

Quality 1.4404

According to Standard EN 10088 - 1 : 2014

Number



Comparable Standards	German	DIN	France AFNOR	Spain UNE	China GB	U.K. B.S.	Russia GOST	USA AISI - SAE	Japan JIS
		X2CrNiMo17-12-2				022Cr17Ni12Mo2		03Ch17Ni13M2	316L

Chemical Analysis	C%	max	Si% max	Mn% max	P%	max	S% max	Cr%	N% max	Ni%	Mo% max
		0.03		1.00	2.00	0.045		0.015	16.5-18.5	0.11	10.0-13.0

Hot Work and Heat Treatment Temperatures

Temperature °C

Melting Range	Hot Forming	Soft Annealing +A	Solution Annealing	Sensitization	Stabilizing	Quenching	Tempering	Annealing
1400-1380	1200-925	not suitable	not suitable	700-450	885 calm air	not suitable	not suitable	-

Mechanical Properties at Room Temperature

Heat Treated Materials EN 10088 - 3 : 2014

Size d/t		Testing at Room Temperature (Longitudinal)								
mm		R	Rp 0.2	A%	C%	Kv	HB			
From	To	N/mm2	N/mm2	min.	min.	J min.	max			
160	160	500-700	200	40		100	215			
160	250	500-700	200	30		60	215			

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

Size d/t		Testing at Room Temperature (Longitudinal)								
mm		R	Rp 0.2	A%	Z%	Kv	HB			
From	To	N/mm2	N/mm2	min.	min.	J min.	max			
	10	600-930	400	25						
10	16	580-930	380	25						
16	40	500-830	200	30		100				
40	63	500-830	200	30		100				
63	160	500-700	200	40		100				
160	250	500-700	200	30		60				

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

R	N/mm2	500	650	790	850	940	1030	1100	1200
Rp 0.2	N/mm2	200	520	700	760	830	920	1000	1080
A	%	55	30	14	12	10	9	8	8
Reduction	%	0	10	20	30	40	50	60	70

Magnetic no
Machinability high
Hardening cold-drawn and other cold plastic deformatuions
Service temperature in air continous service up to 850 °C; intermittent service up to 800 °C