

This page is mainly introduced the X19CrMoNbVN11-1,1.4913 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X19CrMoNbVN11-1,1.4913, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Data Table for Grades Stainless Steels X19CrMoNbVN11-1,1.4913

X19CrMoNbVN11-1,1.4913 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	DIN EN 10302 (2002)	Creep resisting steels, nickel and cobalt alloys

X19CrMoNbVN11-1,1.4913 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C	0.16	0.22
Si	0.10	0.50
Mn	0.30	0.80
P		0.035
S		0.035
Cr	10.0	11.5
Mo	0.50	1.00
Ni	0.30	0.80
V	0.10	0.30
Nb	0.15	0.50
N	0.05	0.19

X19CrMoNbVN11-1,1.4913 Physical Properties		
Tensile strength	115-234	$\sigma_b$ /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa

Elongation	65	65 ≥ (%)
ψ	-	ψ ≥ (%)
Akv	-	Akv ≥ /J
HBS	123-321	-
HRC	30	-

### X19CrMoNbVN11-1,1.4913 Mechanical Properties

Tensile strength	231-231	σ <sub>b</sub> /MPa
Yield Strength	154	σ <sub>0.2</sub> ≥ /MPa
Elongation	56	δ <sub>5</sub> ≥ (%)
ψ	-	ψ ≥ (%)
Akv	-	Akv ≥ /J
HBS	235-268	-
HRC	30	-

### X19CrMoNbVN11-1,1.4913 Heat Treatment Regime

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

### X19CrMoNbVN11-1,1.4913 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
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

**We can produce Stainless Steels the specifications follows:**