

# ASTM A312 TP317L Stainless steel Pipes, UNS S31703 1.4438 Seamless pipe

We are a professional exporter and supplier of ASTM A312 TP317L stainless steel Pipes in china, UNS S31703 1.4438 Seamless pipe

Stainless steel grade 317L is a low carbon version of grade 317 stainless steel. It has the same high strength and corrosion resistance as 317 steel but can produce stronger welds due to the low carbon content

ASTM A312 TP317L (UNS S31703) is a molybdenum-bearing austenitic stainless steel with greatly increased resistance to chemical attack as compared to the conventional chromium-nickel austenitic stainless steels such as Alloy 304. In addition, Alloy 317L offers higher creep, stress-to-rupture, and tensile strength at elevated temperatures than conventional stainless steels. It is a low carbon or "L" grade which provides resistance to sensitization during welding and other thermal processes.

ASTM A312 TP317L is a molybdenum containing, low carbon austenitic stainless steel with increased additions of chromium, nickel, and molybdenum for better corrosion resistance and increased resistance to chemical attack for sulfurous, acetic, formic, citric, and tartaric acids. Due to its low carbon content, 317L also provides resistance to sensitization when welded and higher creep, stress to rupture, and tensile strength at elevated temperatures. It is non-magnetic in the annealed condition but may become slightly magnetic after welding.

## ASTM A312 TP317L APPLICATIONS

Alloy 317L is commonly used to handle sulfur, pulp liquor, acid dyestuffs, acetylating and nitrating mixtures, bleaching solutions, severe coal and oil, and many chemical compounds. Some other applications that use alloy 317L include:

- Paper and pulp handling equipment
- Chemical and petrochemical processing equipment
- Condensers in fossil and nuclear fueled power generation stations
- Food processing equipment

[ASTM A312](#) Standard Specification for Seamless and Welded Austenitic Stainless Steel Pipes Scope

This specification covers seamless, straight-seam welded, and heavily cold worked welded austenitic stainless steel pipe intended for high-temperature and general corrosive service.

A312 TP317L is a specific type of stainless steel pipe grade designed for high-temperature and corrosive environments. The designation "A312" refers to the ASTM (American Society for Testing and Materials) standard for seamless, welded, and heavily cold worked austenitic stainless steel pipes. The "TP" stands for "Type," followed by a number which specifies the specific grade. In this case, TP317L designates a high-alloy austenitic stainless steel.

- **A312:** ASTM standard for seamless, welded, and heavily cold worked austenitic stainless steel pipes.
- **TP:** Type designation followed by a number.
- **317L:** Specific grade of stainless steel. In this case, it's a high-alloy austenitic stainless steel containing elements like chromium, nickel, molybdenum, and carbon.

The "L" in TP317L indicates a low carbon version, which offers better corrosion resistance in certain environments compared to standard grades.

These pipes find applications in various industries such as chemical processing, petrochemical, pharmaceutical, food processing, and more, where resistance to corrosion and high temperatures is crucial.

#### Chemical Composition Of ASTM A312 TP 317L Stainless Steel Seamless Pipe

SS	317	317L
Ni	11--14	11--15
N	-	-
Cr	18 - 20	18 - 20
C	0.08 max	0.035 max
Si	1 max	1 max
Mn	2 max	2 max
P	0.040 max	0.040 max
S	0.030 max	0.03 max
Mo	3.00 - 4.00	3 - 4

#### Mechanical Properties of Astm A213 TP 317L

Density	8.0 g/cm <sup>3</sup>
Melting Point	1454 ° C (2650 ° F)
Tensile Strength	Psi - 75000, MPa - 515
Yield Strength (0.2%Offset)	Psi - 30000, MPa - 205

Elongation

35%

**How to order our ASTM A312. TP317L Seamless pipes?**

Stainless Steel Seamless Pipe size DN100 (OD114.3MM) x S.80S/SX (8.56mm) x 6000mm. ASME B36.19M, Material: ASTM A312. GR. TP317L. N.W: 133.92KG/PC

