says it.

CHEMICAL COMPOSITION

Element	C	Si	Mn	P	S	Cr	Ni	N
max. % (ladle)	≤ 0.030	≤ 1.00	≤ 2.00	≤ 0.045	≤ 0.015	17.5–19.5	8.0–10.5	≤ 0.10

1.4306: Cr 18.0–20.0, Ni 10.0–12.0. ASTM 304L: Cr 18.0–20.0, Ni 8.0–12.0.

MECHANICAL PROPERTIES

Property	Requirement (EN 10088-2, cold-rolled)	Typical value	Note
Yield strength Rp0.2	≥ 220 MPa	240–290 MPa	
Tensile strength Rm	520–700 MPa	560–640 MPa	
Elongation A	≥ 45 %	50–60 %	
Hardness	—	≤ 200 HB	
Impact at –196 °C	≥ 60 J (1.4306)	> 100 J	cryogenic grade

EQUIVALENT GRADES

System	Grade	Note
EN 10088	1.4307 / 1.4306	material number
DIN	X2CrNi18-9 / X2CrNi19-11	historic
AISI / ASTM A240	304L	US designation
JIS G4304/4305	SUS 304L	
GB/T 3280	022Cr19Ni10	
UNS	S30403	

FINISHES FOR WELDED WORK

Finish	As delivered	After welding
2B	skin-passed matt silver, filmed	brush or pickle the seam; blends well
1D (hot-rolled plate)	rough pickled surface, unfilmed	no cosmetic work needed; pickle heat tint
BA	bright reflective	seam always visible — use only where welds are hidden
No.4 satin	brushed 180 grit, filmed	re-brush seam lengthwise after grinding
Electropolished	smooth, passive, Ra ≤ 0.4	for pharma / hygienic tanks after fabrication

For tank shells order 2B or 1D; decorative finishes on welded parts double the finishing labour.

STANDARDS

EN 10088-2 — 1.4307 (X2CrNi18-9) / 1.4306 (X2CrNi19-11) · ASTM A240 — Type 304L · EN 10028-7 — pressure-vessel use · EN 10204 3.1 / 3.2