

316/316L Stainless Steel Seamless Pipe



316/316L stainless steel seamless pipe is an austenitic stainless steel pipe known for its excellent corrosion resistance, especially in chloride and marine environments. Compared with 304 stainless steel, 316 / 316L contains molybdenum, which improves resistance to pitting and crevice corrosion. It is widely used in marine engineering, chemical processing, heat exchangers, food processing, and industrial fluid transportation systems.

316L is the low-carbon version of 316 stainless steel, offering better weldability and reduced risk of intergranular corrosion after welding. 316 and 316L stainless steel seamless pipes are widely used in various industries due to their excellent corrosion resistance and high-temperature strength.

Specifications of 316 / 316L Stainless Steel Seamless Pipe:

316/316L stainless steel seamless pipe can be supplied in a wide range of sizes and specifications according to international standards and customer requirements.

Item	Description
Product Name	316 / 316L Stainless Steel Seamless Pipe
Grades	316, 316L
Standards	ASTM A312, ASTM A213, ASTM A269, ASME SA312, EN 10216-5
Outer Diameter	6 mm – 630 mm
Wall Thickness	0.5 mm – 40 mm
Length	5.8m, 6m, random length, fixed length, or custom length

Item	Description
Manufacturing Process	Cold drawn, cold rolled, hot finished
Surface Finish	Annealed, pickled, bright annealed, polished
Pipe Ends	Plain end, beveled end, threaded end
Type	Seamless pipe / seamless tube
Tolerance	According to ASTM, ASME, EN, or customer requirements
Packaging	Bundles, wooden cases, plywood cases, seaworthy export packing
Marking	Grade, size, standard, heat number, manufacturer's mark, or as required
Inspection Documents	MTC, EN 10204 3.1, EN 10204 3.2, third-party inspection report

Chemical Composition of 316 / 316L Stainless Steel Seamless Pipe:

Grade	C	Si	Mn	P	S	Cr	Ni	Mo	N
316	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	16.0–18.0	10.0–14.0	2.0–3.0	≤0.10
316L	≤0.03	≤1.00	≤2.00	≤0.045	≤0.030	16.0–18.0	10.0–14.0	2.0–3.0	≤0.10

Chemical composition may vary slightly depending on the applicable standard.

Mechanical Properties of 316 / 316L Stainless Steel Seamless Pipe:

Grade	Tensile Strength	Yield Strength	Elongation	Hardness
316	≥515 MPa	≥205 MPa	≥35%	≤95 HRB
316L	≥485 MPa	≥170 MPa	≥35%	≤95 HRB

Mechanical properties may vary according to size, production process, and standard.

Comparison of 316 and 316L Stainless Steel Seamless Pipe:

Property	316 Stainless Steel Seamless Pipe	316L Stainless Steel Seamless Pipe
Carbon Content	Higher, up to 0.08%	Lower, up to 0.03%
Corrosion Resistance	Excellent	Excellent
Intergranular Corrosion Resistance	Good	Better after welding
Weldability	Good	Better
Strength	Slightly higher	Slightly lower
Sensitization Risk After Welding	Higher	Lower
Typical Use	General corrosion-resistant applications	Welded structures and corrosive environments
Marine Use	Suitable	More commonly preferred
Chemical Processing Use	Suitable	Widely preferred
Heat Resistance	Good	Good
Common Selection	Standard 316 applications	Projects requiring welding and better corrosion performance

Standards of 316 / 316L Stainless Steel Seamless Pipe:

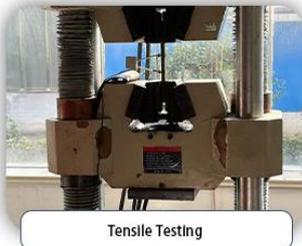
316 / 316L stainless steel seamless pipe can be manufactured and supplied according to the following standards:

- ASTM A312 – Seamless, welded, and heavily cold worked austenitic stainless steel pipes
- ASTM A213 – Seamless ferritic and austenitic alloy-steel boiler, superheater, and heat-exchanger tubes
- ASTM A269 – Seamless and welded austenitic stainless steel tubing for general service
- ASME SA312 – Pressure piping applications
- EN 10216-5 – Seamless steel tubes for pressure purposes, stainless steel tubes
- JIS / DIN / GB standards – Available upon request

Inspection & Testing of 316 / 316L Stainless Steel Seamless Pipe:

316 / 316L stainless steel seamless pipe is inspected and tested to ensure quality, performance, and compliance with applicable standards.

Common inspection and testing items include:



- Visual inspection
- Dimensional inspection
- Chemical composition analysis
- Mechanical property test
- Hydrostatic test
- Flattening test
- Flaring test
- Ultrasonic test or eddy current test
- PMI (Positive Material Identification)
- Intergranular corrosion test
- Surface quality inspection

Applications of 316 / 316L Stainless Steel Seamless Pipe:

316 / 316L stainless steel seamless pipe is widely used in industries that require good corrosion resistance, hygiene, and durability.

Typical applications include:

- Marine and shipbuilding industry
- Seawater and desalination systems
- Chemical and petrochemical processing

Heat exchangers and condensers

Oil and gas industry

Food processing equipment

Pharmaceutical industry

Pulp and paper industry

Pressure piping systems

Water treatment system



Package of 316 / 316L Stainless Steel Seamless Pipe:

316 / 316L stainless steel seamless pipe is usually packed in bundles, wooden cases, or seaworthy export packing to ensure safe transportation and storage. Both ends can be protected with plastic caps, and the pipes may be wrapped with plastic film, woven bags, or waterproof materials if required. Packing can also be customized according to customer requirements.

