

DECLARATION OF PERFORMANCE

1. Unique identification code of the product-type:

Weldable, ribbed, hot rolled reinforcing steel in bars in steel quality B500B (DIN 488-1:2009 and MSZ/T 339:2012.03) with $R_e = 500$ MPa declared yield strength calculated from nominal cross-section, in nominal diameters $\varnothing 8, \varnothing 10, \varnothing 12, \varnothing 14, \varnothing 16, \varnothing 18, \varnothing 20, \varnothing 22, \varnothing 25, \varnothing 28$ and $\varnothing 32$ mm

2. Type, batch or serial number or any other element allowing identification of the construction product according to government decree no. 275/2013 (dated 16th July):

Rolling mark applied on the product: 1-17

3. Intended use or uses of the construction product, in accordance with the relevant technical approval, as foreseen by the manufacturer:

The reinforcing steel products may be used as reinforcement of concrete structures according to EN 10080:2005, in steel quality B500B (DIN 488-1:2009 and MSZ/T 339:2012.03).

The steel bars can be taken into account with the parameters of B 60.50 (MSZ 339:1987) steel by performing diagnostic works on building designed in accordance with standards no. MSZ 15022:1986 and no. MSZ 15022:1986/1M:1992.

The steel bars can be taken into account as product in ductility class B with $R_{eH} = 500$ MPa declared yield strength calculated from nominal cross-section at design works and strength calculations, according to Annex C of standard no. EN 1992-1-1:2010 (EUROCODE 2).

4. Name, registered trade name or registered trade mark and contact address of the manufacturer:

*CELSA "Huta Ostrowiec" Sp. z o.o.
ul. Samsonowicza 2, PL-27-400 Ostrowiec Świętokrzyski, Poland*

5. System or systems of assessment and verification of constancy of performance of the construction product:
System (1+)

6. ÉMI Non-profit Ltd. for Quality Control and Innovation In Building, H-2000 Szentendre, Dózsa György út 26., Budapest, Hungary, who issued the *National Technical Assessment* no. A-221/2015 is designated body who performed:

- the determination of product type
- the audit tests of random chosen samples,
- the initial inspection of the factory and factory production control,
- the continuous surveillance, verification and assessment of the factory production control

in System (1+), and issued the Certificate of Constancy of Performance for the product with no. 20-CPR-115-(C-4/2007)

7. Declared performance

Essential characteristics	Performance	Applied test and product standards	Technical specification
Yield or proof strength (R_{eH} or $R_{p0,2}$)	≥ 500 MPa (characteristic) ≥ 485 MPa (individual)	MSZ EN 1992-1-1:2010 MSZ EN 10080:2005 MSZ/T 339:2012.03 MSZ 339:1987 DIN 488-1:2009 DIN 488-3:2009 MSZ EN ISO 15630-1:2011 MSZ EN ISO 6892-1:2010	National Technical Assessment no. A-221/2015
Tensile strength (R_m)	≥ 580 MPa (characteristic) ≥ 563 MPa (individual)		
Stress ratio (R_m / R_{eH})	$\geq 1,08$ (characteristic) $\geq 1,06$ (individual)		
Yield ratio ($R_{e,act} / R_{e,nom}$)	≤ 1.30 (individual)		
Elongation (A_{gt})	$\geq 5,0$ % (characteristic) $\geq 4,5$ % (individual)		
Elongation (A_5)	≥ 18 % (average)		
Bendability	180 degrees: $d \leq 16$ mm: 3d mandrel $d > 16$ mm: 6d mandrel		
Tolerances from nominal cross-section	$d \leq 8$ mm: $\pm 6,0\%$ $d > 8$ mm: $\pm 4,5\%$		
Bonding strength (f_R)	8 mm $< d \leq 12$ mm: 0.040 $d > 12$ mm: 0.056		
Weldability (C_{eq}):	$C_{eq} \leq 0.52$		
Durability (product analysis):	$C \leq 0.24$; $S \leq 0.055$; $P \leq 0.055$; $N \leq 0.014$; $Cu \leq 0.85$; $C_{eq} \leq 0.52$		
Fatigue:	$\sigma_M = 300$ MPa; $2\sigma_A = 150$ MPa; $n = 2 \cdot 10^6$		

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:



(Stanisław Klusek)
(Quality Manager of RPP)

Ostrowiec Świętokrzyski, 09.10.2015