

EN3506-1 A4-80

STAINLESS STEEL

BOLTING MATERIAL FOR LOW TEMPERATURE SERVICE

EN3506-1 A4-80 is an austenitic, acid proof stainless grade (usually 316 material - 316 or 316L) which has been cold worked to provide a minimum tensile strength of 800 N/mm² (MPa). The designation A4-80 derives from "A" meaning the material is a cold worked austenitic stainless, divided into 5 grades (1-5, hence the "4") according to material characteristics (see Annex B of DIN ES ISO 3506-1:1997 for full description of each grade). The "80" denotes the minimum tensile strength to be met by the material (actually the bolt, screw or nut after manufacturer

Chemical Properties

C	Mn	Si	P	S	Cr	Mo	Ni	N
0.08	2.0	0.75	0.045	0.03	16.0-18.0	2.0-3.0	10.0-14.0	0.10

Mechanical Properties

Yield strength	Tensile strength	Elongation
Min 0.2% Mpa	Min Mpa	Min %
205	515	40

Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal	Thermal Conductivity	Specific Heat	Melting Point
(Kg/m ³)	(Gpa)	Expansion(µm/m/°C)	(W/m.K)	0-100°C	°F
8.00	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 S31609
Din x8CrNiMo 1712
Werkstoff.No. 1.4919
BS 316S51
SUS 316H

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