



Grade	Code	AISI	Austenitic Stainless Steel
1.4845	X8CrNi25-21	310	

Steel Properties

AISI 310 (UNS S31000) is an austenitic stainless steel developed for use in high temperature corrosion resistant applications. AISI 310 resists oxidation up to 1100°C under mildly cyclic conditions. Because of its high chromium and moderate nickel content, AISI 310 is resistant to sulfidation and can also be used in moderately carburizing atmospheres. AISI 310 can be utilized in slightly oxidizing, nitriding, cementing and thermal cycling applications, albeit, the maximum service temperature must be reduced. AISI 310 also finds usage in cryogenic applications with low magnetic permeability and toughness down to -268°C.

Chemical Composition (1.4845)

C %	P %	Si %	Mn %	S %	Cr %	Mo %	Ni %	V %	W %
0,08 max.	0,045 max.	1,00 max.	1,50 max.	0,03 max.	22,00 – 25,00	<0,50	17,00 – 20,00	<0,20	<0,50

Mechanical Properties

Rp0.2, Mpa	Rm, Mpa	Elongation [%]	Hardness [HB]
≥ 210	510 – 700	≥ 35	< 195

Suitable For

AISI 310 is used in Food Processing, Furnaces (burners, doors, fans, piping and recuperators), Fluidized Bed Furnaces (coal combustors, grids, piping, wind boxes), Ore Processing/Steel Plants — smelter and steel melting equipment, continuous casting equipment, Petroleum Refining (catalytic recovery systems, flares, recuperators, tube hangers), Power Generation (coal gasifier internals, pulverized coal burners, tube hangers), Sintering/Cement Plants (burners, burner shields, feeding and discharging systems, wind boxes), Thermal Processing (annealing covers and boxes, burner grids, doors, fans, muffles and retorts, recuperators, walking beams).

Remarks

Specification

AISI 310, 1.4845, X8CrNi25-21