

This page is mainly introduced the X7CrNiMoBNb16-16 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X7CrNiMoBNb16-16, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel X7CrNiMoBNb16-16

### X7CrNiMoBNb16-16 Standard Number:

ITEM	Standard Number	Descriptions
1	DIN 17240 (1976)	Heat Resisting and Highly Heat Resisting Materials for Bolts and Nuts; Quality Specifications
2	DIN EN 10088-1	Stainless steels - Part 1: List of stainless steels
3	DIN EN 10269	Steels and nickel alloys for fasteners with specified elevated and/or low temperature properties
4	WB 113/1 (2001)	Heat resistant austenitic rolled and forged steel, X 8 CrNiMoBNb 16 16, WN 1.4986
5	WB 113/2 (2001)	Heat resistant austenitic rolled and forged steel, CrNiMoBNb X 8 16 16, WN 1.4986

### X7CrNiMoBNb16-16 Chemical composition (mass fraction) (wt.%)

Chemical		Min.(%)		Max.(%)					
C		0.04		0.10					
Si		0.30		0.60					
Mn				1.50					
P				0.045					
S				0.030					
Cr		15.5		17.5					
Ni		15.5		17.5					
Mo		1.60		2.00					
B		0.05		0.10					
Other				Nb / Ta $\geq 10 \cdot C \leq 1.20$					
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

DIN 17240 (1976) Heat Resisting and Highly Heat Resisting Materials for Bolts and Nuts; Quality Specifications; Replaced by DIN EN 10269:1999

### X7CrNiMoBNb16-16 Physical Properties

Tensile strength	115-234	$\sigma_b$ /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta_{5\geq}$ (%)
$\psi$	-	$\psi \geq$ (%)
Akv	-	Akv $\geq$ /J
HBS	123-321	-
HRC	30	-

### X7CrNiMoBNb16-16 Mechanical Properties

Tensile strength	231-231	$\sigma_b$ /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta_{5\geq}$ (%)
$\psi$	-	$\psi \geq$ (%)
Akv	-	Akv $\geq$ /J
HBS	235-268	-
HRC	30	-

### X7CrNiMoBNb16-16 Heat Treatment Regime

Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

### X7CrNiMoBNb16-16 Range of products

Product type	Products	Dimension	Processes	Deliver Status
Plates / Sheets	Plates / Sheets	0.08-200mm(T)*W*L	Forging, hot rolling and cold rolling	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Steel Bar	Round Bar, Flat Bar, Square Bar	Φ8-1200mm*L	Forging, hot rolling and cold rolling, Cast	Black, Rough Turning, Shot Blasting,
Coil / Strip	Steel Coil /Steel Strip	0.03-16.0x1200mm	Cold-Rolled & Hot-Rolled	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting

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Pipes / Tubes	Seamless Pipes/Tubes, Welded Pipes/Tubes	OD:6-219mm x WT:0.5-20.0mm	Hot extrusion, Cold Drawn, Welded	Annealed, Solution and Aging, Q+T, ACID- WASHED
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**We can produce Specialsteel the specifications follows:**