UBAtc
Union belge pour l'Agrément technique de la construction

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European Technical Assessment

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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:	LIMETICS with WOOD FIBRE
Product family to which the construction product belongs:	External Thermal Insulation Composite System with Rendering on wood fibre insulation boards for use as external insulation to the wall of buildings
Manufacturer:	ARTE CONSTRUCTO BVBA Molenberglei 18 B-2627 SCHELLE
Manufacturing plant:	ARTE CONSTRUCTO BVBA Molenberglei 18 B-2627 SCHELLE
Website:	http://www.arteconstructo.be/
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:	ETA-Guideline 004, amended February 2013, used as European Assessment Document (EAD)
This European Technical Assessment contains:	10 pages, including 3 annexes which form an integral part of this ETA

European Organisation for Technical Assessment

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) N° 305/2011[1] 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° 1062/2013[2] of 30 October 2013 on the format of the European Technical Assessment for construction products
- European Technical Approval Guideline (ETAG) 004, External Thermal Insulation Composite Systems with Rendering, used as European Assessment Document (EAD)

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.

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.

12 Reproduction of this European Technical Assessment including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of UBAtc. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European Technical Assessment.

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 14 December 2018.

[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 products

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 with 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 Limetics with Wood fibre

This European Technical Assessment specifies an ETICS (External Thermal Insulation Composite System with rendering), i.e. a kit comprising components, which are factory-produced by the manufacturer or component suppliers. The ETICS manufacturer is ultimately responsible for all components of the ETICS specified in this ETA.

The ETICS kit comprises a prefabricated insulation product of wood fibre to be bonded onto a wall. The insulation product is faced with a rendering system consisting of several layers (site applied), one of which contains the reinforcement. The rendering is applied directly to the insulating panels, without any air gap or disconnecting layer.

The ETICS may include special fittings (e.g. base profiles, corner 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 ETICS manufacturer is responsible for adequate compatibility and performance within the ETICS, if the components are delivered as a part of the kit.

1.1.3 Composition of the ETICS

	Components	Coverage	Thickness
	(see § 2.3 for further description, characteristics and performances of the components)	(kg/m²)	(mm)
Insulation materials with associated methods of fixing	**Mechanically fixed ETICS with anchors and supplementary adhesive**		
	Insulation product: Factory-made wood fibre according to EN 13171		60 - 300
	Anchors with ETA according to EAD 330196-01-0604		
	Adhesive: Unilit K/2 (ready to use natural hydraulic lime powder, supplied as a dry powder, requiring addition of 20 to 25 m% of water)	5,0 – 8,0	
Base coat	Unilit 15 P2/H (natural hydraulic lime mixture, supplied as a dry powder, requiring addition of 16 to 20 m% water)	8 – 10 (powder)	≤ 8 (mean: 5,0)
Glass fibres meshes	Standard mesh (alkali resistant glass fibre mesh): Limetics 150 (mesh size ca 5,0 x 4,0 mm²)	0,165	
Finishing coats	Natural hydraulic lime powder, supplied as a dry powder, requiring addition of 16 - 20% water:		
	– Unilit 65M/H, maximum particle size grading of 1,4 mm	7	≤ 8 (mean: 5,0)
	– Unilit 65F, maximum particle size grading of 0,8 mm	5	≤ 5 (mean: 3,5)
Ancillary materials	Description in accordance with § 3.2.2.5 of the ETAG 004 Remains under the ETA-holder responsibilities.		

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 buildings walls. The walls are made of masonry (bricks, blocks, stones …) or concrete (cast on site or as prefabricated panels).

The characteristics of the walls shall be verified prior to use of the ETICS, especially regarding conditions for reaction to fire classification and for fixing of the ETICS. 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 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/W2, according to EOTA Technical Report No 034.

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 Manufacture

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 personnel are given in the manufacturer's technical documentation.

Design, installation and execution of ETICS shall be in conformity with national provisions. Such documents and the level of their implementation in Member States' legislation may be different. Therefore, this assessment has been done, taking into account general assumptions specified in ETAG 004, clauses 7.1 and 7.2, which summarizes how information introduced in the ETA and related documents is intended to be used in the construction process and gives advice to all parties interested when normative documents are missing.

2.3.2 Use, maintenance and repair

The finishing coat shall normally be maintained in order to fully preserve the ETICS performance.

Maintenance includes at least:

- Visual inspection of the ETICS,
- The repairing of localized damaged areas due to accidents,
- The aspect maintenance with products adapted and compatible with the ETICS (possibly after washing or ad hoc preparation).

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.

The information on use, maintenance and repair is given in the manufacturer's technical documentation. It is the responsibility of the manufacturer(s) to ensure that this information is made available to the concerned people.

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

3.1 General

The performances of the kit as described in this chapter are valid, provided that the components of the kit comply with Annexes I, II and III.

3.2 Safety in case of fire - Reaction to fire (ETAG 004, clause 5.1.2.1, EN 13501-1)

No performance assessed.

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 facades. 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, until the existing European classification system has been completed.

3.3 Hygiene, health and environment

3.3.1 Water absorption (ETAG 004, clause 5.1.3.1)

3.3.1.1 Base coat

– 1 hour: Water absorption after < 1 kg/m²
– 24 hours: Water absorption after ≥ 0,5 kg/m²

3.3.1.2 Rendering system

Rendering system Base coat + reinforcement and finishing coat indicated hereafter:		Water absorption after 24 hours (kg/m²)	
		< 0,5	≥ 0,5
Unilit 15 P2/H + Finishing coat indicated hereafter	Unilit 65M/H		X
	Unilit 65F		
	Unilit 65M/H + Unilit 65F		

3.3.2 Water tightness (ETAG 004, clause 5.1.3.2)

3.3.2.1 Hygrothermal behaviour

Hygrothermal cycles have been performed on a rig.

None of the following defects occurred during the testing:

– blistering or peeling of any finishing,
– failure or cracking associated with joints between insulation product boards or profiles fitted with the ETICS,
– detachment of render,
– cracking allowing water penetration to the insulation layer.

The ETICS is therefore assessed as being resistant to hygrothermal cycles.

3.3.2.2 Freeze-thaw behaviour

The rendering system with Unilit 65M/H and Unilit 65F has been assessed as being freeze/thaw resistant according to the freeze/thaw behaviour test.

3.3.3 Impact resistance (ETAG 004, clause 5.1.3.3)

Rendering system: Base coat + reinforcement and finishing coat indicated hereafter:	Single standard mesh
Unilit 65M/H	Category III
Unilit 65F	
Unilit 65M/H + 65F	

3.3.4 Water vapour permeability (ETAG 004, clause 5.1.3.4)

Rendering system: Base coat. + finishing coats indicated hereafter	Equivalent air thickness s_d (m)
Unilit 65M/H	≤ 1 m (test result obtained with a thickness of 10 mm: 0,1 m)
Unilit 65F	

3.3.5 Release of dangerous substances (ETAG 004, clause 5.1.3.5, EOTA TR034)

According to the written declaration on dangerous substances submitted by the ETA-holder to the Technical Assessment Body the kit does not contain any dangerous substances. In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the kit falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Regulation (EU) No 305/2011, these requirements need also to be complied with, when and where they apply.

Note: For dangerous substances falling under the scope of the CPR for which

– No assessment and verification methods are given (or cannot be found in TR 034); or
– "No performance determined" is declared; or
– The chosen verification and assessment method does not comply with the regulatory requirement of a particular Member State

There might be the necessity for an additional assessment.

3.4 Safety and accessibility in use

3.4.1 Bond strength between base coat and insulation product (ETAG 004, clause 5.1.4.1.1)

Initial state	After the hygrothermal cycles (on the rig)	After the freeze/thaw cycles (on samples)
< 0,08 MPa (*)	< 0,08 MPa (*)	< 0,08 MPa(*)

(*) Failure in the insulation product

3.4.2 Bond strength between adhesive and substrate / insulation product (ETAG 004, clauses 5.1.4.1.2 and 5.1.4.1.3)

		Initial state	48 h immersion in water + 2 h 23°C/50% RH	48 h immersion in water+ 7 days 23°C/50% RH
Unilit 15 P2/H	Concrete	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
	Wood fibre insulation	< 0,08 MPa (*)	< 0,03 MPa (*)	< 0,08 MPa (*)
(*) Failure in the insulation product.				

3.4.3 Fixing strength (ETAG 004, clause 5.1.4.2)

Test not required because the ETICS fulfils the following criteria: E x d < 50.000 N/mm (E = modulus of elasticity of the base coat – d = mean dried thickness of the base coat).

3.4.4 Wind load resistance (ETAG 004, clause 5.1.4.3)

Safety in use for mechanically fixed ETCIS using anchors. All anchors, which will be used, are in the control plan and declaration of performance.

Characteristics	All anchors according to 1.1 mounted on the surface	
	Plate diameter of anchor (mm)	≥ 60
	Plate stiffness of anchor (kN/mm)	≥0,3
	Load resistance of anchor plate (kN)	≥ 1,0
	Thickness (mm)	≥ 60
	Tensile strength perpendicular to the face of the wood fibre (kPa)	≥ 10

For all calculations, the following formula shall be used:

$$R_d : 2/m;\ R_d \geq S_d$$

Where:

- R_d: design resistance
- S_d: wind load resistance
- m: national safety factor

3.4.5 Render strip tensile test

No performance assessed.

3.5 Protection against noise - Airborne sound insulation

No performance assessed.

3.6 Energy economy and heat retention - Thermal resistance

The additional thermal resistance provided by the ETICS (R_{ETICS}) to the substrate wall is calculated from the thermal resistance of the insulation product (R_D) and from the tabulated R_{render} value of the render system (R_{render} is about 0,02 m².K/W),

$$R_{ETICS} = R_D + R_{render}\ [(m^2 \cdot K)/W]$$

as described in EN ISO 6946 and EN ISO 10456.

If the thermal resistance cannot be calculated, it can be measured on the complete ETICS as described in EN 1934.

The thermal bridges caused by mechanical fixing devices influence the thermal transmittance of the entire wall and shall be taken into account using the following calculation:

$$U_c = U + \Delta U\ [W/(m^2 \cdot K)]$$

With:

U_c corrected thermal transmittance of the entire wall, including thermal bridges

U thermal transmittance of the entire wall, including ETICS, without thermal bridges

$$U = \frac{1}{R_{ETICS} + R_{substrate} + R_{se} + R_{si}}$$

$R_{substrate}$ thermal resistance of the substrate wall [(m²·K)/W]

R_{se} external surface thermal resistance [(m²·K)/W]

R_{si} internal surface thermal resistance [(m²·K)/W]

ΔU correction term of the thermal transmittance for mechanical fixing devices = χ_p * n (for anchors)

χ_p point thermal transmittance value of the anchor [W/K]. See Technical Report n°25. If not specified in the anchors ETA, the following values apply:
= 0,002 W/K for anchors with a stainless steel screw with the head covered by plastic material, and for anchors with an air gap at the head of the screw.
= 0,004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material
= 0,008 W/K for all other anchors (worst case)

n number of anchors per m²

The influence of thermal bridges can also be calculated as described in EN ISO 10211. It shall be calculated according to this standard if there are more than 16 anchors per m² foreseen. The χ_p-values given by the manufacturer do not apply in this case.

3.7 Aspects of durability and serviceability - Bond strength after ageing

		After hygrothermal cycles	After freeze/thaw cycles
Unilit 15 P2/H	Unilit 65M/H	< 0,08 MPa (*)	< 0,08 MPa (*)
	Unilit 65F	< 0,08 MPa (*)	< 0,08 MPa (*)
	Unilit 65M/H + 65F	< 0,08 MPa (*)	< 0,08 MPa (*)
(*) but failure in the insulation product			

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 97/556/EC[3], amended by the Commission Decision 2001/596/EC[4], the following system(s) of assessment and verification of constancy of performance apply.

Systems of assessment and verification of constancy of performance

Product(s)	Intended uses	Level(s) or class(es) (reaction to fire)	Assessment and verification of constancy of performance system(s)[a]
External thermal insulation composite systems/kits (ETICS) with rendering	In external wall not subject to fire regulations	Any	2+
	In external wall subject to fire regulations	(A1,A2,B,C)*	1
		(A1,A2,B,C)** , D, E and F (A1 to F)***,NPD	2+

[a] Systems1 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/EC, as amended)

5 Technical details necessary for the implementation of the AVCP system

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 together with the requirements given in EC Guidance Paper B 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 the "name of the Technical Assessment Body" 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 shall 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.

[3] OJEU, L229, 20/08/1997

[4] OJEU, L209, 02/08/2001

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.

6 References

EN 822 Thermal insulating products for building applications - Determination of length and width

EN 823 Thermal insulating products for building applications - Determination of thickness

EN 824 Thermal insulating products for building applications - Determination of squareness

EN 825 Thermal insulating products for building applications - Determination of flatness

EN 1603 Thermal insulating products for building applications - Determination of dimensional stability under constant normal laboratory conditions (23 °C/ 50 % relative humidity)

EN 1604 Thermal insulating products for building applications - Determination of dimensional stability under specified temperature and humidity conditions

EN 1607 Thermal insulating products for building applications - Determination of tensile strength perpendicular to faces

EN 1609 Thermal insulating products for building applications - Determination of short term water absorption

EN 1934 Thermal performance of buildings - Determination of thermal resistance by hot box method using heat flow meter - Masonry

EN 12086 Thermal insulating products for building applications - Determination of water vapour transmission properties

EN 12090 Thermal insulating products for building applications - Determination of shear behaviour

EN 12664 Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Dry and moist products of medium and low thermal resistance

EN 12667 Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance

EN 13501-1 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

EN 13171:2013 Thermal insulation products for buildings - Factory made wood wool (WW) products - Specification

EN ISO 6946 Building components and building elements - Thermal resistance and thermal transmittance - Calculation method

EN ISO 10211 Thermal bridges in building construction - Heat flows and surface temperatures - Detailed calculations

EN ISO 10456 Building materials and products - Hygrothermal properties - Tabulated design values and procedures for determining declared and design thermal values

Annex I
Insulation product characteristics

Description and characteristics	Reference	Wood fibre
Reaction to fire	EN 13501-1	Class E
Thermal resistance	EN 13171	Defined in the CE-marking
Thickness	EN 823	T4
Length	EN 822	± 2 %
Width	EN 822	± 1,5 %
Squareness	EN 824	± 5 mm/m
Dimensional stability	EN 1603 Laboratory conditions	Length and width: ≤1 % Thickness: ≤ 0,5 %
Dimensional stability	EN 1604 Specified temperature and humidity / (70 °C, 90 % R.H.)	< 1 %
Water absorption (partial immersion)	EN 1609	≤ 1 kg/m²
Water vapour diffusion resistance factor (μ)	EN 12086	≤ 3
Tensile strength perpendicular to the faces in dry conditions	EN 1607	≥ 30
Tensile strength perpendicular to the faces in wet conditions	EN 1607	≥10
Shear strength	EN 12090	≥ 0,02 N/mm²
Shear modulus of elasticity	EN 12090	≥1,0 N/mm²

Annex II
Description and characteristics of the anchor

Trade name	Plate diameter (mm)	Characteristic resistance of the substrate
All anchors according to clause 1.1	≥ 60	See valid ETA according to EAD 330196-01-0604

Annex III
Description and characteristics of the reinforcement

Mesh trade name	Description	Alkali resistance	
		Residual resistance after ageing (N/mm)	Relative residual resistance: % (after ageing) of the strength in the as delivered state
Limetics 150	Standard mesh mesh size: 5,0 x 4,0 mm	≥ 20	≥ 50

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, in Sint-Stevens-Woluwe, 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 Blaere,
Director general

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