

Quality	E295 (C30E – C35E)	Structural Steel	<i>Technical card</i>
According to standards	EN 10025-2: 2004		Lucefin Group
Number	1.0050		rev. 2018

Chemical composition

C%	Si%	Mn%	P% max	S% max	N% max	Cu%	
-	-	-	0,045	0,045	0,012 ^{a)}	-	Cast analysis
-	-	-	0,055	0,055	0,014 ^{b)}	-	Product analysis

FN deoxidation method - rimming steel not admitted

^{a)} N max value is not applied if chemical composition shows total Al content of 0.020%

^{b)} N max value is not applied if chemical composition shows total Al content of 0.015%

Temperature °C

Hot-forming	Supply state +U	Soft annealing +A	Isothermal annealing +I	Temperature values are valid for analysis close to:			
1150-850	natural	700 air	850 furnace cooling to 650 then, air	C%	Mn%	Si%	
				~ 0.30	~ 0.60	~ 0.30	
In some cases the piece can be normalized and tempered +NT or quenched and tempered +QT				Pre-heating welding	Stress-relieving after welding		
Normalizing and tempering	Quenching and tempering	Stress-relieving +SR	End quench hardening	100	slow cooling		
880 air	860 water	50° under the	-				
540-650 air	550-650 air	temperature of tempering		Ac1	Ac3	Ms	Mf
				730	810	400	180

Mechanical properties

Hot-rolled EN 10025-2: 2004 **E295** 1.0050

Testing at room temperature

size mm		R	ReH min	A% (L)	A% (T)	Kv	HB
from	to	N/mm ²	N/mm ²	min	min	J min	for information
	3	490-660	295	-	-	-	-
3	16	470-610	295	20	18	-	140-181
16	40	470-610	285	20	18	-	140-181
40	63	470-610	275	19	17	-	140-181
63	80	470-610	265	18	16	-	140-181
80	100	470-610	255	18	16	-	140-181
100	150	450-610	245	16	15	-	135-181
150	200	440-610	235	15	14	-	132-181
200	250	440-610	225	15	14	-	132-181

+N normalization is suggested. (L) = longitudinal (T) = tangential

Cold-drawn +C EN 10277-2: 2008 **E295GC** 1.0533

Testing at room temperature (longitudinal)

size mm		Testing at room temperature (longitudinal)				Hot-rolled – Peeled +SH Testing at room temperature (longitudinal)			
from	to	R ^{b)}	Rp 0.2 ^{b)}	A%	HB	R	Rp 0.2	A%	HB
		N/mm ²	N/mm ² min	min	for information	N/mm ²	N/mm ² min	min	
5 ^{c)}	10	650-950	510	6	200-286	-	-	-	-
10	16	600-900	420	7	178-271	-	-	-	-
16	40	550-850	320	8	159-253	470-610	-	-	140-181
40	63	520-770	300	9	155-231	470-610	-	-	140-181
63	100	470-740	255	9	140-224	470-610	-	-	140-181

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

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

EUROPE	ITALY	CHINA	GERMANY	FRANCE	U.K.	RUSSIA	USA
EN	UNI	GB	DIN	AFNOR	B.S.	GOST	AISI/SAE
E295	Fe 490	Q275	St 50-2	A 50-2		St5ps-2	