BIBUS METALS

Technical datasheet

Alloy 316/316L / W-Nr. 1.4401/1.4404

316 stainless steel and the low Carbon variant 316L are the most widely used austenitic stainless steel grades after grade 304. The addition of Molybdenum gives it improved corrosion resistance and the 316L variant is immune to grain boundary carbide precipitation.

Available products

Product form	Size range from	Size range to
Bar	0.80 mm diameter	220 mm diameter

Chemical composition (%) of 316L according AMS 5653

Fe	Cr	Ni	Mo	Si	P	Mn	N	C	Cu
Balance	16.0-18.0	10.0-14.0	2.0-3.0	1.0 max	0.04 max	1.25-2.0 max	0.11 max	0.03 max	1.0 max

Major specifications

ASTM A276	UNS S31600
AMS 5653	UNS S31603 (316L)

Physical properties

Density	8.0 g/cm^3
Melting range	1400°C

Mechanical properties – room temperature according AMS 5653

Yield strength	172 MPa	Hardness	255 HB max
Tensile strength	482 MPa		
Elongation	40 %		

Key attributes

316 stainless is an austentic stainless steel with additions of Mo for improved corrosion resistance (above 304) especially against pitting and crevice corrosion in chloride environments. It has excellent pitting resistance and good resistance to most chemicals. The 316L low C variant is immune to grain boundary carbide precipitation which makes it highly suited to welded fabrications as there is no carbide precipitation during welding.

Applications

Industrial boilers, pressure vessels, heat exchangers
Chemical containers
Furnace equipment
Food industry components
Daily household items
Valves and pumps

All information is subject to change without notice. The properties correspond to the material in the heading. They may vary for other specifications. Please contact us for more details.