

<b>Quality</b>	<b>SAE 1141</b>
According to standard	ASTM A 576-90b: 2000 <b>Hot-rolled</b>
	ASTM A311/A 311M: 2004 <b>Cold-drawn</b>

### Chemical composition

C%	Si%	Mn%	P% max	S%	Deviations allowed for analysis product
0,37-0,45	a)	1,35-1,65	0,040	0,08-0,13	
± 0.03		± 0.06	+ 0.008	+ 0.008	

See the notes below

### Mechanical properties ASTM A311/A 311M: 2004 Cold-drawn stress-relieved cl. A

size mm		Testing at room temperature (longitudinal)					
from	to	R	Rp 0.2	A%	C%	HB	
		N/mm <sup>2</sup>	N/mm <sup>2</sup>	min	min	min	min
	20	655	620	11	35	201	
20	30	620	585	11	30	190	
30	50	585	550	10	30	173	
50	70	550	520	10	30	159	

### Quality SAE 1116

According to standard	ASTM A 576-90b:2000 <b>Hot-rolled</b>
Number	

### Chemical composition

C%	Si%	Mn%	P% max	S%	Deviations allowed for analysis product
0,14-0,20	a)	1,10-1,40	0,040	0,16-0,23	
± 0.02		± 0.06	+ 0.008	+ 0.008	

See the notes below

### Quality SAE 1117

According to standard	ASTM A 576-90b: 2000 <b>Hot-rolled</b>
Number	U.K. B.S.

### Chemical composition

C%	Si%	Mn%	P% max	S% max	Deviations allowed for analysis product
0,14-0,20	a)	1,00-1,30	0,040	0,08-0,13	
± 0.02		± 0.06	+ 0.008	+ 0.008	

### Mechanical properties ASTM A311/A 311M: 2004 Cold-drawn stress-relieved cl. A

size mm		Testing at room temperature (longitudinal)					
from	to	R	Rp 0.2	A%	C%	HB	
		N/mm <sup>2</sup>	N/mm <sup>2</sup>	min	min	min	min
	20	520	450	15	40	155	
20	30	485	415	15	40	147	
30	50	450	380	13	35	135	
50	75	415	345	12	30	123	

x100

### Sulphur distribution



NOTE: : if fine grain min. 5 is specified in the order, Al content should be of not less than 0.020%

In case of lead addition, the steel is identified by inserting the letter "L" 11L41, 11L16, 11L17

a) the following values are usually specified at the time of order placement: 0.10 max, 0.10-0.20, **0.15-0.35**, 0.20-0.40, 0.30-0.60



# SAE1141



USA AISI/SAE	ITALY UNI	CHINA GB	GERMANY	U.K. B.S.	FRANCE AFNOR	RUSSIA GOST	EUROPE EN
SAE 1141							
SAE 1116							
SAE 1117							(15S10)