

This page is mainly introduced the X5CrNiMo17-12-3 chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X5CrNiMo17-12-3, 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 X5CrNiMo17-12-3

X5CrNiMo17-12-3 Standard Number:		
ITEM	Standard Number	Descriptions
1	ISO 15510 (2010)	Stainless steels -- Chemical composition
2	ISO 16143-1 (2004)	Stainless steels for general purposes -- Part 1: Flat products
3	ISO 16143-2 (2004)	Stainless steels for general purposes -- Part 2: Semi-finished products, bars, rods and sections
4	ISO 16143-3 (2005)	Stainless steels for general purposes -- Part 3: Wire
5	ISO 6931-1 (1994)	Stainless steels for springs - Part 1: Wire
6	ISO 6931-2 (2005)	Stainless steels for springs - Part 2: Narrow strip
7	ISO 9328-7 (2011)	Steel flat products for pressure purposes - Technical delivery conditions - Part 7: Stainless steels
8	ISO/TS 15510 (2003)	Stainless steels - Chemical composition

X5CrNiMo17-12-3 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C		0.07
Si		1.00
Mn		2.00
P		0.045
S		0.030
Cr	16.50	18.50
Ni	10.50	13.00
Mo	2.50	3.00
N		0.11

X5CrNiMo17-12-3 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	-

X5CrNiMo17-12-3 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	-

X5CrNiMo17-12-3 Heat Treatment Regime

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

X5CrNiMo17-12-3 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: