

# 304 / 304L STAINLESS STEEL PIPE

**Welded and Seamless**

ASTM A312 / ASME SA312 / EN 10216-5 / EN 10217-7



MetalFromTurkey supplies 304 stainless steel pipe for general-purpose food, architectural, process and industrial piping requirements. Supply includes ASTM A312 TP304, 304/304L dual-certified material, EN 10216-5, EN 10217-7, UNS S30400, DIN/EN 1.4301, with EN 10204 3.1 Mill Test Certificate documentation.

## 1. PRODUCT OVERVIEW

Property	Specification
Product	Stainless Steel Pipe, Round
Grade	TP304 / TP304L (dual-certified 304/304L available)
Equivalent Designations	UNS S30400 / S30403 • DIN/EN 1.4301 / 1.4307
Manufacturing Type	Seamless (SMLS) • Welded (WLD / EFW)
Applicable Standards	ASTM A312, ASME SA312, EN 10216-5, EN 10217-7
Condition	Solution annealed and pickled (unless otherwise specified)

## 2. CHEMICAL COMPOSITION (% by weight, heat analysis)

Element	TP304 (S30400)	TP304L (S30403)
Carbon (C), max	0.08	0.035
Manganese (Mn), max	2.00	2.00
Silicon (Si), max	1.00	1.00
Phosphorus (P), max	0.045	0.045
Sulfur (S), max	0.030	0.030
Chromium (Cr)	18.0 – 20.0	18.0 – 20.0
Nickel (Ni)	8.0 – 11.0	8.0 – 13.0
Nitrogen (N), max	0.10	0.10

Per ASTM A312 Table 1. Values are furnished for reference; final heat analysis is reported on the Mill Test Certificate for each shipment.

## 3. MECHANICAL PROPERTIES (minimum, room temperature)

Property	TP304	TP304L
Tensile Strength, min	515 MPa (75 ksi)	485 MPa (70 ksi)
Yield Strength (0.2% offset), min	205 MPa (30 ksi)	170 MPa (25 ksi)
Elongation in 2 in. (50 mm), min	35%	35%
Hardness, max	≤ 92 HRB / 201 HB	≤ 92 HRB / 201 HB

Per ASTM A312 Table 2. Additional impact / low-temperature testing available on request.

## 4. DIMENSIONAL PROGRAM (representative sizes)

NPS	Outside Diameter (mm)	Sch 10S (mm)	Sch 40S (mm)	Sch 80S (mm)
1/2"	21.3	2.11	2.77	3.73
3/4"	26.7	2.11	2.87	3.91
1"	33.4	2.77	3.38	4.55
1 1/2"	48.3	2.77	3.68	5.08
2"	60.3	2.77	3.91	5.54
3"	88.9	3.05	5.49	7.62
4"	114.3	3.05	6.02	8.56
6"	168.3	3.40	7.11	10.97
8"	219.1	3.76	8.18	12.70
10"	273.0	4.19	9.27	15.09
12"	323.9	4.57	9.53	17.48

Full range: 1/8" – 30" OD, Sch 5S – Sch 80S, per ASME B36.19M. Exact wall thickness confirmed per mill availability at order. Custom OD/WT and metric sizing available on request.

### Length & Tolerances

- Standard length: Single Random 5–7.5 m (16–24 ft) or fixed length up to 12 m
- OD tolerance, WT tolerance and straightness per ASTM A999 / EN ISO 1127
- Ends: plain (square cut) or beveled for welding, per customer requirement

## 5. HEAT TREATMENT

Solution annealing at 1010–1150 °C followed by rapid water quenching or equivalent rapid cooling, in accordance with ASTM A312 Table 2 heat-treatment requirements, to restore corrosion resistance and remove sensitization from hot/cold working.






## 6. SURFACE FINISH OPTIONS

Finish	Description
Pickled & Annealed (PA)	Standard mill finish, matte gray, scale-free
Bright Annealed (BA)	Bright, reflective finish, no pickling required
No.4 / Brushed	Uniform directional polish, common for architectural use
Mirror / No.8 Polish	High-gloss polish for decorative / sanitary applications

## 7. TESTING & CERTIFICATION

- Chemical composition — spectral analysis (heat and product analysis)
- Mechanical testing — tensile test, flattening test, flare/expanding test
- Hydrostatic test or ultrasonic (UT) / eddy-current (ET) examination, per ASTM A312 §14
- Intergranular corrosion test (Practice E, ASTM A262) available on request for 304L
- Documentation: EN 10204 Type 3.1 or 3.2 Mill Test Certificate, third-party inspection (SGS / BV / TÜV) on request

## 8. TYPICAL APPLICATIONS

	Sector	Typical Use
	<b>Food &amp; Beverage</b>	Process piping, hygienic transfer lines
	<b>Architectural</b>	Handrails, balustrades, facade structures
	<b>Chemical / Process</b>	General corrosive-service piping
	<b>Water Treatment</b>	Piping and structural supports in corrosive environments
	<b>General Industrial</b>	Structural tube, equipment framing, transport piping

## 9. PACKAGING & MARKING

- Bundled with steel strapping and end caps; export seaworthy packing
- Each pipe marked with heat number, grade, dimensions, and manufacturer identification per ASTM A312 §18
- Bundle tags include heat/lot number for full traceability to Mill Test Certificate

The information in this data sheet reflects general ASTM A312 / EN 10216-5 requirements and is provided for guidance. Exact chemistry, mechanical properties, dimensions and certification are confirmed per mill and per order on the final Mill Test Certificate. Contact MetalFromTurkey for a formal quotation.