

## Material properties

<b>Material</b>	<b>St 52-3 / S355J2G3 (Germany / DIN)</b>
<b>Group</b>	Structural and constructional steels
<b>Subgroup</b>	DIN 2393-2 Welded precision steel tubes
<b>Comment</b>	Technical delivery conditions; DIN 2393-2 was superseded by EN 10305-2

**Application** -

Yield Stress[MPa]			
Dimension	Min	Max	Approx
Welded tube; Cold-finished and stress relief annealed (BKS)	435	-	-
<b>Note:</b> Yield Stress is Upper Yield Stress			
Welded tube; Normalized (NBK)	355	-	-
<b>Note:</b> Yield Stress is Upper Yield Stress			

Tensile Stress[MPa]			
Dimension	Min	Max	Approx
Welded tube; Cold-finished as-drawn (BK)	640	-	-
Welded tube; Lightly cold-worked after the last heat treatment (BKW)	590	-	-
Welded tube; Cold-finished and stress relief annealed (BKS)	590	-	-
Welded tube; Annealed (GBK)	490	-	-
Welded tube; Normalized (NBK)	490	630	-

Elongation A5 [%]			
Dimension	Min	Max	Approx
Welded tube; Cold-finished as-drawn (BK)	4.0	-	-
Welded tube; Lightly cold-worked after the last heat treatment (BKW)	6.0	-	-
Welded tube; Cold-finished and stress relief annealed (BKS)	10.0	-	-
Welded tube; Annealed (GBK)	22.0	-	-
Welded tube; Normalized (NBK)	22.0	-	-

## Chemical Composition [%]

Criterion	Min	Max	Approx
C	-	0.2200	-
Si	-	0.5500	-
Mn	-	1.6000	-
P	-	0.0250	-
S	-	0.0250	-
V	-	0.0500	-
Ti	-	0.0300	-
Nb	-	0.0300	-
Al	0.0200	-	-
Nb+Ti+V	-	0.0500	-

## Cross Reference Table

Material	Standard	Country
<b>S 355 J 2 G 3</b>	<b>AFNOR NF</b>	France
<b>S 355 J 2 G 3</b>	<b>B.S.</b>	United Kingdom
<b>350WT</b>	<b>CSA</b>	Canada
<b>11523</b>	<b>CSN</b>	Czech Republic
<b>St 52-3</b>	<b>DIN</b>	Germany
<b>St 52-3 G</b>	<b>DIN</b>	Germany
<b>S355J2G3 / Fe 510 D1</b>	<b>DIN</b>	Germany
<b>Fe 510 D1</b>	<b>EN</b>	European Union
<b>1.0570</b>	<b>EN</b>	European Union
<b>S 355 J 2 G 3</b>	<b>EN</b>	European Union
<b>16Mn</b>	<b>GB</b>	China
<b>17GS</b>	<b>GOST</b>	Russia
<b>SM 520 C</b>	<b>JIS</b>	Japan
<b>SM 490 A</b>	<b>JIS</b>	Japan
<b>C 0563</b>	<b>JUS</b>	Yugoslavia
<b>Fe 355 C/ FF</b>	<b>MSZ</b>	Hungary
<b>S 355 J 2 G 3</b>	<b>NBN</b>	Belgium
<b>S 355 J 2 G 3</b>	<b>NS</b>	Norway
<b>St 52 F</b>	<b>ONORM</b>	Austria
<b>G 355</b>	<b>PN</b>	Poland

## Cross Reference Table

Material	Standard	Country
16 G 2	PN	Poland
2133	SS	Sweden
2132	SS	Sweden
OL 52.3 kf	STAS	Romania
OL 52.3 k	STAS	Romania
S 355 J 2 G 3	UNE	Spain
Fe E 420	UNI	Italy
Fe 510	UNI	Italy
S 355 J 2 G 3	UNI	Italy
1.0570	WN	Germany