

This page is mainly introduced the 17-7PH Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 17-7PH, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 17-7PH

17-7PH Standard Number:		
ITEM	Standard Number	Descriptions
1	SAE AMS 5528H (2007)	Steel, Corrosion-Resistant, Sheet, Strip, and Plate 17Cr - 7.1Ni - 1.1Al Solution Heat Treated, Precipitation Hardenable
2	SAE AMS 5529J (2012)	Steel, Corrosion Resistant, Sheet and Strip 17Cr - 7.1Ni - 1.1Al Solution Heat Treated and Cold Rolled, Precipitation Hardenable 0.0015 to 0.050 Inch (0.038 to 1.27 mm) Nominal Thickness
3	SAE AMS 5568G (2011)	Steel, Corrosion and Heat Resistant, Welded Tubing 17Cr - 7.1Ni - 1.1Al Solution Heat Treated, Precipitation-Hardenable
4	SAE AMS 5644D (1964)	Steel Bars and Forgings, Corrosion Heat Resistant 17Cr - 7Ni - 1Al
5	SAE AMS 5678F (2007)	Steel, Corrosion Resistant, Wire 17Cr - 7.1Ni - 1.1Al Cold Drawn, Precipitation-Hardenable
6	SAE J 217 (1994)	Stainless steel 17-7 PH spring wire and springs
7	SAE J 467 (1968)	Special Purpose Alloys ("Superalloys")

17-7PH Chemical composition(mass fraction)(wt.%)									
Chemical		Min.(%)				Max.(%)			
C						0.09			
Si						1.00			
Mn						1.00			
P						0.040			
S						0.040			
Ni		6.50				7.75			
Cr		16.00				18.00			
Al		0.75				1.50			
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Steel, Corrosion-Resistant, Sheet, Strip, and Plate 17Cr - 7.1Ni - 1.1Al Solution Heat Treated, Precipitation Hardenable

17-7PH 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	-

17-7PH 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	-

17-7PH Heat Treatment Regime

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

17-7PH 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: