No. 08/2021-DoP

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 Ø8, Ø10, Ø12, Ø14, Ø16, Ø18, Ø20, Ø22, Ø25, Ø28 and Ø32 mm

2. **Type, batch or serial number or any other element allowing identification of the construction product according to government decree no. 275/2013 (issued on 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the parameters of B 60.50 (MSZ 339:1987) steel by performing diagnostic works on building designed in accordance with withdrawn standards no.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, Hungary, who issued the *National Technical Assessment* no. A-221/2015 dated at 01.10.2015 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) dated at 05.02.2020.

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 *dated at 01.10.2015*
Tensile strength (R_m)	*≥ 580 MPa (characteristic)* *≥ 563 MPa (individual)*			
Stress ratio (R_m / R_{eH})	*≥ 1,08 (characteristic)* *≥ 1,06 (individual)*			
Yield ratio ($R_{e,act}$ / $R_{e,nom}$)	*≤1.30 (individual)*			
Elongation (A_{gt})	*≥ 5,0 % (characteristic)* *≥ 4,5 % (individual)*			
Elongation (A_5)	*≥ 18 % (average)*			
Bendability *Bending 180 degrees*	*d ≤ 16 mm: 3d mandrel* *d > 16 mm: 6d mandrel*			
Tolerances from nominal cross-section	*d ≤ 8 mm: ± 6,0%* *d > 8 mm: ± 4,5%*			
Bonding strength (rib geometry)	*a_m [mm]*	*0,03·d – 0,15·d*		
	β [°]	*35° ÷ 75°*		
	Σ_{ei} (mm)	*≤ d·π/4*		
	c (mm)	*0,4·d – 1,2d*		
	f_R, minimum	*8 mm ≤ d ≤ 12 mm: 0,040* *d >12 mm:0,056*		
Weldability (C_{eq}):	*$C_{eq} \leq 0.52$*			
Durability (product analysis):	*C ≤0.24; S ≤0.055; P ≤0.055;* *N ≤0.014; Cu ≤0.85; C_{eq} ≤0.52*			
Fatigue:	*σ_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:

Ostrowiec Świętokrzyski, 05.02.2021

(Stanisław Klusek)
(Quality Manager of RPP)