316 / 316L Stainless

Technical Datasheet

Austenitic Stainless Steel with added Molybdenum Service. Quality. Value.

Typical Applications

- Heat exchangers
- Pressure vessels
- Chemical containers
- Food preparation equipment
- Furnace parts
- Valves & pumps

Product Description

Type 316 is an austenitic stainless steel with added molybdenum which gives the alloy improved corrosion resistance. It is commercially almost as popular as 304. The mechanical properties of the alloy are similar to Type 304 except that this grade is stronger at elevated temperatures. Type 316L is a low carbon version of Type 316 which minimizes carbide precipitation due to welding.

Weldability of 316 alloys is excellent and machinability is good. Corrosion resistance is good - excellent pitting resistance and good resistance to most chemicals involved in such industries as paper, photographic and textiles.

Key features

- Austenitic stainless steel with added molybdenum
- Improved corrosion resistance (better than 304) particularly in chloride environments.
- Use 316L for welding applications.

Machinability

Good machinability.

Weldability

Weldable by common fusion and resistance techniques.

Availability

Round bar, flat bar, plate, sheet, wire, hexagon and tube

Corrosion resistance

Excellent pitting resistance and good resistance to most chemicals.

Chemical Composition (weight %)

	C	Cr	Mo	Si	P	S	Ni	Mn	Fe
min		16.5	2.00				10.0		Bal
max	0.08	18.5	2.50	1.00	0.05	0.02	13.0	2.00	Bal

Mechanical Properties

Tensile strength	520 - 680	MPa
Proof Stress	220 min	MPa
Elongation A5	40 min	%

Physical Properties

Density	8.00	kg/m^3
Melting Point	1400	°C
Modulus of Elasticity	193	GPa
Electrical Resistivity	0.074	$x10^{-6}$ Ω.m
Thermal Conductivity	16.3	W/m.K
Thermal Expansion	15.9	$x10^{-6}$ /K

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

info@jxd-machining.com | www.jxd-machining.com