

Quality	S355J0	Structural	<i>Technical card</i>
According to standard	EN 10025-2: 2004	Steel	Lucefin Group
Number	1.0553		<i>rev. 2018</i>

Chemical composition

C%	Si%	Mn%	P%	S%	N%	Cu%	
max	max	max	max	max	max	max	
0,20 ^{c)}	0,55	1,60	0,030	0,030	0.012 ^{a)}	0,40	Cast analysis
0,23 ^{c)}	0,60	1,70	0,040	0,040	0.014 ^{b)}	0,45	Product analysis

FN deoxidation method - rimming steel not admitted

^{c)} max 0.22 by ladle analysis, max 0.24 of the product for thickness > 30 mm up to 100 mm

^{c)} for nominal thickness > 100 mm, C content to be agreed

^{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:		
1100-850	natural	700 air	-	C%	Mn%	Si%
				~ 0.18	~ 1.20	~ 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	100	slow cooling		
920 air	880-900 water	50 under the				
550-650 air	550-650 air	temperature of				
		tempering	Ac1	Ac3	Ms	Mf
			-	-	-	-

Mechanical properties

Hot-rolled EN 10025-2: 2004 **S355J0** 1.0553

Testing at room temperature Kv 0 °C

size mm	R	R _{eH}	A%	A%	Kv 0 °C	HB	Mod. of Elasticity	
from to	N/mm ²	N/mm ² min	min (L)	min (T)	J min ^{c)} (L)	for inf.	GPa +20 °C	
3 to 3	510-680	355	-	-	-	-	long.	long.
3 to 16	470-630	355	22	20	27	141-192	210	80
16 to 40	470-630	345	22	20	27	141-192		
40 to 63	470-630	335	21	19	27	141-192		
63 to 80	470-630	325	18	18	27	141-192		
80 to 100	470-630	315	18	18	27	141-192		
100 to 150	450-600	295	18	18	27	135-178		
150 to 200	450-600	285	17	17	27	135-178		
200 to 250	450-600	275	17	17	27	135-178		
250 to 400	450-600	265	17	17	27	135-178	apply to flat products	

^{c)} values to be agreed for thickness > 100 mm (**normalization** +N is advised)

Cold-drawn					Hot-rolled – Peeled				
size mm		Testing at room temperature (longitudinal)				Testing at room temperature (longitudinal)			
over	to	R	R _{p 0.2}	A%	HB	R	R _{p 0.2}	A%	HB
		N/mm ²	N/mm ² min	min		N/mm ²	N/mm ² min	min	

No indications from reference standards

(use as reference S355J2C EN 10277-2 values)

EUROPE	ITALY	CHINA	GERMANY	FRANCE	U.K.	RUSSIA	USA
EN	UNI	GB	DIN	AFNOR	B.S.	GOST	AISI/SAE
S355J0	Fe 510 C		St 52-3 U	E 36-3	50 C		