

Quality S355J2 (Fe 510 D)

According to Standard EN 10025 - 2 : 2004

Number 1.0577



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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St52 - 3N					50D	17G15 . 171C	A 50 LF2	
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Chemical Analysis

C% max	Si% max	Mn% max	P% max	S% max	N% max	Cu% max
0.20 - 0.23	0.55 - 0.60	1.60 - 1.70	0.025 - 0.035	0.025 - 0.035		0.40 - 0.45

Hot Work and Heat Treatment Temperatures

Temperature °C

Hot - Forming	Supply State +U	Soft Annealing +A	Isothermal Annealing +I	Normalising & Tempering	Quenching & Tempering QT	Stress-relieving +SR
1100 - 850	natural state	700 air		920 air	880 - 900 water	50° under the temperature of tempering
		(HB max 180)		550 - 650 air	550 - 650 air	

Mechanical Properties at Room Temperature

Minimum Yield Strength R^{eH}
Mpa
Nominal Thickness mm

≤ 16	> 16 ≤ 40	> 40 ≤ 63	> 63 ≤ 80	> 80 ≤ 100	> 100 ≤ 150	> 150 ≤ 200	> 200 ≤ 250
355	345	335	325	315	295	285	275

Tensile Strength R
Mpa
Nominal Thickness mm

< 3	> 3 ≤ 100	> 100 ≤ 150	> 150 ≤ 250
510 to 680	470 to 630	450 to 600	450 to 600

Minimum percentage elongation after fracture %

	L = 80 mm. Normal thickness mm				L = 5.65 √S ₀ Nominal thickness mm					
	≤ 1	> 1 ≤ 1.5	> 1.5 ≤ 2	> 2 ≤ 2.5	> 2.5 < 3	> 3 ≤ 40	> 40 ≤ 63	> 63 ≤ 100	> 100 ≤ 150	> 150 ≤ 250
l	14	15	16	17	18	22	21	20	18	17
t	12	13	14	15	16	20	19	18	18	17