



**DECLARATION OF PERFORMANCE**

**No 0160/017**

**Rev. 0**

Product Identification Code	Hot rolled steel product for Structural Use. <b>Grade S355J0W as for EN10025-5:2005</b>	
Identification	According to the information stated on the ID label with barcode and/or Bundle number and in the Inspectin certificate.	
Intended use of the Construction Product	Flat product for use in metal structures or in metal complexes and concrete structures.	
Manufacturer (registered office)	<b>Marcegaglia S.p.A.</b> Via Bresciani, 16 – 46040 Gazoldo degli Ippoliti (MN) – Italia	
Production Plant	<b>San Giorgio di Nogaro</b> Via Fermi, n°33 - 33058 San Giorgio Nogaro (UD) - Italia	
System of assessment and verification of the continuity of performance of the construction product	<b>2+</b>	
Name and ID number of the notified Body	RINA Service S.p.A. – Via Corsica, 12 – 16128 Genova - Italia <b>0474</b>	
Certificates of Conformity for the control of the plant production have been issued for the following elements: <ul style="list-style-type: none"> <li>Starting inspection of the production plant and of the factory production control.</li> <li>Surveillance, evaluation and regular audits of the factory production control.</li> </ul>		
<b>DECLARED PERFORMANCE</b>		
<b>Main Features</b>	<b>Performance</b>	<b>Harmonised specification</b>
Dimensional tolerances	As for Table 2	EN 10029: 2011
Elongation	As for Table 1	EN 10025-5: 2005
Tensile strength		
Yield strength		
Impact strength		
Chemical analysis	As for Table 3	
Durability (with no request for coating)	N.P.D.	
This declaration of performance is issued under the sole responsibility of the Manufacturer identified above.		
Signed for and behalf of Marcegaglia S.p.A.		
<b>Marco Ing. Ferrone</b> San Giorgio di Nogaro Plant Manager		<i>San Giorgio di Nogaro 11/07/2013</i>
This declaration of performance is valid only in presence of the product identification label and delivery document or of the inspection certificate.		

**TABLE 1 – MECHANICAL CHARACTERISTICS**

grade	Minimum Yield strenght $ReH^{a)}$ Mpa						Tensile strenght $Rm^{a)}$ Mpa	
	Nominal Thickness (mm)							
	≤ 16	> 16 ≤ 40	> 40 ≤ 63	> 63 ≤ 80	> 80 ≤ 100	> 100 ≤ 120	≥ 3 ≤ 100	> 100 ≤ 120
<b>S355J</b>	355	345	335	325	315	295	470 to 630	450 to 600

a) For plate, strip and wide flats with widths. ≥600 mm the direction transverse (t) to the rolling direction applies. For all other products the values apply for the direction parallel (l) to the rolling direction..

**TABLE 1 – MECHANICAL CHARACTERISTICS (follows)**

grade	Position of test pieces <sup>a)</sup>	Mechanical characteristics at room temperature for steel grades with impact strenght values				Impact strenght KV longitudinal for flat products	
		Min. percentage elongation after break <sup>a)</sup> % L0=5,65√S0				temperature °C	Minimum energy (J)
		Nominal Thickness (mm)					
		≥ 3 ≤ 40	> 40 ≤ 63	> 63 ≤ 100	> 100 ≤ 120	≤ 120	
<b>S355J</b>	l	22	21	20	18	0	27 <sup>b)</sup>
	t	20	19	18	18		

a) For plate, strip and wide flats with widths. ≥600 mm the direction transverse (t) to the rolling direction applies. For all other products the values apply for the direction parallel (l) to the rolling direction.

**TABLE 3 – CHEMICAL ANALYSIS**

<i>Chemical composition of the ladle analysis of steel with improbe atmospheric corrosion resistance <sup>d)</sup></i>									
grade	C % max	Si % max	Mn %	P % max	S % max	N % max	Aggiunta di elementi che fissano l'azoto <sup>c)</sup>	Cr %	Cu %
<b>S355J</b>	0,16	0,50	0,50 - 1,50	0,035	0,035	0,009 <sup>a) b)</sup>	-	0,40 - 0,80	0,25 - 0,55

a) It is permissible to exceed the specified values provided that for each increase of 0.001% N the P max. content will be reduced by 0.005%; the N content of the ladle analysis, however, shall not be more than 0.012%

b) The max. value for nitrogen does not apply if the chemical composition shows a minimum total Al content of 0.020 % or if sufficient other N binding elements are presents..The binding elements shall be mentioned in the inspection document.

c) The steels shall contain at least one of the following elements: Al total ≥ 0,020%, Nb: 0,015% - 0,060%, V: 0,02% - 0,12%, Ti: 0,02 - 0,10%.If these elements are used in combination, at least one of them shall be present with the minimum content indicated.

d) The steels may show a Ni content of max.0.65%, 0.30% Mo, 0.15% Zr.



**TABLE 2 – DIMENSIONAL TOLERANCES**

*Tolerance on thickness (mm)*

Dimensions ( mm)	class A		class B		class C		class D	
	min	max	min	max	min	max	min	max
8 ≤ t < 15	-0,5	+0,9	-0,3	+1,1	0	+1,4	-0,7	+0,7
15 ≤ t < 25	-0,6	+1,0	-0,3	+1,3	0	+1,6	-0,8	+0,8
25 ≤ t < 40	-0,7	+1,3	-0,3	+1,7	0	+2	-1,0	+1,0
40 ≤ t < 80	-0,9	+1,7	-0,3	+2,3	0	+2,6	-1,3	+1,3
80 ≤ t < 150	-1,1	+2,1	-0,3	+2,9	0	+3,2	-1,6	+1,6

*Tolerances on width for plates with trimmed edges <sup>a)</sup>*

Dimensions ( mm)	Tolerance on width for trimmed edges	
Nominal thickness t	Lower	Upper
t < 40	0	+20
40 ≤ t < 150	0	+25

a) Tolerances on width for plates with untrimmed edges shall be the subject of agreement between the manufacturer and purchaser at the time of enquiry and order

*Tolerances on length*

Dimensions ( mm)	Tolerances on length	
Nominal length t	Lower	Upper
l < 4000	0	+20
4000 ≤ l < 6000	0	+30
6000 ≤ l < 8000	0	+40
8000 ≤ l < 10000	0	+50
10000 ≤ l < 15000	0	+75
15000 ≤ l ≤ 20000	0	+100

*Tolerances on flatness*

Dimensions ( mm)	Normal tolerances (class N)		Special tolerances (class S)	
	Measuring length ( mm)		Measuring length ( mm)	
Nominal thickness t	1000	2000	1000	2000
8 ≤ t < 15	7	11	3	6
15 ≤ t < 25	7	10	3	6
25 ≤ t < 40	6	9	3	6
40 ≤ t < 150	5	8	3	6

For anything not specified in tables or for exceptions as established in the reference standards