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DECLARATION of PERFORMANCE
No 01/ISOTHERM FIX-S/S-K/0447/2020

CE

1. *Unique identification code of the product-type*: **ISOTHERM-FIX-S / ISOTHERM FIX-S-K**
2. *Intended use:* **Nailed-in plastic anchor for fixing of external thermal insulation composite systems with rendering in concrete and masonry**
3. *Name, registered trade name or registered trade mark and contact address of the manufacturer:* **Marcopol Sp. z o.o. Producer of Bolts str. Oliwska 100, 80-209 Chwaszczyno Poland**
4. *System or systems of assessment and verification of constancy of performance of the construction product:* **System "2+" of assessment**
5. *European Technical Assessment:* **ETA 20/0447 issued 28.05.2020**
   Technical Assessment Body:
   Deutsches Institut für Bautechnik Kolonnenstraße 30B 10829 Berlin
   Notified Body: **Number: 1488 - Deutsches Institut für Bautechnik**
6. *Declared performance:*

	Essential characteristic	Performance	Technical Specification
3.1 BWR 4: Safety and accessibility in use			
3.1.1.	Characteristic resistance under tension load	see table below	ETA 20/0447
3.1.2.	Minimum edge distance and spacing	see table below	ETA 20/0447
3.1.3.	Displacements	see table below	ETA 20/0447
3.1.4.	Plate stiffness	see table below	ETA 20/0447
3.2 BWR 6: Energy economy and heat retention			
3.2.1.	Point thermal transmittance	see table below	ETA 20/0447

Essential characteristic	**Performance ISOTHERM FIX-S**	**Technical Specification**
Characteristic resistance under tension load N_{Rk}		
Concrete C12/15, bulk density ≥2,25 (kg/m^3) acc. to EN 206-1:2000	**0.5 (kN)**	**ETA 20/0447**
Concrete C16/20 ÷ C50/60, bulk density ≥2, (kg/m3) acc. toEN 206-1:2000	**0.7 (kN)**	
Clay bricks, Mz, bulk density ≥2,0 (kg/m3) EN 771-1:2011	**0.45 (kN)**	

Calcium silicate bricks KS20, bulk density ≥2,0 (kg/m3) acc. toEN 771-2:2011	**0.45 (kN)**		
Calcium silicate perforated bricks KSL12, bulk density ≥1,6 (kg/m3) acc. to EN 771-2:2011	**0.45 (kN)**		
Vertically perforated clcay bricks HZL 12, bulk density ≥1,2 (kg/m3) acc. to EN 771-1:2011	**0.25 (kN)**		
Vertically perforated clcay bricks Porotherm 25, bulk density ≥0,8 (kg/m3) acc. to EN 771-1:2011	**0.10 (kN)**		
Autoclaved aerated concrete AAC2-AAC7, bulk density ≥0,35 (kg/m3) acc. toEN 771-4:2011	**0.35 (kN)**		
Lightweight aggregate concrete LAC, bulk density ≥0,88 (kg/m3) acc. To EN 771-3:2011	**0.7 (kN)**		
Minimum spacing s_{min}	**100 (mm)**		**ETA 20/0447**
Minimum Edge distance c_{min}	**100 (mm)**		
Minimum thickness of member h	**100 (mm)**		
Displacements	**Tension load N [N]**	**Displacement δ [mm]**	
Concrete C12/15 - EN 206-1:2000	**0.17**	**0.22**	**ETA 20/0447**
Concrete C16/20 ÷ C50/60 - EN 206-1:2000	**0.23**	**0.31**	
Clay bricks Mz - EN 771-1:2011	**0.15**	**0.33**	
Calcium silicate bricks KS20 - EN 771-2:2011	**0.15**	**0.33**	
Calcium silicate hollow block KSL12 - EN 771-2:2011	**0.15**	**0.23**	
Vertically perforated clcay bricks HZL 12 - EN 771-1:2011	**0.08**	**0.44**	
Vertically perforated clcay bricks Porotherm 25 - EN 771-1:2011	**0.03**	**0.27**	
Autoclaved aerated concrete AAC2-AAC7 - EN 771-4:2011	**0.12**	**0.12**	
Lightweight aggregate concrete LAC - EN 771-3:2011	**0.23**	**0.25**	
Plate stiffness	**load resistance of the anchor plate [kN]**	**stiffness [kN/mm]**	**ETA 20/0447**
	1.50	0.30	
Point thermal transmittance	**Insulation thickness h_D [mm]**	**Point thermal transmittance χ [W/K]**	**ETA 20/0447**
Installed condition Surface mount	**20**	**0.002**	
	150	**0.003**	
	375	**0.002**	
Installed condition immerged mount	**40**	**0.001**	
	150	**0.002**	
	395	**0.002**	

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Essential characteristic **Characteristic resistance under tension load N_{Rk}**	Performance ISOTHERM FIX-S-K		Specyfikacja techniczna
Concrete C12/15, bulk density ≥2,25 (kg/m^3) acc. to EN 206-1:2000	**0.40 (kN)**		**ETA 20/0447**
Concrete C16/20 ÷ C50/60, bulk density ≥2, (kg/m3) acc. toEN 206-1:2000	**0.55 (kN)**		
Clay bricks, Mz, bulk density ≥2,0 (kg/m3) EN 771-1:2011	**0.45 (kN)**		
Calcium silicate bricks KS20, bulk density ≥2,0 (kg/m3) acc. toEN 771-2:2011	**0.45 (kN)**		
Calcium silicate perforated bricks KSL12, bulk density ≥1,6 (kg/m3) acc. to EN 771-2:2011	**0.45 (kN)**		
Vertically perforated clcay bricks HZL 12, bulk density ≥1,2 (kg/m3) acc. to EN 771-1:2011	**0.25 (kN)**		
Vertically perforated clcay bricks Porotherm 25, bulk density ≥0,8 (kg/m3) acc. to EN 771-1:2011	**0.10 (kN)**		
Autoclaved aerated concrete AAC2-AAC7, bulk density ≥0,35 (kg/m3) acc. toEN 771-4:2011	**0.20 (kN)**		
Lightweight aggregate concrete LAC, bulk density ≥0,88 (kg/m3) acc. To EN 771-3:2011	**0.55 (kN)**		
Minimum spacing s_{min}	**100 (mm)**		**ETA 20/0447**
Minimum Edge distance c_{min}	**100 (mm)**		
Minimum thickness of member h	**100 (mm)**		
Displacements	**Tension load N [N]**	**Displacement δ [mm]**	
Concrete C12/15 - EN 206-1:2000	**0.13**	**0.22**	**ETA 20/0447**
Concrete C16/20 ÷ C50/60 - EN 206-1:2000	**0.18**	**0.30**	
Clay bricks Mz - EN 771-1:2011	**0.15**	**0.28**	
Calcium silicate bricks KS20 - EN 771-2:2011	**0.15**	**0.28**	
Calcium silicate hollow block KSL12 - EN 771-2:2011	**0.15**	**0.37**	
Vertically perforated clcay bricks HZL 12 - EN 771-1:2011	**0.08**	**0.21**	

Vertically perforated clcay bricks Porotherm 25 - EN 771-1:2011	**0.03**	**0.12**	
Autoclaved aerated concrete AAC2-AAC7 - EN 771-4:2011	**0.07**	**0.33**	
Lightweight aggregate concrete LAC - EN 771-3:2011	**0.18**	**0.24**	
Plate stiffness	**load resistance of the anchor plate [kN]**	**stiffness [kN/mm]**	**ETA 20/0447**
	1.50	**0.30**	
Point thermal transmittance	**Insulation thickness h_D [mm]**	**Point thermal transmittance χ [W/K]**	**ETA 20/0447**
Installed condition Surface mount	**20**	**0.002**	
	150	**0.003**	
	375	**0.002**	
Installed condition immerged mount	**40**	**0.001**	
	150	**0.002**	
	395	**0.002**	

7. **The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point *6***

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3.

Signed by:

Chwaszczyno, 29.06.2020

R&D Director

Janusz Kabała

Dyrektor Działu Rozwoju Produktów

Janusz Kabała