This page is mainly introduced the 2HR501 Datasheet, including chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 2HR501,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Datasheet for Steel Grades Specialsteel 2HR501

2HR501 Standard Number:		
ITEM	Standard Number	Descriptions
1	BS 2HR 501 (1973)	Specification for nickel-chromium-cobalt-titanium-aluminium heat-resisting alloy cold drawn wire for springs (nickel base, Cr 19.5, Co 18.0, Ti 2.5, Al 1.5)
2	BS 3HR 501 (2011)	Specification for nickel-chromium-cobalt-titanium- aluminium heat-resisting alloy cold drawn wire for springs and springs (Nickel base, Cr 19.5, Co 18.0, Ti 2.5, Al 1.5)

2HR501 Chemical composition(mass fraction)(wt.%)		
Chemical	Min.(%)	Max.(%)
C		0.13
Si		1.00
Mn		1.00
P		
S		0.015
Cr	18.00	21.00
Ni		remaining
Mo		
Co	15.00	21.00
Ti	2.00	3.00
Fe		1.50
Al	1.00	2.00
Cu		0.20
Zr		0.15
B		0.020
Bi		0.0001
Pb		0.002
Ag		0.0005

C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Specification for nickel-chromium-cobalt-titanium- aluminium heat-resisting alloy cold drawn wire

for springs and springs (Nickel base, Cr 19.5, Co 18.0, Ti 2.5, Al 1.5)

2HR501 Physical Properties		
Tensile strength	115-234	σb/MPa
Yield Strength	23	σ 0.2 ≥/MPa
Elongation	65	δ5≥ (%)
ψ	-	ψ≥ (%)
Akv	-	Akv≥/J
HBS	123-321	-
HRC	30	-

2HR501 Mechanical Properties		
Tensile strength	231-231	σb/MPa
Yield Strength	154	σ 0.2 ≥/MPa
Elongation	56	δ5≥(%)
ψ	-	ψ≥(%)
Akv	-	Akv≥/J
HBS	235-268	-

HRC	30	-

2HR501 Heat Treatment Regime				
Annealing	**Quenching**	**Tempering**	**Normalizing**	**Q & T**
√	√	√	√	√

2HR501 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: