

This page is mainly introduced the X10CrMoVNb9-1 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X10CrMoVNb9-1, 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 X10CrMoVNb9-1

X10CrMoVNb9-1 Standard Number:		
ITEM	Standard Number	Descriptions
1	EN 10302: 2008	Creep resisting steels, nickel and cobalt alloys
2	EN 10028-2: 2009	Flat products made of steels for pressure purposes. Non-alloy and alloy steels with specified elevated temperature properties
3	EN 10222-2: 2000	Steel forgings for pressure purposes. Ferritic and martensitic steels with specified elevated temperature properties
4	EN 10216-2: 2014	Seamless steel tubes for pressure purposes. Technical delivery conditions. Non-alloy and alloy steel tubes with specified elevated temperature properties
5	EN 10253-2: 2007	Butt-welding pipe fittings. Non alloy and ferritic alloy steels with specific inspection requirements
6	EN 10088-1: 2005	Stainless steels. List of stainless steels

X10CrMoVNb9-1 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C	0.08	0.12
Si		0.5
Mn	0.3	0.6
Ni		0.4
P		0.025
S		0.015
Cr	8.0	9.5
Mo	0.85	1.05
V	0.18	0.25
N	0.03	0.07
Nb	0.06	0.10
Al		0.03

X10CrMoVNb9-1 Physical Properties

Tensile strength	115-234	σ_b /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	123-321	-
HRC	30	-

X10CrMoVNb9-1 Mechanical Properties

Tensile strength	231-231	σ_b /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	235-268	-
HRC	30	-

X10CrMoVNb9-1 Heat Treatment Regime

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

X10CrMoVNb9-1 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	Φ 8-1200mm*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:

