STAINLESS STEEL

310S - 1.4845

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310S is a highly alloyed austenitic stainless steel known for its exceptional high-temperature and corrosion resistance properties. Its robust chemical composition and mechanical properties make it indispensable in industries such as chemical processing, power generation, and oil & gas. The alloy's ability to withstand extreme temperatures and aggressive environments ensures reliable performance and longevity in critical applications.

KEY FEATURES

- High temperature resistance
- Excellent corrosion resistance
- Creep resistance
- Good formability
- Can be readily welded

CHEMICAL PROPERTIES

Chromium (Cr)	Nickel (Ni)	Manganese (Mn)	Silicone (Si)	Carbon (C)	Phosphorus (P)	Sulphur (S)	Iron (Fe)
24-26%	**19-22%**	**2%**	**0.75%**	**0.08-0.1%**	**0.045%**	**0.03%**	**rest**

MECHANICAL PROPERTIES

Tensile strength (N/mm²)	**515-690**
Yield strength (N/mm²)	**205-260**
Elongation (% in 4D)	**40-45**
Hardness - Rockwell (HRB) max	**85-95**
Hardness - Brinell (HB) max	**190-230**

PHYSICAL PROPERTIES

Density (kg/m³)		**7900**
Modulus of elasticity (Gpa)		**200**
Mean coefficient of thermal expansion	0-100ºC (µm/m/ºC)	**16.0**
	0-350ºC (µm/m/ºC)	**16.7**
	0-538ºC (µm/m/ºC)	**17.6**
Thermal conductivity	at 100ºC (W/m.K)	**14.2**
	at 500ºC (W/m.K)	**15.9**
Specific Heat 0-100ºC (J/kg.K)		**500**
Electrical resistivity (nΩ.m)		**780**
Melting point (ºC)		**1400**

MARKET SECTORS

Heat Exchangers
Radiant tubes, conveyor belts, furnace linings

Chemical Processing
Reactor vessels, piping systems

Power Generation
Boiler tubes, gas turbines, power generation systems

Oil & Gas Industry
Offshore platforms, piping, heat exchangers

Food & Beverage Industry
Sanitary and high-temperature resistant heat exchangers

Automotive Industry
High temperature exhaust systems

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