

This page is mainly introduced the X6CrNiNb18-10 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X6CrNiNb18-10, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel X6CrNiNb18-10

X6CrNiNb18-10 Standard Number:		
ITEM	Standard Number	Descriptions
1	NF EN 10028-7	Flat products made of steels for pressure purposes - Part 7: Stainless steels
2	NF EN 10088-1	Stainless steels - Part 1: List of stainless steels
3	NF EN 10088-2	Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes
4	NF EN 10088-3	Stainless steels - Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes
5	NF EN 10088-5	Stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products of corrosion resisting steels for construction purposes
6	NF EN 10216-5 (2004)	Seamless steel tubes for pressure purposes - Technical delivery conditions - Part 5: Stainless steel tubes
7	NF EN 10217-7	Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7: Stainless steel tubes
8	NF EN 10222-5	Steel forgings for pressure purposes - Part 5: Martensitic, austenitic and austenitic-ferritic stainless steels
9	NF EN 10250-4	Open die steel forgings for general engineering purposes - Part 4: Stainless steels
10	NF EN 10253-3	Butt-welding pipe fittings - Part 3: Wrought austenitic and austenitic-ferritic (duplex) stainless steels without specific inspection requirements
11	NF EN 10253-4	Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements
12	NF EN 10272	Stainless steel bars for pressure purposes
13	NF EN 10296-2 (2005)	Welded circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel
14	NF EN 10297-2 (2005)	Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel

X6CrNiNb18-10 Chemical composition (mass fraction) (wt.%)		
Chemical	Min.(%)	Max.(%)
C		0.080

Si				1.00					
Mn				2.00					
P				0.045					
S				0.015					
Cr		17.00		19.00					
Mo									
Ni		9.00		12.00					
Nb		10×C		1.00					
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Seamless circular steel tubes for mechanical and general engineering purposes - Technical

delivery conditions - Part 2: Stainless steel

X6CrNiNb18-10 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	-

X6CrNiNb18-10 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	-

X6CrNiNb18-10 Heat Treatment Regime

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

X6CrNiNb18-10 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 Specialsteel the specifications follows: