



DECLARATION OF PERFORMANCE

No 0160/007

Rev. 02

| | | |
|--|---|---|
| Product Identification Code | Hot rolled steel product for Structural Use. Grade S355JR as for EN10025-2:2005 | |
| 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) | Marcegaglia S.p.A. Via Bresciani, 16 – 46040 Gazoldo degli Ippoliti (MN) – Italia | |
| Production Plant | San Giorgio di Nogaro Via Fermi, n°33 - 33058 San Giorgio Nogaro (UD) - 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 Service 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: <ul style="list-style-type: none"> 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 for (EN 10029: 2011)Table 2 | EN 10025-2: 2005 |
| Elongation | As for Table 1 | |
| Tensile strength | | |
| Yield strength | | |
| Impact strength | | |
| Chemical analysis | As for Table 3 | |
| Durability (with no request for coating) | N.P.D. | |
| The performance of the above mentioned product complies with the set of declared performances. This responsibility statement is issued in accordance with Regulation (EU) No. 305/2011, under the sole responsibility of the manufacturer identified above. | | |
| Signed for and behalf of Marcegaglia S.p.A. | | |
| <i>Marco Ing. Ferrone</i> San Giorgio di Nogaro Plant Manager | | <i>San Giorgio di Nogaro 29/01/2015</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 | <i>Minimum Yield strenght Reh^{a)} Mpa</i> | | | | | | <i>Tensile strenght Rm^{a)} Mpa</i> | |
|---------------|--|-----------|-----------|-----------|------------|-------------|---|-------------|
| | Nominal Thickness (mm) | | | | | | | |
| | ≤ 16 | > 16 ≤ 40 | > 40 ≤ 63 | > 63 ≤ 80 | > 80 ≤ 100 | > 100 ≤ 120 | ≥ 3 ≤ 100 | > 100 ≤ 120 |
| S355JR | 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 ^{a)} | <i>Mechanical characteristics at room temperature for steel grades with impact strenght values</i> | | | | <i>Impact strenght KV longitudinal for flat products</i> | |
|---------------|---------------------------------------|--|-----------|------------|-------------|--|--------------------|
| | | Min. percentage elongation after break ^{a)} % L0=5,65√S0 | | | | temperature °C | Minimum energy (J) |
| | | Nominal Thickness (mm) | | | | | |
| | | ≥ 3 ≤ 40 | > 40 ≤ 63 | > 63 ≤ 100 | > 100 ≤ 120 | ≤ 120 | |
| S355JR | l | 22 | 21 | 20 | 18 | +20 | 27 ^{b)} |
| | 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.
b) The impact properties of quality JR products are verified only when specified at the time of the order.

TABLE 3 – CHEMICAL ANALYSIS

| grade | <i>Chemical composition of the ladle analysis for flat products of steel grades and qualities with values for impact strenght</i> | | | | | | | | <i>Maximum CEV based on the ladle analysis</i> | | | |
|---------------|---|-----------|------|----------|----------|---------|---------|---------|--|------------------------|-----------|------------|
| | C in % max for nominal thickness (mm) | | | Si % max | Mn % max | P % max | S % max | N % max | Cu % max | Nominal thickness (mm) | | |
| | ≤ 16 | > 16 ≤ 40 | > 40 | | | | | | | ≤ 30 | > 30 ≤ 40 | > 40 ≤ 120 |
| S355JR | 0,24 | 0,24 | 0,24 | 0,55 | 1,60 | 0,035 | 0,035 | 0,012 | 0,55 | 0,45 | 0,47 | 0,47 |



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 |
| Nominal thickness t | | | | | | | | |
| $8 \leq t < 15$ | -0,5 | +0,9 | -0,3 | +1,1 | 0 | +1,4 | -0,7 | +0,7 |
| $15 \leq t < 25$ | -0,6 | +1,0 | -0,3 | +1,3 | 0 | +1,6 | -0,8 | +0,8 |
| $25 \leq t < 40$ | -0,7 | +1,3 | -0,3 | +1,7 | 0 | +2 | -1,0 | +1,0 |
| $40 \leq t < 80$ | -0,9 | +1,7 | -0,3 | +2,3 | 0 | +2,6 | -1,3 | +1,3 |
| $80 \leq t < 150$ | -1,1 | +2,1 | -0,3 | +2,9 | 0 | +3,2 | -1,6 | +1,6 |

Tolerances on width for plates with trimmed edges ^{a)}

| Dimensions (mm) | Tolerance on width for trimmed edges | |
|---------------------|--------------------------------------|-------|
| Nominal thickness t | Lower | Upper |
| t < 40 | 0 | +20 |
| $40 \leq t < 150$ | 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 |
| $4000 \leq l < 6000$ | 0 | +30 |
| $6000 \leq l < 8000$ | 0 | +40 |
| $8000 \leq l < 10000$ | 0 | +50 |
| $10000 \leq l < 15000$ | 0 | +75 |
| $15000 \leq l \leq 20000$ | 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 |
| $8 \leq t < 15$ | 7 | 11 | 3 | 6 |
| $15 \leq t < 25$ | 7 | 10 | 3 | 6 |
| $25 \leq t < 40$ | 6 | 9 | 3 | 6 |
| $40 \leq t < 150$ | 5 | 8 | 3 | 6 |

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