

**DECLARATION OF PERFORMANCE
N°1.8901**

1. Unique identification code of the product-type: **1.8901**
2. Type number: **S460N**
3. Intended use of the construction product, in accordance with the applicable harmonised technical specification: **EN 10025-1:2004**

**HOT ROLLED STRUCTURAL STEEL PRODUCTS TO BE USED IN METAL STRUCTURES OR IN
COMPOSITE METAL AND CONCRETE STRUCTURES**

4. Name and contact address of the manufacturer:

MARCEGAGLIA PLATES S.P.A.
Registered office - **Via Bresciani, 16 – 46040 Gazoldo degli Ippoliti (MN)**
in the factory
Via E. Fermi, 28 – 33058 San Giorgio di Nogaro (UD)

6. System of assessment and verification of constancy of performance of the construction product: **2+**
7. Name and identification number of the notified body:

RINA Services S.p.A.
N° 0474

It has issued the certificate of conformity of the factory production control based on the following elements:
i.initial inspection of the factory and of the factory production control;
ii.continuous surveillance, assessment and approval of the factory production control.

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued: **N.A.**
9. Declared performance:

Essential characteristics	Requirement clauses in this (or another) European Standard	Performance	Harmonised technical specification
Tolerances on dimensions and shapes	7.7.1	EN10029	EN 10025-3:2019
Elongation	7.3.1	COMPLIANT TABLE 1	
Tensile strength	7.3.1		
Yield strength	7.3.1		
Impact strength	7.3.1+7.3.2		
Chemical Analysis	7.2.1	COMPLIANT TABLE 2	
Weldability (Chemical composition)	7.2+7.4.1	NPD	
Durability (Chemical composition)	7.2+7.4.3	NPD	

10. performance of the product the identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and behalf of MARCEGAGLIA PLATES S.P.A.

Massimo Ing. Zat

Plant manager of San Giorgio di Nogaro , Via E. Fermi ,28

San Giorgio di Nogaro, 01/01/2026

➤ **TABLE 1- ESSENTIAL CHARACTERISTICS IN ACCORDING TO EN 10025-3:2019**

Table 4 — Mechanical properties - Tensile test properties at room temperature

Designation		Minimum yield strength R_{eH} ^a MPa Nominal thickness mm								Tensile strength R_m ^a MPa Nominal thickness mm			Minimum percentage elongation after fracture ^a % $L_0 = 5,65 \sqrt{S_0}$ Nominal thickness mm					
Steel name	Steel number	≤ 16	>16 ≤ 40	>40 ≤ 63	> 63 ≤ 80	> 80 ≤ 100	> 100 ≤ 150	> 150 ≤ 200	> 200 ≤ 250	≤ 100	> 100 ≤ 200	> 200 ≤ 250	≤ 16	>16 ≤ 40	>40 ≤ 63	> 63 ≤ 80	> 80 ≤ 200	> 200 ≤ 250
S460N	1.8901	460	440	430	410	400	380	370	370	540 to 720	530 to 710	510 to 690	17	17	17	17	17	16

^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 5 — Mechanical properties - Impact energy KV_2 on longitudinal test pieces ^a

Designation		Minimum values of impact energy KV_2 in J at test temperatures, in °C						
Steel name	Steel number	+20	0	-10	-20	-30	-40	-50
S460N	1.8901	55	47	43	40 ^b	-	-	-

For subsized specimens the minimum values shall be reduced in direct proportion to the cross-sectional area of the test piece.

^a Exceptions due to product size restrictions, 9.2.3.3.

^b This value corresponds with 27 J at - 30 °C (see EN 1993-1-10).

➤ **TABLE 2 – ESSENTIAL CHARACTERISTICS IN ACCORDING TO EN 10025-3:2019**

Table 1 — Chemical composition of the heat analysis

Designation		C % max.	Si % max.	Mn %	P % max. a	S % max. a b	Nb % max.	V % max.	Al _{total} % min. c	Ti % max.	Cr % max.	Ni % max.	Mo % max.	Cu % max.	N % max.
Steel name	Steel														
S460N ^d	1.8901 ^d	0,20	0,60	1,00 to 1,70	0,030	0,025	0,05	0,20	0,02	0,05	0,30	0,80	0,10	0,55	0,025

^a For long products the P and S content can be 0,005 % higher.

^b For some applications, e.g. for railways, a maximum S content of 0,010 % may be agreed upon at the time of the order, see **Option 32**, Clause 13.

^c If sufficient other N-binding elements are present the minimum total Al content does not apply.

^d V + Nb + Ti \leq 0,22 % and Mo + Cr \leq 0,30 %.

Table 3 — Maximum CEV based on the heat analysis

Designation		Maximum CEV in % for nominal product thickness in mm		
Steel name	Steel number	≤ 63	> 63 ≤ 100	> 100 ≤ 250
S460N	1.8901	0,53	0,54	0,55

^a Max. CEV is increased for **Option 5** (Clause 13), see 7.2.4.