

Quality S355J0 (Fe 510 C)



According to Standard EN 10025 - 2 : 2004

Number 1.0553

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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St52-3U	E36-3				50C	St4sp	A441	SCCC 3
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Chemical Analysis	C% max	Si% max	Mn% max	P% max	S% max	N% max	Cu% max	Cast & Product Analysis
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0.023	0.60	1.70	0.040	0.030 - 0.040	0.014	0.45		
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**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
1150 - 850	natural state	650 - 700 air		880 - 900 air	860 - 900 water	50° under the temperature of tempering
				550 - 660 air	550 - 660 air	

**Mechanical Properties at Room Temperature**

Minimum Yield Strength R<sup>eH</sup>  
Mpa  
Nominal Thickness mm

≤ 16	> 16	> 40	> 63	> 80	> 100	> 150	> 200
	≤ 40	≤ 63	≤ 80	≤ 100	≤ 150	≤ 200	≤ 250
275	265	255	245	235	225	215	205

Tensile Strength R  
Mpa  
Nominal Thickness mm

< 3	> 3	> 100	> 150
	≤ 100	≤ 150	≤ 250
	430 to 580	410 to 560	400 to 540
		380 to 540	

Minimum percentage elongation after fracture %

L = 80 mm. Normal thickness mm					L = 5.65 √S <sub>0</sub> . Nominal thickness mm					
≤ 1	> 1	> 1.5	> 2		> 2.5	> 3	> 40	> 63	> 100	> 150
	≤ 1.5	≤ 2	≤ 2.5	< 3	≤ 40	≤ 63	≤ 100	≤ 150	≤ 250	
l	15	16	17	18	19	23	22	21	19	18
t	13	14	15	16	17	21	20	19	19	18







