

317L Stainless Steel

317L STAINLESS STEEL DATASHEET

317L stainless steel is an austenitic stainless steel containing molybdenum. This grade has improved corrosion resistance compared to that of 304/304L and 316/316L grades. 317L stainless steel has improved chloride pitting resistance over 316L due to the increased levels of chromium, nickel and molybdenum. It is common for 317L stainless steel to meet the mechanical properties of 317 stainless steel grade, while maintaining a low carbon content with the controlled addition of nitrogen.

Common industry/applications for 317L stainless steel include: Flue-Gas Desulfurization (FGD systems), Chemical Processing, Oil and Gas, Pulp and Paper Processing, and Condensers in Power Generation.

Product forms include round bar, square, rectangle & flat bar, plate & sheet, hollow bar, tubing and pipe, and forgings.



Standards

- UNS S31703

Physical Properties

- Density: 0.285LB/in³ (7.90g/cm³)
- Melting Point: 2550–2590°F (1398–1421°C)
- Modulus of Elasticity: 29.0x10⁶psi (200 GPa)
- Magnetic Permeability: 1.02 Max @ 200 H (Annealed)

Characteristics

- Improved general and localized corrosion resistance compared to 304L or 316L.
- Good formability.
- Good weldability.

Chemical Composition

	C	Mn	S	P	Si	Cr	Ni	N	Mo
MIN	-	-	-	-	-	18.000	11.000	-	3.000
MAX	0.030	2.00	0.030	0.045	0.750	20.000	15.000	0.100	4.000

Mechanical Properties

Tensile (min) KSI	Yield (min) KSI	Elongation (min) %	Reduction of Area (min) %	Hardness HRB (BHN)
75	30	40%	45%	85 (217)

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