

Key Features

- Increased corrosion resistance
- Excellent weldability
- Good machinability
- Excellent pitting resistance
- Good chemical resistance

Common Applications

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

Material Description

Stainless Steel 316 is an austenitic stainless steel alloy known for its superior corrosion resistance, particularly in chloride-rich environments. It contains molybdenum, which enhances its resistance to pitting and crevice corrosion. Stainless Steel 316 is commonly used in marine environments, chemical processing, and pharmaceutical applications where corrosion resistance is critical. It offers good strength and weldability, making it suitable for a wide range of industrial and commercial applications.

Chemical Composition (%)

	C	Cr	Fe	Mn	Mo	Ni	N	P	Si	S
Min.		16	61.995		2.0	10				
Max.	0.080	18	72	2.0	3.0	14	0.010	0.045	0.75	0.030

Mechanical Properties

Ultimate Tensile Strength	84,000 PSI
Tensile Yield Strength	42,100 PSI
Hardness	Rockwell B95
Elongation at Break	50%

Physical Properties

Density	0.289 lb/in ³ (7.99 g/cm ³)
Thermal Conductivity	16.2W/m.K
Modulus of elasticity	28,000 KSI (193 GPa)
Melting Point	2,500–2,550°F (1,371–1,399 °C)

Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

InstaVoxel™ – On-Demand Manufacturing Expert

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InstaVoxel's quality control system is ISO-9001 certified, and all our partners hold relevant certifications.



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