

Material properties

Material	S355JR / Fe 510 B (Germany / DIN)
Group	Structural and constructional steels
Subgroup	DIN EN 10025 Hot rolled products of non-alloy structural steels
Comment	Technical delivery conditions
Application	-

Yield Stress[MPa]			
Dimension	Min	Max	Approx
t < 3 mm; Hot rolled	355	-	-
t < 16 mm; Hot rolled	355	-	-
16 < t < 40 mm; Hot rolled	345	-	-
40 < t < 63 mm; Hot rolled	335	-	-
63 < t < 80 mm; Hot rolled	325	-	-
80 < t < 100 mm; Hot rolled	315	-	-
100 < t < 150 mm; Hot rolled	295	-	-
150 < t < 200 mm; Hot rolled	285	-	-
200 < t < 250 mm; Hot rolled	275	-	-

Tensile Stress[MPa]			
Dimension	Min	Max	Approx
t < 3 mm; Hot rolled	510	680	-
t < 16 mm; Hot rolled	490	630	-
16 < t < 40 mm; Hot rolled	490	630	-
40 < t < 63 mm; Hot rolled	490	630	-
63 < t < 80 mm; Hot rolled	490	630	-
80 < t < 100 mm; Hot rolled	490	630	-
100 < t < 150 mm; Hot rolled	470	630	-
150 < t < 200 mm; Hot rolled	450	630	-
200 < t < 250 mm; Hot rolled	450	630	-

Elongation A5 [%]			
Dimension	Min	Max	Approx
t < 16 mm; Hot rolled	20.0	22.0	-
16 < t < 40 mm; Hot rolled	20.0	22.0	-
40 < t < 63 mm; Hot rolled	19.0	21.0	-
63 < t < 80 mm; Hot rolled	18.0	20.0	-
80 < t < 100 mm; Hot rolled	18.0	20.0	-
100 < t < 150 mm; Hot rolled	18.0	-	-
150 < t < 200 mm; Hot rolled	17.0	-	-
200 < t < 250 mm; Hot rolled	17.0	-	-

Impact [J]			
Dimension	Min	Max	Approx
t < 16 mm; Hot rolled	27	-	-
16 < t < 40 mm; Hot rolled	27	-	-
40 < t < 63 mm; Hot rolled	27	-	-
63 < t < 80 mm; Hot rolled	27	-	-
80 < t < 100 mm; Hot rolled	27	-	-
100 < t < 150 mm; Hot rolled	27	-	-
150 < t < 200 mm; Hot rolled	23	-	-
200 < t < 250 mm; Hot rolled	23	-	-

Chemical Composition [%]			
Criterion	Min	Max	Approx
C	-	0.2400	-
Si	-	0.5500	-
Mn	-	1.6000	-
P	-	0.0450	-
S	-	0.0450	-
N	-	0.0070	-

- C Depending on thickness

- N Depending on P- content N < 0.012%

Cross Reference Table		
Material	Standard	Country
S 355 JR	AFNOR NF	France
A 572 Grade 50	ASTM	USA
S 355 JR	B.S.	United Kingdom
1.0045	EN	European Union
Fe 510 B	EN	European Union
S 355 JR	EN	European Union
C 0561	JUS	Yugoslavia
Fe 355 B	MSZ	Hungary
S 355 JR	NBN	Belgium
S 355 JR	NS	Norway
2172	SS	Sweden
S 355 JR	UNE	Spain
S 355 JR	UNI	Italy
Fe 510 B	UNI	Italy
1.0045	WN	Germany