

# AISI 304L

# STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

Types 304L Stainless Steel are the most versatile and widely used of all the stainless steels. Their chemical composition, mechanical properties, weldability and corrosion/oxidation resistance provides the best all-round performance at relatively low cost. These have excellent low-temperature properties and respond well to hardening by cold working. The carefully controlled chemical compositions of various sub-grades provide a large range of cold work hardenability, enabling them to suit for various applications by direct drawing without intermediate annealing. Type 304L does not require post-weld annealing and finds extensive use in heavy-gauge components where freedom from carbide precipitation is often required.

## Chemical Properties

C	Mn	P	S	Si	Cr	Ni	N
0.030 Max	2.00 Max	0.045 Max	0.030 Max	1.00 Max	18.0-20.0	8.0-13.0	0.10 Max

## Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction
Min 0.2% Mpa	Min Mpa	Min %	Min %
170	485	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	Range F	
8000	193	17.2	17.8	18.4	16.2	21.5	500	720

## Heat Treatment

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

## Equivalent Designation

UNS S30403  
 EN number 304S51  
 EN Name X6CrNi18-11  
 Werkstoff.No. 1.4306  
 BS 304S11  
 JIS SUS304L

CUSTOMER ASSISTANCE : [customer@TorqBolt.com](mailto:customer@TorqBolt.com)

#4/217, Deccan Bank Bldg,  
 R. R. Roy Road, Mumbai - 400 004,  
 Maharashtra, INDIA

Email: [info@TorqBolt.com](mailto:info@TorqBolt.com)  
 Web: [www.TorqBolt.com](http://www.TorqBolt.com)

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