

Westgate

310s

(UNS S31000) W. Nr. 1.4845

Chemical composition	C	Si	Mn	P	S	Cr	Ni	Fe
% Present (Max)	0.08	1.00	2.00	0.045	0.030	24.0-26.0	19.0-22.0	Bal

Alloy 310 (UNS S31000) is an austenitic stainless steel developed for use in high temperature corrosion resistant applications. The alloy resists oxidation up to 2010°F (1100°C) under mildly cyclic conditions. Because of its high chromium and moderate nickel content. Alloy 310 can be utilized in slightly oxidizing, nitriding, cementing and thermal cycling applications, albeit, the maximum service temperature must be reduced. Alloy 310 also finds usage in cryogenic applications with low magnetic permeability and toughness down to -450°F (-268°C). When heated between 1202–1742°F (650–950°C) the alloy is subject to sigma phase precipitation. A solution annealing treatment at 2012–2102°F (1100–1150°C) will restore a degree of toughness. 310S (UNS S31008) is the low carbon version of the alloy. It is utilized for ease of fabrication. 310H (UNS S31009) is a high carbon modification developed for enhanced creep resistance. In most instances the grain size and carbon content of the plate can meet both the 310S and 310H requirements. Alloy 310 can be easily welded and processed by standard shop fabrication practices.

Note: Values are in accordance with EN 10088 specifications. Actual mill certs available upon request.



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