

## DECLARATION OF PERFORMANCE

**No. 0104/003**

**Rev. 1**

Product identification code	Hot rolled steel product for Structural Use <b>Grade S235J2 as per EN10025-2:2004</b>	
Identification	According to the information stated on the ID label with barcode and/or Bundle number and in the Inspection 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>Ravenna</b> Via Baiona n°141- 48123 Ravenna Italia	
System of assessment and verification of constancy of performance of the construction product	<b>2+</b>	
Notified Body and ID No	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>		
DECLARED PERFORMANCE		
Essential characteristics	Performance	Harmonised technical specification
Dimensional tolerances	As per Table 2	EN10051:2010
Elongation	As per Table 1	EN10025-1:2004 EN10025-2:2004
Tensile strength		
Yield strength		
Impact strength		
Weldability (CEV)	0.35% max	
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 on behalf of Marcegaglia S.p.A.  <i>Aldo Dr. Fiorini</i> Ravenna Plant Manager  <span style="float: right;"><i>Ravenna 01/07/2013</i></span>		
This declaration of performance is valid only in presence of the product identification label and delivery document or of the inspection certificate issued after delivery		

**TABLE 1 – MECHANICAL CHARACTERISTICS**

Mechanical characteristics at room temperature for steel grades with impact strength values													
GRADE	$R_{eH}^{(a)}$ MPa <sup>(bb)</sup>	$R_m^{(a)}$ MPa <sup>(b)</sup>		Min. Percentage elongation after break % <sup>a)</sup>							Longitudinal Impact strength KV		
	Min			$L_0 = 80$ (mm)					$L_0 = 5,65\sqrt{S_0}$	Temp. (°C)	Min energy (J)		
	Nominal Thickness (mm)												
	≤ 16	< 3	≥ 3 ≤ 100	a)	≤ 1	> 1 ≤ 1.5	> 1.5 ≤ 2	> 2 ≤ 2.5	> 2.5 < 3	≥ 3 ≤ 40	> 6 ≤ 150		
S235JR	235	360 ÷ 510	360 ÷ 510	L	17	18	19	20	21	26		-20	27
				t	15	16	17	18	19	24			

a) For sheets and strips ≥600 mm wide, the transversal (t) to rolling direction is applied. For all other products, the values for parallel (l) to rolling direction are applied  
 b) MPa = 1N/mm<sup>2</sup>

**TABLE 2 – DIMENSIONAL TOLERANCES**

tolerance on thickness – dimension mm				
NOMINAL THICKNESS	tolerances for nominal width			
	≤ 1200	> 1200 ≤ 1500	> 1500 ≤ 1800	> 1800
≤ 2,00	± 0,17	± 0,19	± 0,21	-
> 2,00 ≤ 2,50	± 0,18	± 0,21	± 0,23	± 0,25
> 2,50 ≤ 3,00	± 0,20	± 0,22	± 0,24	± 0,26
> 3,00 ≤ 4,00	± 0,22	± 0,24	± 0,26	± 0,27
> 4,00 ≤ 5,00	± 0,24	± 0,26	± 0,28	± 0,29
> 5,00 ≤ 6,00	± 0,26	± 0,28	± 0,29	± 0,31
> 6,00 ≤ 8,00	± 0,29	± 0,30	± 0,31	± 0,35
> 8,00 ≤ 10,00	± 0,32	± 0,33	± 0,34	± 0,40
> 10,00 ≤ 12,50	± 0,35	± 0,36	± 0,37	± 0,43
> 12,50 ≤ 15,00	± 0,37	± 0,38	± 0,40	± 0,46
> 15,00 ≤ 25,00	± 0,40	± 0,42	± 0,45	± 0,50

  

tolerance on width - dimension mm		
NOMINAL WIDTH	raw edges	trimmed edges
≤ 1200	-0 / +20	-0 / +3
> 1200 ≤ 1850	-0 / +20	-0 / +5
> 1850	-0 / +25	-0 / +6

Tolerances on products with trimmed edges apply to nominal thickness ≤ 10mm  
 For thickness > 10mm the values of + deviation must be agreed upon order placement

tolerance on length - dimension mm		
NOMINAL LENGHT	lower	upper
< 2000	-0	+10
≥ 2000 < 8000	-0	+0,005 x nominal length
≥ 8000	-0	+40

  

tolerance on flatness – dimension mm			
NOMINAL THICKNESS	nominal length	flatness tolerances	
		flatness tolerances	special flatness tolerance
≤ 2,00	≤ 1200	18	9
	> 1200 ≤ 1500	20	10
	> 1500	25	13
> 2,00 ≤ 25	≤ 1200	15	8
	> 1200 ≤ 1500	18	9
	> 1500	23	12

Flatness requirements for strips must be agreed upon order placement

tolerance on longitudinal edge camber or straightness
SHEETS with nominal length < 5000 mm $q = 0,5\%$ of length
SHEETS with nominal length ≥ 5000 mm, width ≥ 600 mm and with raw edges, $q = 20$ mm max over any portion 5000 mm long
SHEETS with nominal length ≥ 5000 mm width ≥ 600 mm and trimmed edges, $q = 15$ mm max over any portion 5000 mm long

  

Out of squareness
The out of squareness for sheets is the orthogonal projection of a transverse edge over a longitudinal one and must not exceed 1% of actual width of the sheet