DIN-EN 1.4404, UNS S31603, AMS 5507

316L stainless steel is the low carbon version of type 316, which is the second most common austenitic chromium-nickel stainless steel after type 304. 316L stainless steel has very good corrosion resistance due to its high chromium and molybdenum content combined with a low carbon content. It is often considered one of the most suitable choices when selecting an austenitic stainless steel for medical devices and marine applications.

Common Applications Of 316L Stainless Steel Strip Include:

- Storage & Transportation
- Equipment
- Chemical Tubing
- Food Processing
- Marine Applications
- Flexible Metal Hose
- Medical Devices

316L Stainless Steel Strip Cold Forming

316L stainless steel strip has a high degree of ductility and is quite easy to form. A cold working operation will enhance the alloy's strength and hardness, as well as leave it slightly magnetic.

Corrosion Resistance

Type 316L, sometimes referred to as marine grade stainless steel, is an austenitic chromium-nickel-molybdenum alloy that provides improved corrosion resistance than type 304 or other stainless steel alloys. This enables 316L stainless steel to be used in highly acidic environments that other steels cannot withstand. Structural parts for aircraft, trailers, and diaphragms are typical uses.

Welding Of 316L Stainless Steel Strip

316L stainless steel can be readily welded by most standard processes. A post weld heat treatment is not necessary.

Heat Treatment

Annealing between 1050 and 1080°C followed by rapid quenching can be carried out after forging to restore corrosion resistance in particular, but no heat treatment can harden the grade.

Available Sizes & Forms

- Thickness Range: 0.03-2 mm (.001″- .079″)
- Slitting Width: 2-300 mm (.08″ - 12)
- Materials can be delivered in forms of strip coils and cut-to-length.

Gauge Tolerance

Thickness Tolerance: +/- 0.005 mm

Width Tolerance: +/- 0.05 mm

Straightness

Maximum deviation is 1.25 mm per 1000 mm.

Surface Finish

- **2H** -work hardened and temper rolled for higher tensile strength
- **2R/BA** -cold rolled, bright annealed and skin passed. Smooth, bright surface.

Specifications

Our type 316L stainless steel strip is covered by the following specifications:

- ASTM A 666
- ASTM A 240

Edging Treatment

- **Mill Edge** – untreated edge, generally with a somewhat uneven contour.
- **Slit Edge** – edge with the shearing burr not removed.
- **Deburred Edge** – slit edge from which the burr has been removed.
- **Round Edge** – edge completely rounded.

Chemical Composition

Element	% Present Max.
Carbon (C)	0.03
Chromium (Cr)	16.00 – 18.00
Manganese (Mn)	2.00
Silicon (Si)	0.75
Phosphorous (P)	0.04
Sulphur (S)	0.03
Nickel (Ni)	10.00 – 14.00
Iron (Fe)	Balance
Molybdenum (Mo)	2.00 - 3.00

Physical Properties

Melting Point	Density	Specific Gravity	Modulus of Elasticity in Tension
2550-2590° F 1399-1421° C	.29 lb/in^3 8.027g/cm^3	8.03	29 X 10^6 psi 200 Gpa

Mechanical Properties

Type	Tensile Strength Rm (N/mm^2)	Yield Strength Rp 0.2 (N/mm^2)	Condition	Vickers Hardness (HV)	Elongation % Min.
316L	≥520	≥205	ANN	220 Max.	40
	≥700	≥450	1/4 Hard	220-250	20
	≥850	≥700	1/2 Hard	250-310	8
	≥1000	≥830	3/4 Hard	310-370	4

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Important Note

Information given in this data sheet about the condition or usability of materials respectively products are no warranty for their properties, but act as a description. The information, we give on for advice, comply to the experiences of the manufacturer as well as our own. We cannot give warranty for the results of processing and application of the products.