

Quality 1.4105

According to Standard EN 10088 - 1 : 2014

Number 1.6773



Comparable Standards	German DIN	France AFNOR	Spain UNE	China GB	U.K. B.S.	Russia GOST	USA AISI - SAE	Japan JIS
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X6CrMoS17	430F							
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Chemical Analysis	C% max	Si% max	Mn% max	P%	max	S% max	Cr%	Mo%	Ni%
	0.08	1.50	1.50	0.04		0.15 - 0.35	16.0 - 18.0	0.20 - 0.60	

Hot Work and Heat Treatment Temperatures

Temperature °C

Melting Range	Hot Forming	Soft Annealing +A	Isothermal Annealing +I	Normalising	Recrystallization	Quenching	Tempering	Annealing
1500 - 1490	1150 - 815	850 - 750	not suitable	-	790 - 710 cooling to 300, then air	not suitable	not suitable	825-805 protectet atmosphere cooling 50-100°C/h to 400, then air
		air						

Mechanical Properties at Room Temperature

Heat Treated Materials EN 10088 - 3 : 2014

Size d/t mm		Testing at Room Temperature (Longitudinal)					
From	To	R	Rp 0.2	A%	C%	Kv	HB
		N/mm2	N/mm2	min.	min.	J min.	max.
100		430-630	250	20	-	-	200

Bright Bars of Heat Treated Materials EN 10088 - 3 : 2014

Size d/t mm		Testing at Room Temperature (Longitudinal)					
From	To	R	Rp 0.2	A%	C%	Kv	HB
		N/mm2	N/mm2	min.	min.	J min.	max
10	10	530-780	330	7	-	-	-
10	16	500-780	310	7	-	-	-
16	40	430-730	250	12	-	-	-
40	63	430-730	250	12	-	-	-
63	100	430-630	250	20	-	-	-

Effect of Cold-working (Hot rolled +RA +C)

R	N/mm2	570	620	690	710	740	780	800	840	880
Rp 0.2	N/mm2	280	510	590	620	650	690	730	760	800
A	%	20	10	9	9	8	8	8	8	8
Reduction	%	0	10	20	30	50	60	60	70	75

Minimum values at high temperatures EN 10088-3: 2014

Rp 0.2	N/mm2	230	220	215	210	205	200	195	+A annealed material	
Test at	°C	100	150	200	250	300	350	400		

Magnetic yes
Machinability high
Hardening cold-drawn and other cold plastic deformatuions
Service temperature in air continous service up to 810 °C; intermittent service up to 860 °C