

316L

Type 316L is a molybdenum-containing austenitic stainless steel intended to provide improved corrosion resistance relative to type 304/304L in moderately corrosive process environments, particularly those containing chlorides or other halides. Type 316L is non-magnetic in the annealed condition but may become slightly magnetic as a result of welding.

Chemical Composition, %

element	Cr	Ni	Fe	Mo	C	Mn	Si	P	S
min.	16.00	10.00	bal.	2.00	0.030	2.00	1.00	0.045	0.030
max.	18.00	14.00		3.00					

Chemical Composition according to ASTM. Some compositional limits of other specifications may vary slightly.

Designation and standards

National Standards	Material designation	Chemical composition	Forgings	Rod and bar	Plate and sheet	Strip	Seamless tube
ASTM ASME SAE	UNS S31603 316L	A959 SA959	A182 SA182 AMS5653	A276 SA276 A479 SA479 AMS5653	A240 SA240 A666 SA666 AMS5507	A240 SA240 A666 SA666 AMS5507	A213 SA213 A249 SA249 A312 SA312
DIN	1.4404 X2CrNiMo17-12-2	DIN 10088-1	DIN 10222-5	DIN 10088-3 DIN 10272	DIN 10088-2	DIN 10088-2	DIN 10297-2 DIN 10216-5
GB/T	022Cr17Ni12Mo2 00Cr17Ni12Mo2 S31603	GB/T 20878	YB/T 5089 NB/T 47010 JB/T 4728	GB/T 1220 GB/T 4226	GB/T 3280 GB/T 4237 GB/T 4238	GB/T 3280 GB/T 4237 GB/T 4238	GB/T 13296 GB/T 14975 GB/T 14976

Density 7.90g/cm³

Corrosion resistance

- improved general and localized corrosion to 304/304L stainless
- good formability
- good weldability

Applications

Typical applications are:

- food processing
- pulp and paper
- chemical process vessels
- pharmaceutical equipment
- marine