

317L STAINLESS STEEL TUBING



Similar in composition to 316L and 304L, alloy 317L is an austenitic molybdenum, chromium, nickel stainless alloy. Due to the higher moly content, 317L provides enhanced resistance to pitting and stress corrosion cracking particularly in chloride or halide-rich environments. 317L has higher creep, stress-to-rupture, and tensile strength than its 316L and 304L counterparts which makes it a great solution to demanding applications found offshore, in pulp & paper mills and in chemical processing plants.

PRODUCT SPECIFICATIONS

ASTM A213 / ASME SA213 / NACE MRO175

SIZE RANGE

Outside Diameter (OD)	Wall Thickness
.125"–1.000"	.028"–.134"

CHEMICAL REQUIREMENTS

ASTM TP317L (UNS S31703)
COMPOSITION %

Element	Requirement	Limit
C	Carbon	0.030 max
Mn	Manganese	2.00 max
P	Phosphorous	0.045 max
S	Sulfur	0.030 max
Si	Silicon	1.00 max
Cr	Chromium	18.0–20.0
Ni	Nickel	11.0–15.0
Mo	Molybdenum	3.0–4.0

DIMENSIONAL TOLERANCES

OD	OD Tolerance	Wall Tolerance
≤ .500"	± .005"	± 10%
.500"–1.500" excl	± .005"	± 10%

MECHANICAL PROPERTIES

Yield Strength	30 ksi min
Tensile Strength	75 ksi min
Elongation (2" min)	35%
Hardness (Rockwell B Scale)	90 HRB max

FABRICATION

The low carbon content provides resistance to intergranular corrosion and superior weldability over 316. 317L can be hardened by cold working as opposed to heat treating.

OD	Wall	ID	Lbs./Ft.	Bursting PSI	Working PSI
1/8" (.125")	.028	.069	.0294	30,240	7,560
	.035	.055	.0341	37,800	9,450
1/4" (.250")	.035	.180	.0814	23,333	5,833
	.049	.152	.1066	26,460	6,615
	.065	.120	.1301	35,100	8,775
3/8" (.375")	.035	.305	.1288	12,600	3,150
	.049	.277	.1728	17,640	4,410
	.065	.245	.2180	23,400	5,850
1/2" (.500")	.035	.430	.1761	9,450	2,362
	.049	.402	.2391	13,230	3,307
	.065	.370	.3059	17,550	4,387
	.083	.334	.3745	22,410	5,602
3/4" (.750")	.065	.620	.4818	11,700	2,925
	.083	.584	.5990	14,940	3,735
	.095	.560	.6773	17,100	4,275
	.109	.532	.7560	19,620	4,905
	.120	.510	.8181	24,000	6,000
1" (1.000")	.065	.870	.6576	8,775	2,193
	.083	.834	.8235	11,205	2,801
	.095	.810	.9302	12,825	3,206
	.109	.782	1.051	14,715	3,678
	.120	.760	1.143	16,200	4,050
	.134	.732	1.256	18,090	4,522

TYPICAL APPLICATIONS

Offshore Oil and Gas
Chemical and Petrochemical
Pulp & Paper
Food Processing
Textile Equipment

