

Quality	C43	<i>Technical card</i>
According to standards	UNI 7847: 1979	<i>Lucefina Group</i>
Number		

Chemical composition

C%	Si%	Mn%	P% max	S% max	
0,40-0,46 ± 0.02	0,15-0,40 ± 0.03	0,50-0,80 ± 0.04	0,030 + 0.005	0,030 + 0.005	Product deviations are allowed
Max Cr, Mo, Ni, Cu values can be agreed at the time of order placement					

Temperature °C

Hot-forming	Normalizing	Quenching	Quenching	Tempering	Stress-relieving		
1100-850	870 air	840 water		550-650 air	180		
Soft annealing	Isothermal annealing	Natural state	End quench hardenability test	Pre-heating welding	Stress-relieving after welding		
690 air (HB max 220)	820 furnace cooling to 660, then air (HB 155-205)	(HB max 231)		not recommended			
				Ac1	Ac3	Ms	Mf
				730	780	360	150

Mechanical properties

Hot-rolled mechanical properties obtained on test blanks after **normalizing** treatment UNI 7847: 1979

test blanks diameter (mm)		Testing at room temperature (longitudinal)					
over	To	R	Rp 0.2	A%	C%	Kcu	HB
16	100	N/mm ²	N/mm ² min.	min.	min.	J min.	for information
		570-720	300	18			169-223

Hot-rolled mechanical properties obtained on test blank after **quenching and tempering** (values valid for untreated products)

For quenched and tempered material supply, reported values must be guaranteed on the product

UNI 7847:1979. Use only as reference

test blanks diameter (mm)		Testing at room temperature (longitudinal)					
from	to	R	Rp 0.2	A%	C%	Kcu	HB
		N/mm ²	N/mm ² min	min.	min.	J min	for information
	16	690-840	470	15		25	210-250
16	40	640-790	400	16		20	198-237
40	100	570-720	360	17		20	169-223

For dimensions over 100 mm, mechanical properties can be agreed before order placement

Cold-drawn

diameter		Testing at room temperature (longitudinal)				
from	to	R N/mm ²	Rp 0.2 N/mm ² min	A% min	HB	

No indications from reference standards; use C40E – C45E values as reference

Jominy test HRC

mm distance from quenched extremity															Min. surface hardness after hardening and stress-relieving			
		1.5	3	5	7	9	11	13	15	20	25	30	35	40	45	50	HRC	
min	No indications from reference standards; use C 45E values as reference																	
max																		54

EUROPE EN	ITALY UNI	CHINA GB	GERMANY DIN	FRANCE AFNOR	U.K. B.S.	RUSSIA GOST	USA AISI/SAE
	C43						