

European Technical Assessment

ETA 20/1263



VANDERSANDEN



European Technical Assessment

ETA 20/1263

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UBAtc Assessment Operator:
Belgian Construction Certification Association
Rue d'Arlon 53 - 1040 Brussels
www.bcca.be - info@bcca.be



Technical Assessment Body issuing the European Technical Assessment: UBAtc.
UBAtc has been designated according to Article 29 of Regulation (EU) No 305/2011
and is member of EOTA (European Organisation for Technical Assessment)

Trade name of the construction product:	E-BOARD
Product family to which the construction product belongs:	Kits for external thermal insulation composite system (ETICS) with discontinuously installed claddings, adhesively bonded to the insulation panel, without reinforced base coat
Manufacturer:	Vandersanden Group Riemstersteenweg 300 B-3740 Bilzen
Manufacturing plant:	Vandersanden Group Riemstersteenweg 300 B-3740 Bilzen
Website:	www.vandersanden.com
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:	EAD 041347-00-0404
This European Technical Assessment contains:	10 pages, including 1 annex, which forms an integral part of this ETA



European Organisation for Technical Assessment

Legal bases and general conditions

1 This ETA (European Technical Assessment) is issued by UBAtc (Union belge pour l'Agrément technique de la construction, i.e. Belgian Union for technical Approval in construction), in accordance with:

- Regulation (EU) N° 305/2011¹ of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
- Commission Implementing Regulation (EU) N° 1062/2013² of 30 October 2013 on the format of the European Technical Assessment for construction products
- European Assessment Document: EAD 041347-00-0404 (2020-12-17).

2 Under the provisions of Regulation (EU) No 305/2011, UBAtc is not authorized to check whether the provisions of this European Technical Assessment are met once the ETA has been issued.

3 The responsibility for the conformity of the performances of the products with this European Technical Assessment and the suitability of the products for the intended use remains with the holder of the European Technical Assessment.

4 Depending on the applicable Assessment and verification of constancy of performance (AVCP) system, (a) notified body(ies) may carry out third-party tasks in the process of assessment and verification of constancy of performance under this Regulation once the European Technical Assessment has been issued.

5 This European Technical Assessment allows the manufacturer of the construction product covered by this ETA to draw up a declaration of performance for the construction product.t

6 CE marking should be affixed to all construction products for which the manufacturer has drawn up a declaration of performance.

7 This European Technical Assessment is not to be transferred to other manufacturers, agents of manufacturers, or manufacturing plants other than those indicated on page 1 of this European Technical Assessment.

8 The European Technical Assessment holder confirms to guarantee that the product(-s) to which this assessment elates, is/are produced and marketed in accordance with and comply with all applicable legal and regulatory provisions, including, without limitation, national and European legislation on the safety of products and services. The ETA-holder shall notify the UBAtc immediately in writing of any circumstance affecting the aforementioned guarantee. This assessment is issued under the condition that the aforementioned guarantee by the ETA-holder will be continuously observed.

9 According to Article 11(6) of Regulation (EU) No 305/2011, when making a construction product available on the market, the manufacturer shall ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned which can be easily understood by users. These instructions and safety information should fully correspond with the technical information about the product and its intended use which the manufacturer has submitted to the responsible TAB for the issuing of the European Technical Assessment.

10 Pursuant to Article 11(3) of Regulation (EU) No 305/2011, manufacturers shall adequately take into account changes in the product-type and in the applicable harmonised technical specifications. Therefore, when the contents of the issued European Technical Assessment do not any longer correspond to the product-type, the manufacturer should refrain from using this European Technical Assessment as the basis for their declaration of performance.

11 All rights of exploitation in any form and by any means of this European Technical Assessment are reserved for UBAtc and the ETA-holder, subject to the provisions of the applicable UBAtc regulations.

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13 Subject to the application introduced, this European Technical Assessment is issued in English and may be issued by the UBAtc in its official languages. The translations correspond fully to the English reference version circulated in EOTA.

14 This European Technical assessment was first issued by UBAtc on 2 April 2021.

¹ OJEU, L 88 of 2011/04/04

² OJEU, L 289 of 2013/10/31

Technical Provisions

1 Technical description of the product

1.1 Characteristics of the kit

1.1.1 General

This ETA is being issued for the products specified on the cover page on the basis of agreed data/information, deposited at the UBAtc, which identifies the products that have been assessed and judged.

Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the UBAtc before the changes are introduced. The UBAtc will decide whether or not such changes affect the ETA and if so whether further assessment/alterations to the ETA, shall be necessary.

1.1.2 E-Board

This ETA specifies an external thermal insulation composite system (ETICS) with discontinuously installed cladding elements adhesively bonded to prefabricated insulation panels, without reinforced base coat. The components are factory-produced by the manufacturer or component suppliers. The ETICS manufacturer is ultimately responsible for all the components of the ETICS specified in this ETA.

The insulation panels are adhesively bonded to the wall (at least 60 % of each panel, whereby the borders are continuously covered over approx. 50 mm to prevent air circulation) or the insulation panels are mechanically fixed to the wall with supplementary adhesive (at least 60 %, whereby the borders are continuously covered).

The joints between the insulation panels are sealed with polyurethane foam.

The joints between the cladding elements may be sealed with a jointing grout.

The kit may include special fittings (e.g. base profiles) to treat details of ETICS (connections, apertures, corners, parapets, sills ...).

Assessment and performance of these components is not addressed in this ETA, however the kit manufacturer is responsible for adequate compatibility and performance within the ETICS when the components are delivered as a part of the kit.

1.1.3 Composition of the kit

Components	Coverage	Thickness
(see § 3 for further description, characteristics and performances of the components)	(kg/m²)	(mm)
Base adhesive		
E-Board Adhesive Mineral dry mixture according to EN 12004-1) requiring addition of 18 - 20% water See annex 2	3,5	
Thermal insulation panel		
E-Board EPS Factory made EPS insulation panels according to EN 13163		≤ 180
Mechanical fixing		
E-Board Anchor According to EAD 330196-00-0604 See annex 4		
Expanding cellular foam		
E-Board PU-Foam Expanding one component polyurethane foam See annex 3		
Cladding adhesive		
E-Board Adhesive Mineral dry mortar according to EN 12004-1, requiring addition of 18-20 % water. See annex 2	6,0	
Cladding element		
E-Board Brick Slip Clay brick slip See annex 5	≤ 60	
Grout		
Jointing grout according to EN 998-2 (*)		
(*): This component is not part of the kit. This product shall be in conformity with this ETA, Annex 6, and may be purchased on the market		

2 Specification of the intended use(s) in accordance with the applicable EAD

2.1 General

This ETICS is intended for use as external insulation of walls of buildings. The walls are made of masonry (bricks, blocks, stones) or concrete (cast on site or as prefabricated panels) with a reaction to fire classification A1 to A2-s2,d0 according to Commission Delegated Regulation (EU) 2016/364 or A1 according to EC decision 96/603/EC, as amended, in new or existing buildings.

The characteristics of the walls shall be verified prior to use of the ETICS, especially regarding conditions for reaction to fire classification. The ETICS is designed to give the wall to which it is applied satisfactory thermal insulation.

The ETICS is made of non-load bearing construction elements. It does not contribute directly to the stability of the wall on which it is installed, but it may contribute to durability by providing enhanced protection from the effect of weathering. The minimal thermal resistance of the ETICS shall be $\geq 0,5 \text{ m}^2\cdot\text{K}/\text{W}$.

The ETICS may be used on new or existing (retrofit) vertical walls. It may also be used on horizontal or inclined surfaces which are not exposed to precipitation.

The ETICS is not intended to ensure the airtightness of the building structure.

The ETICS belongs to Category S/W1, according to EOTA Technical Report No 034 (product in direct contact with soil, ground- and surface water).

Design and installation of ETICS shall take into account principles laid down in accordance with national instructions.

The provisions made in this European Technical Assessment are based on the assumed working life of 25 years, provided that the ETICS is subject to appropriate installation, use and maintenance. These provisions are based upon the current state of the art and the available knowledge and experience.

The assumed working life of a system cannot be taken as a guarantee given by the producer, but is to be used as a means for selecting the appropriate product in relation to the expected economically reasonable working life of the works.

Assumed intended working life means that it is expected that, when the working life has elapsed, the real working life may be, under normal use conditions, considerably longer without major degradation affecting the basic requirements for construction works.

2.2 Provisions related to manufacturing, packaging, transportation and storage

2.2.1 Manufacturing

The product is applied on site according to the procedure laid down in the technical file deposited with the UBAtc.

2.2.2 Packaging, transportation and storage

The information on packaging, transport and storage is given in the manufacturer's technical documentation. It is the responsibility of the manufacturer(s) to ensure that this information is made known to the concerned people.

2.3 Provisions related to the design and use of the product

2.3.1 Design and installation

The installation instructions, including special installation techniques and provisions for the qualification of the personnel, are given in the manufacturer's technical documentation.

Design, installation and execution of ETICS shall be in conformity with national documents. Such documents and the level of their implementation in Member States' legislation are different.

2.3.2 Use, maintenance and repair

Maintenance of the ETICS includes:

- The repair of localized damages such as cracking, detachment and delamination;
- The prevention of water penetration.

Necessary repairs should be performed as soon as the need has been identified.

It is important to be able to carry out maintenance as far as possible using readily available products and equipment, without spoiling appearance. Only products which are compatible with the ETICS shall be used.

3 Performance of the product and references to the methods used for its assessment

3.1 Reaction to fire (EAD §2.2.1)

The reaction to fire of the ETICS is class B,s1-d0 according to Commission Delegated Regulation (EU) 2016/364.

This classification is valid for the following product parameters:

- Total thickness of the ETICS of minimum 60 mm;
- Nominal thickness of the clay brick slip of 20 mm;
- Nominal weight of the clay brick slip of 1.850 kg/m³
- With grouted joints ;
- With non-grouted joints with a maximum thickness of 3 mm;
- Nominal thickness of the adhesive of 3 – 5 mm;
- Maximum mass of the expanded polystyrene of 25 kg/m³;
- Minimal thickness of the insulation panel of 40 mm;
- Substrate: Class A2-s1,d0 or better with a nominal thickness of at least 12 mm and a nominal density of at least 525 kg/m³.

Note: A European reference fire scenario has not been laid down for facades. In some Member States, the classification of ETICS according to EN 13501-1 might not be sufficient for the use in façades. An additional assessment of ETICS according to national provisions (e.g. on the basis of a large-scale test) might be necessary to comply with Member State regulations.

3.2 Water absorption (EAD §2.2.3)

3.2.1 Water absorption of the ETICS kit

The water absorption has been tested with different cladding element with a different water absorption (the maximum, average and minimum).

		Water absorption	
		1h	24h
		(kg/m²)	(kg/m²)
E-Board with brick slip	Brick slip 1	0,06	0,25
	Brick slip 2	0,39	0,68
	Brick slip 3	1,18	1,49
	Brick slip 4	2,13	2,34

3.2.2 Water absorption of the insulation panel (EN 1609)

The water absorption of the insulation panel according to EN 1609, method A, after 24 hours is < 0, 09 kg/m².

3.2.3 Water absorption of other components

See annexes 2, 3 and 5.

3.2.4 Water vapour permeability (resistance to water vapour diffusion (EAD §2.2.4)

The equivalent water vapour diffusion resistance has been obtained by calculation from the water vapour permeability of the kit components.

The water vapour permeability of the individual kit components are given in the annexes.

Kit	S _d ETICS (m)	μ _{ETICS} (-)
E-Board 100 mm EPS 20 mm brick slip	6	50
S _d ETICS: water vapour diffusion-equivalent air layer thickness of the ETICS μ _{ETICS} : water vapour-diffusion equivalent factor for ETICS		

3.2.5 Accelerated ageing behaviour (EAD §2.2.5) after hygrothermal cycles followed by freeze-thaw cycles

3.2.5.1 Bond strength

See 3.2.9

3.2.5.2 Presence of water

At the end of the hygrothermal cycles followed by freeze-thaw cycles, no water was present at the interface of the ETICS and the wall.

3.2.5.3 Presence of damage after the hygrothermal cycles followed by freeze-thaw cycles

After the hygrothermal cycles followed by freeze-thaw cycles, none of the following defects occurred:

- Deterioration such as cracking or delamination of the brick slips;
- Deterioration of cracking of the grout between the cladding elements;
- Irreversible deformation of the ETICS allowing water to penetrate through the panel joints;

The ETICS is therefore assessed resistant to hygrothermal cycles followed by freeze-thaw cycles.

3.2.6 Resistance to driving rain (EAD § 2.2.6)

The resistance to driving rain has been determined according to EN 12865-1 under a pulsating air pressure, method A, on the E-Board system fixed on a wooden frame. The joints between the insulation panels have been sealed with a polyurethane foam.

Pressure	Time	Water infiltration
(Pa)		
0	20	No
0 - 150	10	
0 - 300		
0 - 450		
0 - 600		
0 - 750		
0 - 900		
0 - 1050		
0 - 1200		
0 - 1350		
0 - 1500		
0 - 1800		
0 - 2000		

3.2.7 Wind load resistance (EAD § 2.2.7)

The wind load resistance has been determined in suction on a wooden frame with 5 anchors/panel. The joints between the panels have been sealed with a polyurethane foam.

Suction (Pa)	Result
0 - > 2500	No remark
0 - > 5000	
0 - > 7500	
0 - > 10000	

3.2.8 Impact resistance (EAD § 2.2.8)

ETICS	Impact	Category (*)
E-Board	Hard body – 3 J Hard body – 10 J Soft Body – 60 J Soft Body – 400 J	I

(*) Category and corresponding use:
: A zone readily accessible at ground level to the public and vulnerable to hard body impacts but not subjected to abnormally rough use. (e.g.: Façade bases in buildings sited in public locations, such as squares, schoolyards or parks. Cleaning gondolas may be used on the façade).
I: A zone liable to impacts from thrown or kicked objects, but in public locations where the height of the kit will limit the size of the impact; or at lower levels where access to the building is primarily to those with some incentive to exercise care (e.g.: Façade bases in buildings not sited in public locations (e.g. squares, schoolyards, parks) or upper façade levels in buildings sited in public locations that occasionally may be hit by a thrown object (e.g. ball, stone, etc.). Cleaning gondolas may be used on the façade).
II: A zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects (e.g.: upper façade levels in buildings (not including base) not sited in public locations, that occasionally may be hit by a thrown object (e.g. ball, stone, etc.). Cleaning gondolas should not be used on the façade).
V: A zone out of reach from ground level (e.g. high façade levels that cannot be hit by a thrown object. Cleaning gondolas should not be used on the façade).

3.2.9 Bond strength (EAD 2.2.9)

3.2.9.1 Bond strength after 28 days drying

	Bond strength	
	Average (Minimum) (N/mm²)	Failure type (*)
Brick slip 1	0,16 (0,12)	100 % AS
Brick slip 2	0,18 (0,17)	100 % AS
Brick slip 3	0,20 (0,18)	60% AS / 40% CS
Brick slip 4	0,20 (0,18)	70% AS / 30 CS

(*) Failure type:
AS: adhesive rupture between de insulation and adhesive
CS: cohesive rupture in the insulation

3.2.9.2 Bond strength after hygrothermal cycles followed by freeze-thaw cycles

	Bond strength	
	Average (Minimum) (N/mm²)	Average (Minimum) (N/mm²)
Brick slip 1	0,24 (0,21)	20% AS / 80% CS
Brick slip 2	0,11 (0,06)	95% AS / 5% CS
Brick slip 3	0,10 (0,07)	100% AS
Brick slip 4	0,09 (0,08)	100% AS

(*) Failure type:
AS: adhesive rupture between de insulation and adhesive
CS: cohesive rupture in the insulation

3.2.10 Tensile strength of the thermal insulation panel (EAD 2.2.10)

Conditioning	Mean value (kPa)	Ratio (%)
After conditioning In dry conditions	≥ 150	100
After conditioning at 70°C & 95% R.H for 7 days	≥ 150	91
After conditioning at 70°C & 95% R.H for 28 days	≥ 150	87

3.2.11 Shear strength and shear modulus of the thermal insulation panel (EAD 2.2.11)

Conditioning	Shear strength (kPa)	Ratio (%)
After conditioning In dry conditions	≥ 150	100
After conditioning at 70°C & 95% R.H for 7 days	≥ 150	98
After conditioning at 70°C & 95% R.H for 28 days	≥ 150	98

Conditioning	Shear modulus	Ratio
	(kPa)	(%)
After conditioning in dry conditions	≥ 2000	-
After conditioning at 70°C & 95% R.H for 7 days	≥ 2000	99
After conditioning at 70°C & 95% R.H for 28 days	≥ 1500	76

3.2.12 Dead load behaviour (EAD §2.2.12)

3.2.12.1 Bonded ETICS

The dimensions of the test sample are brick slips of 210 mm x 65 mm and 20 mm thick, bonded to E-Board insulation of 180 mm thick. This insulation is adhesively bonded to 144 mm thick EPS insulation.

- The maximum dead load in the test specimen is 2,51 kN.
- The maximum difference between two displacements in 1 hour is 0,09 mm.

3.2.12.2 Mechanically fixed ETICS with supplementary adhesive

No performance assessed.

3.2.13 Pull-through resistance of fixings (EAD §2.2.13).

Insulation thickness	Plate diameter anchor	Anchor at the centre Average (Minimum)	Anchor at 10 cm of the border Average (Minimum)
(mm)	(mm)	(N)	(N)
40	60	899 (866)	911 (779)
80		1179 (1097)	1190 (1020)
180		1007 (964)	1030 (924)

3.2.14 Pull-out resistance (static foam block test) (EAD §2.2.14)

- Characteristics of the EPS:
 - Thickness: ≥ 60 mm
 - Tensile strength perpendicular to the face of the EPS: ≥ 150 kPa
 - Shear modulus: ≥ 2.000 kPa
- Plate diameter anchor: 60 mm

	Failure loads Average (Minimum)
	(N)
R _{panel} : Anchors not placed at the panel joints (Static Foam Block)	520 (510)
R _{joint} : Anchors placed at the panel joints	430 (400)

3.2.15 Airborne sound insulation (EAD §2.2.15)

No performance assessed

3.2.16 Thermal conductivity and thermal resistance (EAD §2.2.16)

The thermal resistance of the ETICS has been calculated from the thermal values and geometry of the component according to EN ISO 6946, clause 6.2. The influence of the other components is negligible.

Thickness insulation	R _{ETICS}	ΔU
[mm]	(m².K)/W	W/(m².K)
40	1,25	ΔU _f = n _f · χ _p
60	1,90	
80	2,55	
100	3,20	
120	3,85	
140	4,50	
160	5,15	
180	5,80	
204	6,55	
224	7,20	
244	7,85	
264	8,50	
284	9,15	
304	9,80	

ΔU = correction term of the thermal transmittance for mechanical fixing devices

ΔU_f = n_f · χ_p

n_f = number of anchors per unit area

χ_p = point thermal transmittance of one anchor

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with Regulation (EU) N° 305/2011, Article 65, Directive 89/106/EEC is repealed, but references to the repealed Directive shall be construed as references to the Regulation.

According to the Commission Decision 1997/556/EC³, as amended, taking into account Commission Delegated Regulation (EU) N° 2016/364 the following system(s) of assessment and verification of constancy of performance apply.

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	Assessment and verification of constancy of performance system(s) ^a
ETICS	In external walls subject to fire regulations	(A1, A2, B, C)*	1
		(A1, A2, B, C)**, D, E, F	2+
	In external walls not subject to fire regulations	(A1 to F)***, NPD****	2+

^a Systems 1 and 2+ : See Regulation (EU) N° 305/2011, Annex V

* Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)

** Products/materials not covered by footnote (*)

*** Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of class A1 according to Commission Decision 96/603/EC⁴, as amended)

**** 'No Performance Declared' in accordance with Regulation (EU) N° 305/2011, Article 6(f)^a

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD.

5.1 General

In order to help the Notified Body to make an evaluation of conformity, the Technical Assessment Body issuing the ETA shall supply the information detailed below. This information will generally form the basis on which the factory production control (FPC) is assessed by the Notified Body.

This information shall initially be prepared or collected by the Technical Assessment Body and shall be agreed with the manufacturer. The following gives guidance on the type of information required.

5.2 The ETA

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.

5.3 Basic manufacturing process

The basic manufacturing process is described in sufficient detail to support the proposed FPC methods. The different components of ETICS are generally manufactured using conventional techniques. Any critical process or treatment of the components which affects performance are highlighted in the manufacturer's documentation.

5.4 Product and materials specifications

The manufacturer's documentation includes:

- Detailed drawings (possibly including manufacturing tolerances),
- Incoming (raw) materials specifications and declarations,
- References to European and/or international standards,
- Technical data sheets.

5.5 Control Plan (as a part of FPC)

The manufacturer and UBAtc have agreed a Control Plan which is deposited with the UBAtc in documentation which accompanies the ETA. The Control Plan specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacture on properties that cannot be inspected at a later stage and for checks on the final product.

Products not manufactured by the ETICS manufacturer shall also be tested according to the Control Plan. It must be demonstrated to the Notified Body that the FPC system contains elements securing that the ETICS manufacturer takes products conforming to the Control Plan from his supplier(s). Where materials/components are not manufactured and tested by the supplier in accordance with agreed methods, then where appropriate they shall be subject to suitable checks/tests by the ETICS manufacturer before acceptance.

In cases where the provisions of the European Technical Assessment and its Control Plan are no longer fulfilled, the Notified Body shall withdraw the certificate and inform the UBAtc without delay.

³ OJEU, L 229, 20.8.1997, p.14

⁴ OJEU L267 of 1996/10/19

Annex: Technical description of the kit components

1. Insulation product: E-Board EPS

Description and characteristics	Reference	Result
Reaction to fire	EN 13501-1	E
Thermal conductivity (λ_D)	EN 13163	0,031
Thickness (mm)	EN 823	40 – 180 ± 2
Length (mm)	EN 822	1200 ± 2
Width (mm)	EN 822	532/538 ± 2
Squareness (mm/m)	EN 824	≤ 2
Flatness (mm)	EN 825	≤ 2
Dimensional stability (%)	Specified temperature and humidity / EN 1604 (48 h 70°C, 90% R.H.))	Length and width: ≤ 0,5 Thickness: ≤ 2,0
Water absorption (partial immersion) (kg/m²)	EN 1609 Method A	≤ 0,5
Water vapour diffusion resistance factor (μ)	EN 12086	30 - 70
Tensile strength perpendicular to the faces in dry conditions (kPa)	EN 1607	≥ 150
Shear strength (kPa)	EN 12090	≥ 100
Shear modulus of elasticity (kPa)	EN 12090	≥ 1000

2. Base and brick slip cladding adhesive: E-Board Adhesive (*)

Description and characteristics	Reference EN 12004	Result
Reaction to fire	EN 13501-1	NPA
Initial tensile adhesion (N/mm²)	EN 12004-2	≥ 0,5
Tensile adhesion after water immersion (N/mm²)	EN 12004-2	≥ 0,5
Tensile adhesion after heat ageing (N/mm²)	EN 12004-2	≥ 0,5
Tensile adhesion after freeze/thaw cycles (N/mm²)	EN 12004-2	≥ 0,5
Slip resistance (mm)	EN 12004-2	≤ 1
Extended open time after 30 min: tensile adhesion (N/mm²)	EN 12004-2	≥ 0,5
Water absorption (kg/m².min ^{0.5})	EN 1015-18	≤ 0,4
Water vapour resistance factor μ	EN 1015-19	≤ 25
Thermal conductivity (W/m.K)	EN 1745 A12	0,45

(*) Testing according to EN 12004-2 has been executed with brick slips instead of ceramic tiles.

3. PU foam panel joints

Description and characteristics	Reference	Result
Thermal conductivity (W/m.K)	EN 12667	0,03
Water absorption (kg/m²)	EN 1609	0,2

4. Mechanical fixing

	Ejoł H3	Fischer Termoz 8U	Fischer Termoz CN8
ETA	14/0130	02/0019	09/0394
Mechanical characteristics	According to ETA		
Point thermal transmittance χ_p (W/K)	0,000	0,002	0,001

5. Brick slip

Description and characteristics	Reference	Result
Thickness (mm)	EN ISO 10545-2	≤ 30
Length (mm)	EN ISO 10545-2	≤ 300
Width (mm)	EN ISO 10545-2	≤ 100
Weight/m ²	EN ISO 10545-3	≤ 60
Reaction to fire	EN 13501-1	A1
Thermal conductivity ($\lambda_{10, dry}$)	EN 1745	$\leq 0,70$
Water absorption (%)	EN ISO 10545-3	≤ 25
Water vapour diffusion (μ)	EN 1015-19	≤ 10
Frost resistance	EN ISO 10545-12	Resistant
Moisture expansion (mm/m)	EN ISO 10545-10	$\leq 0,2$
Linear thermal expansion ($\mu\text{m}/(\text{m} \cdot ^\circ\text{C})$)	EN ISO 10545-8	≤ 8

6. Jointing grout

Description and characteristics	Reference	Result
Compressive strength (MPa)	EN 1015-11	≥ 5
Water absorption ($\text{kg}/\text{m}^2 \cdot \text{min}^{0,5}$)	EN 1015-18	$0,40 \text{ kg}/\text{m}^2 \cdot \text{min}^{0,5}$
Water vapour resistance (μ)	EN 1745	≤ 50
Reaction to fire	EN 13501-1	A1

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This European Technical Assessment has been issued by UBAtc asbl, in Sint-Stevens-Woluwe, on the basis of the technical work carried out by the Assessment Operator, BCCA.

On behalf of UBAtc asbl,


Eric Winnepenninckx
secretary general


Benny De Blaere
director

On behalf of the Assessment Operator, BCCA, responsible for the technical content of the ETA,


Olivier Delbrouck
director general

The most recent version of this European Technical Assessment may be consulted on the UBAtc website (www.ubatc.be).

info@vandersanden.com
www.vandersanden.com

Vandersanden

Riemsterweg 300
B-3740 Spouwen (Bilzen)
Tel.: +32 (0)89 51 01 40

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