

This page is mainly introduced the X10CrNi18-8 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X10CrNi18-8, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel X10CrNi18-8

X10CrNi18-8 Standard Number:

ITEM	Standard Number	Descriptions
1	DIN EN 10088-1	Stainless steels - Part 1: List of stainless steels
2	DIN EN 10088-2	Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes
3	DIN 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
4	DIN EN 10151	Stainless steel strip for springs - Technical delivery conditions
5	DIN EN 10263-5	Steel rod, bars and steel wire for cold heading and cold extrusion - Part 5: Technical delivery conditions for stainless steels
6	DIN EN 10264-4 (2002)	Steel wire and wire products - Steel wire for ropes - Part 4: Stainless steel wire
7	DIN EN 10270-3	Steel wire for mechanical springs - Part 3: Stainless spring steel wire
8	DIN EN 4528	Aerospace series - Steel FE-PA3903 (X10CrNi18-8) - Cold rolled - Strip for springs - a = 3 mm - 1 250 MPa = Rm = 1 640 MPa

X10CrNi18-8 Chemical composition (mass fraction) (wt.%)

Chemical		Min.(%)		Max.(%)					
C		0.05		0.12					
Si				2.00					
Mn				2.00					
P				0.045					
S				0.015					
Cr		16.0		19.0					
Ni		6.00		9.50					
Mo				0.80					
N				0.11					
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta

W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Stainless steels - Part 1: List of stainless steels

X10CrNi18-8 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	-

X10CrNi18-8 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	-

X10CrNi18-8 Heat Treatment Regime

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

X10CrNi18-8 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,	Φ8-1200mm*L	Forging, hot rolling and	Black, Rough Turning,

	Square Bar		cold rolling, Cast	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: