

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

03Ch17N13M2

316L

SUS 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

2.0-2.5

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)					
From	To	R	Rp 0.2	A%	C%	Kv	HB
		N/mm2	N/mm2	min.	min.	J min.	max
160	250	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)					
From	To	R	Rp 0.2	A%	Z%	Kv	HB
		N/mm2	N/mm2	min.	min.	J min.	max
10	16	600-930	400	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 deformations
Service temperature in air continuous service up to 850 °C; intermittent service up to 800 °C