

# AISI 316N

# STAINLESS STEEL

BOLTING MATERIAL FOR HIGH TEMPERATURE SERVICE

AISI Type 316N is an Austenitic Standard grade Stainless Steel. It is commonly called AISI Type 316N Chromium-Nickel steel. It is composed of (in weight percentage) 0.08% Carbon (C), 2.00% Manganese (Mn), 1.00% Silicon (Si), 16.0-18.0% Chromium (Cr), 10.0-14.0% Nickel (Ni), 0.045% Phosphorus (P), 0.03% Sulfur (S), 2.0-3.0% Molybdenum (Mo), 0.10-0.16% Nitrogen (N), and the base metal Iron (Fe). Other designations of AISI Type 316N stainless steel include UNS S31651 and AISI 316N.

## Chemical Properties

C	Mn	P	S	Si	Cr	Mo	Ni	N
0.08 Max	2.00 Max	0.045 Max	0.030 Max	1.00 Max	16.0-18.0	2.00-3.00	11.0-14.0	0.10-0.16

## Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction
Min 0.2% Mpa	Min Mpa	Min %	Min %
240	550	30	50

## Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Electrical Resistivity
(Kg/m <sup>3</sup> )	(Gpa)	Expansion(μm/m/°C)			(W/m.K)		0-100°C	(nΩ.m)
8.06	196	15.9	16.2	17.5	16.3	21.5	503	740

## Heat Treatment

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

## Equivalent Designation

UNS S31651  
 EN Name X2CrNiMoN17-11-2  
 Werkstoff.No. 1.4406  
 Jis SUS316N  
 SS 2375

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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