

# STAINLESS STEEL

## 316 Ti - 1.4571



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Stainless steel 316Ti, also known as 1.4571, is a titanium-stabilised austenitic stainless steel. The "316" designation indicates that it belongs to the 300 series of stainless steels, which are characterised by their austenitic crystalline structure. The addition of titanium (Ti) provides stabilisation against sensitisation and intergranular corrosion, making it suitable for elevated temperature applications.

#### KEY FEATURES

- Excellent corrosion resistance
- Stability in high temperatures
- Good weldability
- Formability and fabrication
- Good mechanical properties

#### CHEMICAL PROPERTIES

Chromium (Cr)	Nickel (Ni)	Molybdenum (Mo)	Manganese (Mn)	Silicone (Si)	Titanium (Ti)	Nitrogen (N)	Carbon (C)	Phosphorus (P)	Sulphur (S)
16.5-18.5%	10.5-13.5%	2-2.5%	2%	1%	0.2-0.7%	0.1%	0.08%	0.045%	0.03%

#### MECHANICAL PROPERTIES

Tensile strength (N/mm <sup>2</sup> )	<b>600</b>
Yield strength (N/mm <sup>2</sup> )	<b>450</b>
Elongation (% in 4D)	<b>40</b>
Hardness - Rockwell (HRB) max	<b>94</b>
Hardness - Brinell (HB) max	<b>215</b>

#### PHYSICAL PROPERTIES

Density (kg/m <sup>3</sup> )	<b>8000</b>	
Modulus of elasticity (Gpa)	<b>193</b>	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	<b>15.9</b>
	0-350°C (µm/m/°C)	<b>16.2</b>
	0-538°C (µm/m/°C)	<b>17.5</b>
Thermal conductivity	at 100°C (W/m.K)	<b>16.3</b>
	at 500°C (W/m.K)	<b>21.5</b>
Specific Heat 0-100°C (J/kg.K)	<b>500</b>	
Electrical resistivity (nΩ.m)	<b>740</b>	
Melting point (°C)	<b>1450</b>	

#### MARKET SECTORS



**Food & Beverage Industry**

Tanks, conveyors, mixers, processing machinery



**Chemical Processing**

Reactors, vessels, piping systems



**Oil & Gas Industry**

Platforms, pipelines, tubing, valves



**Heat Exchangers**

HVAC systems, chemical processing, power generation



**Pharmaceutical Industry**

Processing equipment, mixing, storage



**Automotive Industry**

Exhaust systems, component parts