

This page is mainly introduced the 15-5PH Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 15-5PH, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 15-5PH

15-5PH Standard Number:		
ITEM	Standard Number	Descriptions
1	SAE AMS 5346C (2006)	Steel, Corrosion-Resistant, Investment Castings 15Cr - 4.6Ni - 0.22Cb (Nb) - 2.8Cu Solution and Precipitation Heat Treated (H925) 180 ksi (1241 MPa) Tensile Strength (15-5)
2	SAE AMS 5347B (2006)	Steel, Corrosion-Resistant, Investment Castings 15Cr - 4.6Ni - 0.22Cb (Nb) - 2.8Cu Solution and Precipitation Heat Treated (H1000) 150 ksi (1034 MPa) Tensile Strength (15-5)
3	SAE AMS 5357C (2011)	Steel, Corrosion Resistant, Investment Castings 15Cr - 4.6Ni - 0.22Cb - 2.8Cu Solution Heat Treated, Precipitation Hardenable
4	SAE AMS 5400B (2007)	Steel, Corrosion-Resistant, Investment Castings 15Cr - 4.6Ni - 0.22Cb - 2.8Cu Solution and Precipitation Heat Treated (H935) 170 ksi (1172 MPa) Tensile Strength
5	SAE AMS 5659N (2012)	Steel, Corrosion-Resistant, Bars, Wire, Forgings, Rings, and Extrusions 15Cr - 4.5Ni - 0.30Cb (Nb) - 3.5Cu Consumable Electrode Melted Solution Heat Treated, Precipitation Hardenable

15-5PH Chemical composition(mass fraction)(wt.%)									
Chemical		Min.(%)				Max.(%)			
C						0.07			
Si									
Mn									
Cr		14.0				15.5			
Ni		3.5				5.5			
Cu		2.5				4.5			
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

High temperature alloys and other special alloys

15-5PH 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	-

15-5PH 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	-

15-5PH Heat Treatment Regime

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

15-5PH 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	$\Phi 8$ -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

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