

## ASTM A 193 Gr.B8C

# STAINLESS STEEL

BOLTING MATERIAL FOR LOW TEMPERATURE SERVICE

ASTM A193 Gr.B8C is 347 SS (UNS S34700). It is a high-alloy austenitic stainless steel used in extreme applications. It differs from standard B8 with the addition of tantalum and columbium. Fully threaded studs are the most commonly type of supplied ASTM A193 Gr.B8C fastener, often high-temp applications involving some sort of high-heat air discharge. ASTM A194 Grade 8C nuts are the common nut specified with ASTM A193 Gr.B8C.

### Chemical Properties

C	Si	Mn	P	S	Cr	Ni	Cb+Ta
0.08 Max	1.00 Max	2.00 Max	0.045 Max	0.030 Max	17.0-19.0	9.0-12.0	1.10 Max

### Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction	Hardness
Min 0.2% Mpa	Min Mpa	Min %	Min %	HRB Max
205	515	30	50	223

### Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Melting Point
(Kg/m <sup>3</sup> )	(Gpa)	Expansion (µm/m/°C)			(W/m.K)		0-100°C	Range F
7.96	193	16.0	18.9	20.5	16.3	21.5	500	2550-2635

### Heat Treatment

Carbide Solution Treated

### Equivalent Designation

UNS S34700  
EN Name X6CrNiNb18-10  
Werkstoff.No. 1.4550  
SS 347

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