

EUROPEAN TECHNICAL ASSESSMENT

ETA 14/0284**Version 01****Date of issue: 2014-12-18**

UBAtc Assessment Operator:
Belgian Construction Certification Association
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**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:**

Ornimat, Decoboard and Puro Plus

**Product family to which the
construction product belongs:**

9 - Wall cladding kits

Manufacturer:

SVK

Manufacturing plant(s):

SVK, Aerschotstraat 114, 9100 Sint-Niklaas, Belgium

Website:

www.svk.be

**This European Technical
Assessment is issued in
accordance with Regulation
(EU) No 305/2011, on the basis
of:**

Guideline for European technical approval (ETAG), used as
European Assessment Document (EAD): ETAG 034-1

**This European Technical
Assessment contains:**

10 pages including 1 Annex which forms an integral part of
the document.

European Organisation
for Technical Assessment

I. Legal bases and general conditions

- 1 This 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) No 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) No 1062/2013² of 30 October 2013 on the format of the European Technical Assessment for construction products
 - Guideline for European technical approval (ETAG), used as European Assessment Document (EAD): ETAG 034-1
- 2 Under the provisions of Regulation (EU) No 3205/2011, 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.
- 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 relates, 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 Technical Assessment Body 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 is 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: 18/12/2014.

¹ OJEU, L 88 of 2011/04/04

² OJEU, L 289 of 2013/10/31

II. Technical Provisions

1 Technical description of the product

The subject of the ETA is a cladding kit, consisting of a cladding material to be attached to a substructure; neither this substructure, nor its fixing products (screws or pop rivets), are placed on the market by the ETA holder.

The system comprises:

- One cladding material (fibre-cement panels)
- Several cladding dimensions (can be built to order, within a size range, with or without edge trimming)
- Several cladding colours and surface textures, including panels without finishing
- Several fixing types (wood screw, metal screw, pop rivets, undercut screw), to be used with several layouts

The cladding elements are fibre-cement panels with the trade names Ornimat, Decoboard, or Puro Plus (depending on the size and finish of the panels, see table 1). The panels are manufactured from a homogeneous mixture of Portland cement, selected reinforcement fibres, additives and water. The panels are double compressed and are air-cured.

Table 1: The panel finish for each trade name:

Denomination	Finishing (front)	Finishing (back)	Maximum size (mm x mm)
Ornimat	high quality, durable and UV-resistant two-component polyurethane painting system	high quality, durable two-component polyurethane painting system	3070 x 1220
Decoboard	high-quality and durable acrylic paint with enhanced UV resistance	high quality, durable two-component polyurethane painting system	3070 x 1220 (squared) 3085 x 1235 (non squared)
Puro Plus	No finish layer	No finish layer	3070 x 1220 (squared) 3085 x 1235 (non squared)

The minimal thickness is 8 mm for all panel finishes, albeit that thicker panels can be produced should this be necessary (e.g. if higher mechanical strength is needed).

The foreseen fixing types are:

- For fixings type A:
 - Screws for wood substructure: self-drilling screw, head Ø 12 mm, Torx 20. Minimum dimensions Ø 4,8 mm x 38 mm. Stainless steel A2. Pull-out load P_k: 243 daN.
 - Screws for aluminium substructure: self-drilling screw, head Ø 12 mm, Torx 20. Minimum dimensions Ø 4,8 mm x 25 mm. Stainless steel A2. Pull-out load P_k: 314 daN.
 - Pop rivets for aluminium substructure: corps Ø 4,8 mm; head Ø 16 mm. Stainless steel A2. Pull-out load P_k: 177 daN in profil-T, thickness ≥ 2 mm.
- For fixings type B:
 - Undercut screws: KEIL KH (hs 5,5 M6). Anchor sleeve and screw, stainless steel A4

Indications given regarding the working life cannot be interpreted as a guarantee given by the producer or the UBAtc, but are to be regarded only as a means for choosing the appropriate product(s) in relation to the expected economically reasonable working life of the construction works.

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

Cladding kit for use as external cladding of vertical walls, mechanically fastened to a framework (not specific to the kit) which is fixed to the external wall of new or existing buildings. An insulation layer is usually fixed on the external wall.

The substrate walls are made of masonry (clay, concrete or stone), concrete (cast on site or as prefabricated panels), timber or metal frame.

Insulation material, if used, is defined in accordance with the table in annex 1.

Between the cladding elements and the insulation layer or the external wall if no insulation is used, there is an air space which shall always be drained and ventilated.

The cladding elements are made of fibre-cement panels.

The cladding elements are attached to the external wall using a subframe, which is made of timber (class C24 in accordance with EN 338) or aluminium (grade EN-AW 6060 in accordance with EN 573-3, thermal treatment T5 in accordance with EN 515; wall thickness ≥ 2 mm).

The cladding elements are usually assembled according to a specific technical design for joints and construction discontinuities, which forms part of the product description.

The claddings are non-load-bearing construction elements. They do not contribute to the stability of the wall on which they are installed. The claddings will normally contribute to durability of the works by providing enhanced protection from the effect of weathering. They are not intended to ensure airtightness of the building structure.

The cladding kits do not contain windows or doors.

Only the claddings (without fixings) are placed on the market by the applicant (manufacturer), the other components of the kit (e.g. fixings) are available on the market and specified in the ETA by the description of dimensions, material and performances of components. The manufacturer and trading reference of fixings are indicated for the type B fixings.

The provisions, test and assessment methods in this ETA or referred to, have been written based upon the assumed intended working life of the cladding kits for the intended use of at least 25 years, provided that the cladding kits is subject to appropriate use and maintenance. These provisions are based upon the current state of art and the available knowledge and experience.

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

3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

3.2 Safety in case of fire (BWR 2)

3.2.1 Reaction to fire

The cladding kit has been classified:

- With polyurethane or acrylic finish (Ornimat or Decoboard): A2,s2,d0
- Without finish layer (Puro Plus): A2,s1,d0.

Since the cladding kit has not been assessed according to façade fire scenarios, an additional demonstration of the fitness for use in this context could have to be given in some countries at national level, as long as the harmonised system is not available.

3.2.2 Reaction to fire on rear side

Reaction to fire on the rear side has not been assessed.

3.2.3 Fire resistance

Not relevant.

3.3 Hygiene, health and the environment (BWR 3)

3.3.1 Watertightness of joints

The kit has open joints. Thus artificial rain tests are not to be carried out.

The kit has to be used with EPS to EN13163, XPS to EN 13164, PUR to EN 13165, phenolic foam to EN 13166 or mineral wool to EN 13162 (WS or WL(P)).

3.3.2 Water permeability

Not relevant.

3.3.3 Water vapour permeability

Not relevant.

3.3.4 Drainability

No drainability problems have been revealed from the study of the technical drawings.

3.3.5 Release of dangerous substances

The product/kit shall comply with all relevant European and national provisions applicable for the uses for which it is brought to the market. The attention of the applicant shall be drawn on the fact that for other uses or other Member States of destination there may be other requirements which would have to be respected. For dangerous substances contained in the product but not covered by the ETA, the NPD option (no performance determined) is applicable.

Used wood

The use of used wood is not foreseen.

Biocides

If wood treated with wood preservatives is used, a marking "PT"(treated with wood preservatives) according EN 13986 is foreseen.

Flame retardant/fire retardant

The use of flame retardant is not foreseen.

Formaldehyde

The use of materials containing formaldehyde is not foreseen.

Pentachlorophenol:

The use of materials containing pentachlorophenol is not foreseen.

Man-made mineral fibres

The use of carcinogen man-made mineral fibres is not foreseen.

Ceramic fibres

The use of ceramic fibres is not foreseen.

Cadmium

The use of materials containing cadmium is not foreseen.

3.4 Safety in Use (BWR 4)

3.4.1 Wind load resistance

The appraisal is based on data from the wind suction and mechanical tests.

The most critical case to be tested for wind load resistance is the largest panel for which the manufacturers' manual states that it can be affixed using 4 screws, as the screws have a lower resistance to pull-out as the undercut panels. This corresponds to a panel measuring 640 mm x 640 mm, mounted onto wooden rafters.

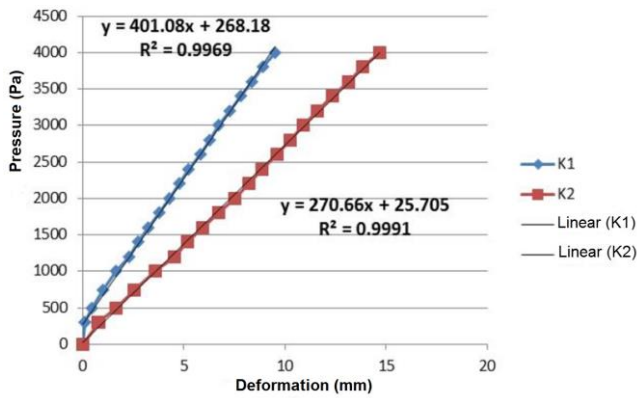
The characteristic wind resistance is derived from the pull-out or pull-through resistance of the fixings. The results of the wind suction test were higher than the pull-out or pull-through resistance of the fixings, by a factor 1,45 to 2,85.

3.4.2 Wind suction

Photograph of the wind suction assembly



Graph deformation (horizontal axis)/pressure (vertical axis)



The load at which the test specimen fails is 4350 Pa, at which moment a panel breaks in a corner.

The deflection was measured up to a differential pressure of 4000 Pa. The maximum deflection was 9,5 mm (K1) and 14,7 mm (K2). After returning to a differential pressure of 0 Pa the deflection returned to less than 0,24 mm (K1) and less than 1,08 mm (K2).

3.4.3 Mechanical resistance

3.4.3.1 Family A (screws and rivets)

Table 1 – Mechanical resistance of fixings - screws

Mounting	Ring diameter (mm)	Mean (N)	Characteristic value (N)
Corner	180	296	270,4
Corner	270	186	153,4
Corner	350	154	137,7
Edge	180	1178	1000,3
Edge	270	804	687,5
Edge	350	743	617,2
Centre	180	2451	2322,9
Centre	270	1931	1691,0
Centre	350	1546	1361,9

Table 2 – Mechanical resistance of fixings - rivets

Mounting	Ring diameter (mm)	Mean (N)	Characteristic value (N)
Centre	180	2508	2198,0

The mean value for rivets and screws are comparable, therefore the other fixing positions and ring diameters are not tested.

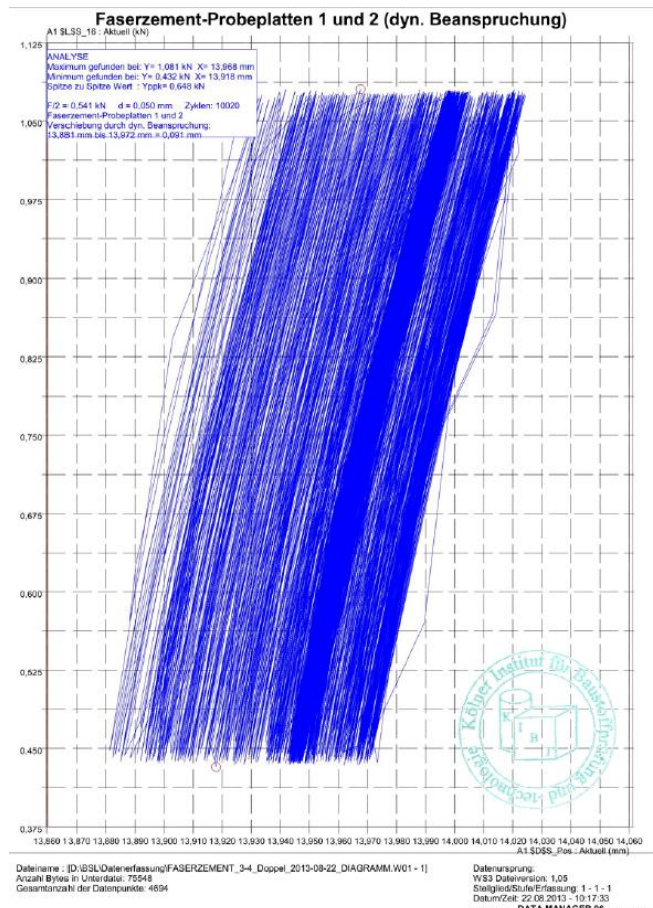
3.4.3.2 Family B (undercut screws)

For all supporting ring diameters, the mode of rupture is pull-out of the test specimen (cone rupture).

Table 3 – Mechanical resistance of fixings - screws

Mounting	Ring diameter (mm)	Mean (N)	Characteristic value (N)
Axial load			
Centre	135	1293	1136
Centre	300	1212	1071
Centre	400	1151	1068
Shear load			
Centre	–	4772	4385
Combined load (30 ° angle)			
Centre	400 mm	2114	1939
Combined load (60 ° angle)			
Centre	400 mm	1372	1144
Axial load after pulsating load			
Centre	135	1248	1097

The displacements during the pulsating load test have been continuously recorded.



The displacement before and after the pulsating loading is 0,091 mm.

3.4.4 Resistance to horizontal point loads

The resistance to horizontal point loads has not been assessed.

3.4.5 Impact resistance – shatter properties

The categories given in the following table correspond to the degrees of exposure in use. They do not include an allowance for acts of vandalism.

Table 4 – Definition of use categories in accordance with ETAG 034-1

Use category	Description
I	A zone readily accessible at ground level to the public and vulnerable to hard body impacts but not subjected to abnormally rough use.
II	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.
III	A zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects.
IV	A zone out of reach from ground level

Based upon the obtained test results, the kit is assessed as being in category III.

It has been established that the cladding element does not present sharp or cutting edges and its surfaces do not cause bodily injury, to the occupants or people nearby.

3.4.6 Resistance to seismic actions

European and/or National regulation is applied.

3.4.7 Hygrothermal behaviour

As the panels conform to EN 12467 class A, hygrothermal behaviour was favourably assessed and the panel is known not to be subject to hygrothermal variation, such as:

- deterioration such as cracking or delamination of the cladding element that allows water penetration to the insulation
- detachment of the cladding element
- Irreversible deformation

3.5 Protection against noise (BWR 5)

Not relevant.

3.6 Energy economy and heat retention (BWR 6)

Not relevant.

3.7 Sustainable use of natural resources (BWR 7)

Not relevant.

3.8 Aspects of durability and serviceability

3.8.1 Density

The density has been determined in accordance with EN 12467. The density is 1.700 kg/m³ (oven dry).

3.8.2 Minimum modulus of rupture

The minimum modulus of rupture has been determined in accordance with EN 12467. The minimum modulus of rupture is ≥ 24 MPa (class 5) in wet condition.

3.8.3 Pulsating load (for undercut fixing)

The resistance before and after pulsating loads, as well as the displacements recorded during this test, have been cited in paragraph 4.1.5.

3.8.4 Dimensional stability of external cladding element

As the panels conform to EN 12467, dimensional stability was favourably assessed.

3.8.5 Immersion in water

As the panels conform to EN 12467 class A, immersion in water was favourably assessed.

3.8.6 Freeze-thaw

As the panels conform to EN 12467 class A, resistance to freeze-thaw cycles was favourably assessed.

3.8.7 Chemical and biological attack

The panel material is not known to be of subject to specific chemical or biological attack.

3.8.8 Corrosion

All fixings are made of stainless steel of grade A2 (grade 1.4301 in accordance with EN 10088-1), which has excellent resistance to atmospheric corrosion, except in severe industrial and marine environments.

3.8.9 UV radiation

Only mechanical deterioration is considered; the decorative properties are not considered. The panels are resistant to UV.

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.

The system(s) of assessment and verification of constancy of performance, specified in the Decision of the Commission 2003/640/EC of 2003-9-4³, are shown in the following Table.

Table 1 – System of assessment and verification of constancy of performance applicable to cladding kit

Product(s)	Intended use(s)	Level(s) or class(es)	Assessment and verification of constancy of performance system(s)*
Kits for exterior wall claddings	External finishes of walls	-	2+

* See Annex V to Regulation (EU) N° 305/2011

Table 2 – Choice of the system of assessment and verification of constancy of performance to cladding kit with respect to reaction to fire

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	Assessment and verification of constancy of performance system(s) ^(a)
Kits for exterior wall claddings	For uses subject to regulations on reaction to fire	(A1, A2, B, C)*	1
		(A1, A2, B, C)**, D, E	3
		(A1 to E)***, F	4

^(a) System 1, 3 and 4: 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)

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

5.1 Tasks for the ETA-holder

5.1.1 Factory production control (FPC)

The ETA-holder shall exercise permanent internal control of the production. All the elements, requirements and provisions adopted by the ETA-holder shall be documented in a systematic manner in the form of written policies and procedures. This factory production control system shall ensure that production is in conformity with this ETA.

The personnel involved in the production process shall be identified, sufficiently qualified and trained to operate and maintain the production equipment. Machinery equipment shall be regularly maintained and this shall be documented. All processes and procedures of production shall be recorded at regular intervals.

The ETA-holder shall maintain a traceable documentation of the production process from purchasing or delivery of raw or basic raw materials up to the storage and delivery of finished products.

The production control system shall specify how the control measures are carried out, and at which frequencies.

ETA-holders which have an FPC system that complies with EN ISO 9001 and that addresses the requirements of this ETA are recognised as satisfying the FPC requirements.

Products that do not comply with requirements as specified in the ETA shall be separated from the conforming products and marked as such. The ETA-holder shall register non-compliant production and action(-s) taken to prevent further non-conformities. External complaints shall also be documented, as well as actions taken.

When materials/products are delivered for incorporation into the production process, verification of conformity with specifications in the ETA shall take place.

If supplied materials/components are not manufactured and tested by the supplier in accordance with agreed methods, or where the ETA-holder purchases materials/components on the open market, then where appropriate, they shall be subject to suitable documented checks/tests by the ETA-holder before acceptance.

The characteristics of incoming material and components, for which the supplier demonstrates documented compliance with a product specification, for an intended use that is appropriate for its use as a raw material or component of the product, shall be considered satisfactory and need, except in justified doubt, no further checking, unless the control plan specifies differently.

5.1.2 Testing of samples taken at the factory

5.1.2.1 General

At least the following minimum information shall be recorded:

- date and time of manufacture
- type of product produced
- material specification
- all results of the verifications performed within the agreed upon control plan

³ OJEU L226 of 2003-9-10

5.1.3 Maintenance, checking and calibration of equipment

All testing equipment shall be maintained, calibrated and/or checked against equipment or test specimens traceable to relevant international or nationally recognised reference test specimens (standards). In case no such reference test specimens exist, the basis used for internal checks and calibration shall be documented.

The ETA-holder shall ensure that handling, preservation and storage of test equipment is such that its accuracy and fitness for purpose is maintained

When production is intermittent, the ETA-holder shall ensure that any test equipment which may be affected by the interruption is suitably checked and/or calibrated before use. The calibration of all test equipment shall be repeated if any repair or failure occurs which could upset the calibration of the test equipment.

5.1.4 Testing as part of Factory Production Control

Table 4 below specifies minimum requirements for testing as part of FPC.

If constituent materials or components are supplied by other manufacturers to the ETA-holder, the supplier shall perform FPC on those constituent materials or components. If that is the case, those suppliers should submit the relevant records to the ETA-holder.

5.1.5 Initial Type Testing

The assessment tests will have been conducted by the UBAtc or under its responsibility (which may include a proportion conducted by an independent laboratory or by the ETA-applicant, witnessed by the UBAtc). The UBAtc will have assessed the results of these tests in accordance with chapter 3 of this ETA, as part of the ETA issuing procedure.

Table 4: Properties and minimum frequencies of control

Property	Indicative test method ⁴	Threshold value (if any)	Minimum number of Tests
Length	EN 12467	/	3 sh/day
Width	EN 12467	/	3 sh/day
Thickness	EN 12467	≥ 8 mm	3 sh/day
Squareness	EN 12467	Squared: level I Non-squared: level II	3 sh/day
Straightness	EN 12467	Squared: level I Non-squared: level II	3 sh/day
Density	EN 12467	≥ 1700 kg/m ³	3 sh/day
Bending strength	EN 12467	Ornimat, Decoboard: class 5 Puro Plus: class 4	3 sheets/day
Freeze-thaw sensitivity	EN 12467	R _L ≥ 0,75	1/3 years
Water impermeability	EN 12467	conform	1/3 years
Pull-out resistance	ETAG 034-1	/	every type/3 years

⁴ The ETA-holder may adopt alternative test methods provided they serve the same purpose

5.2 Tasks for the notified body

5.2.1 Certification of factory production control

5.2.1.1 Initial inspection of the factory and of factory production control

Assessment of the factory production control is the responsibility of the notified inspection body.

An assessment shall be carried out of each production unit to demonstrate that the factory production control is in conformity with the ETA and any subsidiary information. This assessment shall be based on an initial inspection of the factory and of the factory production control.

5.2.1.2 Continuous surveillance, assessment and approval of factory production control

Subsequently continuous surveillance of factory production control is necessary to ensure continuing conformity with the ETA.

It is recommended that Surveillance inspections are to be conducted at least twice a year.

5.2.1.3 Certification of Factory Production Control

The certificate shall contain in particular:

- Name and address (identification number) of the certification body,
- Name and address of the manufacturer or his agent established in the Community,
- Description of the product (type, identification, use, etc...),
- Provisions to which the product conforms,
- Particular conditions applicable to the use of the product,
- The certificate number,
- Conditions and period of validity of the certificate, where applicable,
- Name of, and position held by, the person empowered to sign the certificate.

The certificate shall be presented in the language or languages accepted in the Member State in which the product is to be used

Annex I - Requirements for insulation materials

Property	Test method	Mineral wool	EPS	XPS	PUR/PIR	PF
Edge finishing		Straight	Tongued and grooved or rebate	Tongued and grooved or rebate	Tongued and grooved or rebate	Tongued and grooved or rebate
Thermal conductivity	EN 12667	$\lambda_{90/90} \leq \lambda_D$	$\lambda_{90/90} \leq \lambda_D$	$\lambda_{90/90} \leq \lambda_D$	$\lambda_{90/90} \leq \lambda_D$	$\lambda_{90/90} \leq \lambda_D$
Tolerance on length	EN 822	± 2 %	L1 (l < 1000 mm) ± 8 mm (l < 1000 mm) ± 10 mm (l ≥ 1000 mm)	± 8 mm (l < 1000 mm) ± 7,5 mm (l ≤ 2000 mm) ± 10 mm (l ≤ 4000 mm) ± 15 mm (l > 4000 mm)	± 5 mm (l < 1000 mm) ± 7,5 mm (l ≤ 2000 mm) ± 10 mm (l ≤ 4000 mm) ± 15 mm (l > 4000 mm)	± 5 mm (l < 1250 mm) ± 7,5 mm (l ≤ 2000 mm) ± 10 mm (l ≤ 4000 mm) ± 15 mm (l > 4000 mm)
Tolerance on width	EN 822	± 1,5 %	W1	± 8 mm (b < 1000 mm) ± 10 mm (b ≥ 1000 mm)	± 5 mm (b < 1000 mm) ± 7,5 mm (b ≤ 2000 mm)	± 3 mm (b < 1250 mm) ± 7,5 mm (b ≤ 2000 mm)
Tolerance on thickness	EN 823	T3, T4, T5, T6, T7	T1	T1	T2	T1, T2
Squareness	EN 824	≤ 5 mm/m	S1	≤ 5 mm/m	≤ 6 mm/m	$S_{lb} \leq 6 \text{ mm/m}$ $S_d \leq 2 \text{ mm}$
Flatness	EN 825	≤ 6 mm	P4	≤ 3/5 mm (≤ 75 dm ²) ≤ 3/5/7 mm (> 75 dm ²)	≤ 5 mm (≤ 75 dm ²) ≤ 10 mm (> 75 dm ²)	≤ 10 mm (d < 50 mm) ≤ 7,5 mm (50 ≤ d ≤ 100 mm)
Dimensional stability	EN 1604	48h 23°C 90%RV ≤ 1%	DS(70;90)1 ≤ 1%	48h 70°C 90%RV ≤ 5%	≥ DS(TH)2	48h 70°C 90%RV ± 1,5%
Pull resistance perpendicular to surface	EN 1608	≥ 2 x mass	-	-	-	-
Reaction to fire	EN 13501-1	A1-F	A1-F	A1-F	A1-F	A1-F
Compression strength	EN 826	-	≥ CS (10) 60	≥ CS (10\Y) 100	≥ CS (10\Y) 100	≥ CS (Y) 100
Moisture absorption	EN 1609	≤ 0,5 kg/m ²	-	-	-	WS4 ≤ 0,5 kg/m ²
Vapour permeability	EN 12086	Declared performance according to EN ISO 10456	Tabulated values according to EN 13163	Declared performance according to EN ISO 10456	Declared performance according to EN ISO 10456	Declared performance according to EN ISO 10456

UBAtc asbl is a non-profit organization according to Belgian law. It is a Technical Assessment Body notified by the Belgian notifying authority, the Federal Public Services Economy, SMEs, Self-Employed and Energy, on 17 July 2013 in the framework of Regulation (EU) No 305/2011 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 and is member of the European Organisation for Technical Assessment, EOTA (www.eota.eu).

This European Technical Assessment has been issued by UBAtc asbl on the basis of the technical work carried out by the Assessment Operator, BCCA

On behalf of UBAtc asbl,



Peter Wouters,
Director

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



Benny De Bldere,
Director General

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