

This page is mainly introduced the X7CrNiAl17-7 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of X7CrNiAl17-7, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel X7CrNiAl17-7

X7CrNiAl17-7 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	Stainless steels for springs - Part 1: Wire
6	ISO 6931-2	Stainless steels for springs - Part 2: Narrow strip
7	ISO/TS 15510 (2003)	Stainless steels - Chemical composition

X7CrNiAl17-7 Chemical composition (mass fraction) (wt.%)

Chemical		Min.(%)		Max.(%)					
C				0.09					
Si				0.07					
Mn				1.00					
P				0.040					
S				0.015					
Cr		16.00		18.00					
Ni		6.50		7.80					
Mo									
N									
Al		0.70		1.50					
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Stainless steels - Chemical composition

X7CrNiAl17-7 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	-

X7CrNiAl17-7 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	-

X7CrNiAl17-7 Heat Treatment Regime

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

X7CrNiAl17-7 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,	$\Phi 8$ -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: