

STAINLESS STEEL

347 - 1.4550



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Stainless steel 1.4550, is an austenitic stainless steel alloy that contains niobium (columbium) for stabilisation against intergranular corrosion and oxidation when exposed to high temperatures. It has similar properties and applications as 304 stainless steel, but with better performance at elevated temperatures, and a titanium content of at least five times the carbon content which prevents carbide precipitation.

KEY FEATURES

- High temperature performance
- Oxidation resistance
- Excellent corrosion resistance
- Good weldability
- Good formability and ductility

CHEMICAL PROPERTIES

Chromium (Cr)	Nickel (Ni)	Manganese (Mn)	Niobium (Nb)	Silicone (Si)	Carbon (C)	Phosphorus (P)	Sulphur (S)
17-19%	9-12%	2%	1.1%	1%	0.08%	0.045%	0.03%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	515
Yield strength (N/mm ²)	205
Elongation (% in 4D)	40
Hardness - Rockwell (HRB) max	92
Hardness - Brinell (HB) max	201

PHYSICAL PROPERTIES

Density (kg/m ³)	7900	
Modulus of elasticity (Gpa)	193	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	16.6
	0-350°C (µm/m/°C)	17.2
	0-538°C (µm/m/°C)	18.6
Thermal conductivity	at 100°C (W/m.K)	16.1
	at 500°C (W/m.K)	22.2
Specific Heat 0-100°C (J/kg.K)	500	
Electrical resistivity (nΩ.m)	720	
Melting point (°C)	1450	

MARKET SECTORS



Food & Beverage Industry

Tanks, conveyors, mixers, machinery



Chemical Processing

Heat exchangers, condensers, reactors



Automotive Industry

Exhaust systems, catalytic converters



Power Generation

Turbine exhausts systems, boiler tubes, steam piping



Oil & Gas Industry

Components, pipelines, tubing, wellhead components



Aerospace Industry

Exhaust systems, turbine components