

C16E 1.1148 - C16R 1.1208 EN 10277: 2018
Lucefin Group

Cold drawn +C ^{c)}						Hot-rolled + Peeled +SH			
size mm		Testing at room temperature (longitudinal)				Testing at room temperature (longitudinal)			
from	to	R ^{a)}	Rp 0.2 ^{a)}	A%	HBW	R	Rp 0.2	A%	HBW
		N/mm ²	N/mm ² min	min	for inf.	N/mm ²	N/mm ² min	min	
5 ^{b)}	10	520-820	400	7	154-247	-	-	-	-
10	16	500-800	360	8	152-240	-	-	-	-
16	40	450-750	300	9	135-228	350-620			105-184
40	63	400-690	260	11	119-210	350-620			105-184
63	100	360-620	235	12	106-210	350-620			105-184
size mm		Soft annealing +A+SH Peeled, Ground +G				Soft annealing +A+C Cold-drawn			
from	to	HBW max				HBW max			
5 ^{b)}	10	-				242			
10	16	-				238			
16	40	156				222			
40	63	156				204			
63	100	156				184			

^{a)} for flats and special sections, yield point can be – 10% and tensile strength can be ± 10%

^{b)} for thickness < 5 mm, mechanical properties should be agreed before order placement

^{c)} values valid also for +C+G

C16 Forged values obtained on test blanks after core hardening + stress-relieving UNI 5331: 1964. Use only as reference

size mm	Testing at room temperature (longitudinal)				
test blanks	R	Rp 0.2	A%	Kcu	HB
	N/mm ²	N/mm ² min	min (L)	J min (L)	for inform.
25	700-1100	450	7	44	213-331

L = longitudinal

Jominy test HRC

mm distance from quenched end

	1.5	3	5	7	9	11	13	15	20	25	30	35	40	45	50
min	No indications from reference standards														
max															

Thermal Expansion	10 ⁻⁶ • K ⁻¹	▶	11.1	12.1	12.9	13.5	13.9	14.1							
Mod. of Elasticity long.	GPa		210												
Mod. of Elasticity tang.	GPa		80												
Specific Heat Capacity	J/(Kg•K)		460	481	515		595								
Thermal Conductivity	W/(m•K)		58												
Density	Kg/dm ³		7.85												
Specific Electric Resist.	Ohm•mm ² /m		0.11	0.22	0.29										
Electrical Conductivity	Siemens•m/mm ²		9.09												
°C			20	100	200	300	400	500	600						

The symbol ▶ indicates temperature between 20 °C and 100 °C, 20 °C and 200 °C ...

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EN	UNI	GB	DIN	AFNOR	B.S.	GOST	AISI/SAE
C16E	C15			XC18	080M15		1015