

AISI 430

STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

AISI 430 is a plain chromium ferritic stainless steel. With 17% chromium, the steel has good corrosion resistance in mildly corrosive environments and good oxidation resistance at elevated temperatures. Annealed 430 SS is ductile and can be formed easily and can achieve high reductions. 430 SS does not harden excessively during cold working. As with most ferritic stainless steels, 430 can undergo grain growth in the heat-affected zone of weldments, which may adversely affect the mechanical properties in these zones. Being a ferritic stainless steel, 430 SS is unsuitable for use in cryogenic applications as brittle transition fracture could occur at sub-zero temperatures. 430 SS has excellent polishing characteristics and is therefore used in applications such as architectural trim.

Chemical Properties

C	Mn	P	S	Si	Cr	Ni
0.12 Max	1.00 Max	0.040 Max	0.030 Max	0.75 Max	16.0-18.0	0.50 Max

Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction	Hardness
Min 0.2% Mpa	Min Mpa	Min %	Min %	BHN
240	415	20	45	190

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	Range F
7780	200	11.4	11.9	12.4	15.1	15.2	460	1427 TO 1532

Heat Treatment

Solution annealing by heating stainless steel grade 430 to 815 - 845°C (1499-1553°F).

Equivalent Designation

UNS S43000
DIN X 8 Cr 17
JIS SUS430
Werkstoff.No. 1.4016
SS 430

CUSTOMER ASSISTANCE : customer@TorqBolt.com