

NATIONAL DECLARATION OF PERFORMANCE

Nr 0201.2020

1. Trade name of the construction product:
Polyurethane mortar for thin joints TYTAN Professional/TYTAN Professional foam Adhesive for bricklaying
2. Marking of the construction product:
TYTAN Professional Thin layer for masonry.
3. Intended use:

Raising walls with thin bed mortar, made of:

- 1) hollow clay units, finished by grinding, type P, with vertical hollows, group 2 (where the clear volume of the hollows is 25 to 55% of the hollow brick volume), minimum average compressive strength of 15 N/mm², category I, maximum dimensional deviations of class T2+, maximum dimensional span of class R2+, maximum support surface flatness deviation of 0.3 mm, and maximum support surface parallelism deviation of 0.6 mm, ref. PN-EN 771-1+A1:2015;
- 2) hollow clay units, finished by grinding, type P, with vertical hollows, group 3 (where the clear volume of the hollows is 25% to 70% of the hollow brick volume), minimum average compressive strength of 13 N/mm², category II, maximum dimensional deviations of class T2+, maximum dimensional span of class R2+, maximum support surface flatness deviation of 0.3 mm, and maximum support surface parallelism deviation of 0.6 mm, ref. PN-EN 771-1+A1:2015;
- 3) autoclaved aerated concrete (AAC) blocks, minimum average compressive strength of 4 N/mm², dimensional deviation category TLMB (ref. PN-EN 771-4+A1:2015), and these masonry units shall be used with a maximum support surface flatness deviation of ± 0.3 mm and a maximum support surface parallelism deviation of 0.6 mm;
- 4) sand-lime blocks, with vertical hollows, group 1 (where the maximum clear volume of the hollows is 25% of the block volume), minimum average compressive strength of 15 N/mm², maximum dimensional deviation category T2 (ref. PN-EN 771-2+A1:2015), and these masonry units shall be used with a maximum support surface flatness deviation of ± 0.3 mm and a maximum support surface parallelism deviation of 0.6 mm.

4. Name, address of the Producer and place of production:
ORION PU SP. Z O.O
58-200 Dzierżonów, ul. Pieszycza 4
ZAKŁAD 2, 57-402 Nowa Ruda, ul. Spacerowa 26
5. Name and address of authorized representative, if applicable: Not applicable
6. National system of evaluation and verification of constancy of performance: 4
7. National technical specification:
 - 7a. Polish norm of product: Not applicable
Name of accredited certification body, No of accreditation and No of national certificate or name of accredited laboratory/-ies and No of accreditation: Not applicable
 - 7b. National Technical Assessment: ITB-KOT-2017/0111 edition 2
National body of technical assessment: Instytut Techniki Budowlanej, Warszawa ul. Filtrowa 1.
Name of accredited certification body, No of accreditation and No of national certificate or name of accredited laboratory/-ies and No of accreditation: Not applicable
8. Declared performance properties:

Essential characteristics of construction product for intended use	Declared parameters			
	Wall made of hollow clay units		Wall made of AAC blocks	Wall made of sand-lime blocks with vertical hollows
Technical parameters	Group 2, category I	Group 3, category II		
Specific compressive strength, f_k , MPa (f_b – specific compressive strength of masonry units)	$0,5 \cdot f_b^{0,7}$		$0,7 \cdot f_b^{0,85}$	$0,55 \cdot f_b^{0,7}$
Compressive resilience, K_E	369	435	193	330
Compressive modulus, E , MPa	$E = K_E \cdot f_k$		$E = K_E \cdot f_k$	$E = K_E \cdot f_k$
Specific flexural strength at failure in a plane parallel to the support joints, f_{xk1} , MPa	0,15	0,18	0,30	0,21
Specific flexural strength at failure in a plane perpendicular to the support joints, f_{xk2} , MPa	0,10	0,11	0,20	0,18
Specific shear strength, f_{xk0} , MPa	0,08	0,07	0,10	0,15

Essential characteristics of construction product for intended use	Declared parameters
Degree of expansion, %	67 ± 5
Mortar tensile strength, kPa	≥ 75
Tensile strength (in perpendicular to the plane of adhesion), kPa, of the joint made with and between: hollow clay unit, group 2, category I, to TYTAN Professional polyurethane thin joint mortar / TYTAN Professional bricklaying foam adhesive, to hollow clay unit, group 2, category I:	
• with the joint built and kept under laboratory conditions for 24 h	≥ 100
• with the joint built and kept at -5°C for 24 h	≥ 100
• with the joint built and kept under laboratory conditions for 7 days	≥ 120
• with the joint built after the open time of 3 min and kept under laboratory conditions for 7 days	≥ 100
• with the joint built and kept at -5°C for 7 days	≥ 120
• with the joint built after the open time of 3 min and kept at -5°C for 7 days	≥ 100
• with the joint built and kept under laboratory conditions for 7 days, followed by 20 freezing cycles	≥ 100
Tensile strength (in perpendicular to the plane of adhesion), kPa, of the joint made with and between: hollow clay unit, group 3, category II, to TYTAN Professional polyurethane thin joint mortar / TYTAN Professional bricklaying foam adhesive, to hollow clay unit, group 3, category II:	
• with the joint built and kept under laboratory conditions for 24 h	≥ 70
• with the joint built and kept at -5°C for 24 h	≥ 100
• with the joint built and kept under laboratory conditions for 7 days	≥ 80

Essential characteristics of construction product for intended use	Declared parameters
• with the joint built after the open time of 3 min and kept under laboratory conditions for 7 days	≥ 100
• Tensile strength (in perpendicular to the plane of adhesion), kPa, of the joint made with and between: hollow clay unit, group 3, category II, to TYTAN Professional polyurethane thin joint mortar / TYTAN Professional bricklaying foam adhesive, to hollow clay unit, group 3, category II:	
• with the joint built and kept under laboratory conditions for 24 h	≥ 210
• with the joint built after the open time of 3 min and kept under laboratory conditions for 24 hours	≥ 210
• with the joint built in 24 h and kept in temp. -10°C	≥ 210
• with the joint built in 7 days and kept in laboratory conditions	≥ 260
• with the joint built after open time 3 minutes and kept 7 days in laboratory conditions	≥ 210
• with the joint built in 7 days and kept in laboratory conditions, with realignment of the masonry unit after 3 minutes (correction time)	≥ 210
• with the joint built after open time 3 minutes and 7 days kept in temp. -5°C	≥ 210
• with the joint built in 7 days and kept in temp. -10°C	≥ 210
• with the joint built in 7 days and kept in laboratory conditions, followed by 20 freezing cycles	≥ 210

Essential characteristics of construction product for intended use	Declared parameters
Tensile strength (perpendicular to the bonding plane) joint: hollow silicate block - polyurethane masonry mortar TYTAN Professional / TYTAN Professional Masonry foam adhesive - hollow silicate block, kPa:	
• with the joint built in 24 h and kept in laboratory conditions	≥ 280
• with the joint built after open time 3 minutes in 24 h and kept in laboratory conditions	≥ 240
• with the joint built in 24 h and kept in temp. -10°C	≥ 230
• with the joint built in 7 days and kept in laboratory conditions	≥ 280
• with the joint built in 24 h and kept in laboratory conditions, with realignment of the masonry unit after 3 minutes	≥ 240
• with the joint built in 24 h and kept in temp. -10°C, with realignment of the masonry unit after 3 minutes (correction time)	≥ 140
• with the joint built after open time 3 minutes in 24 h and kept in temp. -10°C	≥ 140
• with the joint built in 7 days and kept in temp. -10°C	≥ 160
• with the joint built in 7 days and kept in laboratory conditions, then subjected to 20 cycles of freezing and thawing	≥ 220
Characteristic bending strength in case of failure in the plane parallel to the support joints, MPa:	
- ceramic hollow brick wall of group 2, category I ¹⁾	≥ 0,15
- ceramic hollow brick wall group 3, category II ²⁾	≥ 0,18
- masonry made of autoclaved aerated concrete blocks ³⁾	≥ 0,30
- masonry made of hollow silicate blocks ⁴⁾	≥ 0,21
Characteristic bending strength in case of failure in the plane perpendicular to the support joints, MPa:	
- ceramic hollow brick wall of group 2, category I ¹⁾	≥ 0,10

Essential characteristics of construction product for intended use	Declared parameters
- ceramic hollow brick wall group 3, category II ²⁾	≥ 0,11
- masonry made of autoclaved aerated concrete blocks ³⁾	≥ 0,20
- the wall of hollow silicate blocks ⁴⁾	≥ 0,18
Characteristic shear strength, MPa:	
- ceramic hollow brick wall of group 2, category I ¹⁾	≥ 0,08
- wall made of ceramic hollow bricks group 3, category II ²⁾	≥ 0,07
- masonry made of autoclaved aerated concrete blocks ³⁾	≥ 0,10
- a wall made of hollow silicate blocks ⁴⁾	≥ 0,15
¹⁾ ceramic blocks according to PN-EN 771-1 + A1: 2015, with an average compressive strength of 15 N / mm ² ²⁾ ceramic blocks according to PN-EN 771-1 + A1: 2015, with an average compressive strength of 13 N / mm ² ³⁾ autoclaved aerated concrete blocks according to PN-EN 771-4 + A1: 2015, with an average compressive strength of 4 N / mm ² , with an average dry density of 600 kg / m ³ , with a tongue and groove end face ⁴⁾ hollow silicate blocks according to PN-EN 771-1: 2015, with an average compressive strength of 15 N / mm ² , with a tongue and groove end face	

9. The performance parameters of the above mentioned product are in accordance with all mentioned in point 8 declared performance parameters. This National Declaration of Performance had been issued in accordance with Act of 16th April 2004 about building products, on the sole responsibility of the Producer.

In the name of Producer signed by:

Renata Lechoniewicz ; Test and Certification Leader

... Wrocław, 02.01.2020.....
(place and date of issue)

Renata Lechoniewicz
(signature)

We declare that the TYTAN PROFESSIONAL HELUZ tenkovrstvé lepidlo foam is the same product as the TYTAN Professional polyurethane thin-joint mortar/TYTAN Professional Foam adhesive for bricklaying, produced from the same raw materials and in the same technological manner. On the basis of the provisions on mutual recognition (Mutual recognition declaration can be found in Article 4 of the Regulation (EU) 2019/515 on the mutual recognition of goods lawfully marketed in another Member State) the product is implemented in other countries of the European Union.

Renata Lechońiewicz