

DECLARATION OF PERFORMANCE

No 0101/030

Rev. 1

Product Identification Code	Hot rolled steel product for Structural Use. Grade S235JR as per EN10025-2:2004
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)	Marcegaglia S.p.A. Via Bresciani, 16 – 46040 Gazoldo degli Ippoliti (MN) – Italia
Production Plant	Gazoldo Degli Ippoliti Via Bresciani, 16 – 46040 Gazoldo degli Ippoliti (MN) – Italia
System of assessment and verification of the continuity of performance of the construction product	2+
Name and ID number of the notified Body	RINA Services S.p.A. – Via Corsica, 12 – 16128 Genova - Italia 0474

Certificates of Conformity for the control of the plant production have been issued for the following elements:

- Starting inspection of the production plant and of the factory production control.
- surveillance, evaluation and regular audits of the factory production control

DECLARED PERFORMANCE

Main Features	Performance	Harmonised 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.

Arnaldo Ing. Barini
Gazoldo D.I. Plant Manager

Gazoldo D.I. 01/07/2013

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 ^(8b) Min	$R_m^{(a)}$ MPa ^(b)			Min. Percentage elongation after break % ^{a)}							Longitudinal Impact strength KV					
					$L_o = 80$ (mm)							$L_o = 5,65\sqrt{S_o}$	Temp.	Min energy			
					Nominal Thickness (mm)											(°C)	(J)
					≤ 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/mm²

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 Width	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.