

Stainless Steel 316 is an austenitic stainless steel alloy that is an upgraded version of Stainless Steel 304. It contains a higher percentage of chromium (16-18%), nickel (10-14%), and molybdenum (2-3%) compared to Stainless Steel 304. These additions enhance its corrosion resistance, especially in chloride environments.

Chemical Composition

Element	Maximum Unless Range is Specified
Silicon	.75
Carbon	.08
Phosphorus	.045
Sulfur	.030
Manganese	2.00
Chromium	16.00-18.00
Nickel	10.00-14.00
Molybdenum	2.00-3.00
Nitrogen	.10
Iron	Balance

Physical Properties

Property	Maximum Unless Range is Specified
Density,lbs/in ³	0.285
Specific Heat,BTU/lb-°F (32–212°F)	0.11
Thermal Conductivity ,BTU/hr/ft ² /ft/°F	10.1
Electrical Resistivity, Micohm-in at 68°F	29.1
Melting Point (Deg°F)	2450-2630
Modules of Elasticity ,psi	29,000,000

Mechanical Properties

Property	Maximum Unless Range is Specified
Ultimate Tensile Strength,ksi	85
Yield Strength,ksi	44
Elongation in 2 in	56%
Hardness, Rockwell B	81

The material properties in this datasheet are provided by one of the manufacturers collaborating with Naxtry. Please note that material properties may slightly vary among different manufacturers. Naxtry can accommodate customer requests for specific materials or brands.