

# AISI 309H

# STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

AISI 309H is Often Used in many product forms, the grain size and carbon content can meet both the 309S and 309H requirements. 309H is a high carbon stainless steel alloy and low ferrite content. These controls are designed to increase the high temperature strength and microstructural stability for service applications above 400°C. The widely used 309L dissimilar weld metal has lower hot strength and is more prone to embrittlement during long term high Temperature service for which it is not intended.

## Chemical Properties

C	Mn	P	S	Si	Cr	Ni
0.04-0.10	2.00 Max	0.045 Max	0.030 Max	1.00 Max	22.0-24.0	12.0-15.0

## 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	Melting Point
(Kg/m <sup>3</sup> )	(Gpa)	Expansion(µm/m/°C)			(W/m.K)		0-100°C	°F
7.89	196	15.6	17.6	19.4	15.6	18.7	502	114.8

## Heat Treatment

Solution Annealed @ 1040°C & Liquid Quenched @ 260°C

## Equivalent Designation

UNS UNS S30909  
Wr. No. 1.4833

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