

<b>Quality</b>	<b>E360</b> (C50E – C55E - C60E)	<b>Structural Steel</b>	<i>Technical card</i>
According to standards	<b>EN 10025-2: 2004</b>		<b>Lucefin Group</b>
Number	<b>1.0070</b>		rev. 2018

### Chemical composition

C%	Si%	Mn%	P% max	S% max	N% max	Cu%	
-	-	-	0,045	0,045	0,012 <sup>a)</sup>	-	<b>Cast analysis</b>
-	-	-	0,055	0,055	0,014 <sup>b)</sup>	-	<b>Product analysis</b>

FN deoxidation method - rimming steel not admitted

<sup>a)</sup> N max value is not applied if chemical composition shows total Al content of 0.020%

<sup>b)</sup> N the max value is not applied if chemical composition shows total Al content of 0.015%

### Temperature °C

Hot-forming	Normalizing +N	Quenching +Q	Quenching +Q	Tempering +T	Temperature values are valid for analysis close to:		
1050-850	825-885 air	830 water	850 oil, polymer	550-650 air	C% ~ 0.52	Mn% ~ 0.80	Si% ~ 0.30
					<b>Pre-heating welding</b>		<b>Stress-relieving after welding</b>
<b>Soft annealing +A</b>	<b>Isothermal annealing +I</b>	<b>Stress- relieving +SR</b>	<b>End quench hardenability</b>	250			600 furnace cooling
690 air	790 furnace cooling to 660 then air	50 under the temperature of tempering	-	<b>Ac1</b> -	<b>Ac3</b> -	<b>Ms</b> -	<b>Mf</b> -

### Mechanical properties

Hot-rolled EN 10025-2: 2004 **E360** 1.0070

Testing at room temperature

size mm	R	ReH	A% (L)	A% (T)	Kv	HB
from to	N/mm <sup>2</sup>	N/mm <sup>2</sup> min	min	min	J min	for information
3	690-900	360	-	-	-	-
3 16	670-830	360	11	10	-	203-249
16 40	670-830	355	11	10	-	203-249
40 63	670-830	345	10	9	-	203-249
63 80	670-830	335	9	8	-	203-249
80 100	670-830	325	9	8	-	203-249
100 150	650-830	305	8	7	-	200-249
150 200	640-830	295	7	6	-	198-249
200 250	640-830	285	7	6	-	198-249

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

Cold-drawn +C					Hot rolled – Peeled +SH				
size mm		Testing at room temperature (longitudinal)				Testing at room temperature (longitudinal)			
from	to	R <sup>c)</sup>	Rp 0.2	A%	HB	R	Rp 0.2	A%	HB
		N/mm <sup>2</sup>	N/mm <sup>2</sup> min	min		N/mm <sup>2</sup>	N/mm <sup>2</sup> min	min	

No indications from reference standards

EUROPE	ITALY	CHINA	GERMANY	FRANCE	U.K.	RUSSIA	USA
EN	UNI	GB	DIN	AFNOR	B.S.	GOST	AISI/SAE
E360	Fe 690		E360	A 70-2	E360		