

AISI 316

STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

Grade 316 is the standard molybdenum-bearing grade, second in importance to 304 amongst the austenitic stainless steels. The molybdenum gives 316 better overall corrosion resistant. Grade 316 also has outstanding welding characteristics. Post-weld annealing is not required when welding thin sections. The austenitic structure also gives these grades excellent toughness, even down to cryogenic temperatures.

Chemical Properties

C	Mn	P	S	Si	Cr	Mo	Ni	N
0.080 Max	2.00 Max	0.045 Max	0.030 Max	1.00 Max	16.0-18.0	2.00-3.00	10.0-14.0	0.10 Max

Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction
Min 0.2% Mpa	Min Mpa	Min %	Min %
205	515	30	50

Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Electrical Resistivity
(Kg/m ³)	(Gpa)	Expansion(μm/m/°C)			(W/m.K)		0-100°C	(nΩ.m)
8.0	193	15.9	16.2	17.5	16.3	21.5	500	740

Heat Treatment

Solution Annealed @ 1050°C & Liquid Quenched @ 260°C

Equivalent Designation

UNS S31600
 EN number 58H,58J
 EN Name X5CrNiMo17-12-2
 Werkstoff.No. 1.4401
 JIS SUS316
 BS 316S31

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