IKOB-BKB BV
Ringveste 1,
NL-3992 DD Houten
Postbus 298
NL-3990 GB Houten
Tel: +31(0)30-635 80 60
Fax: +31(0)30-635 06 86
E-mail: info@ikobbkb.nl
Website: www.ikobbkb.nl

Gemachtigd en aangemeld overeenkomstig artikel 10 van Richtlijn van de Raad van 21 december 1988 betreffende de onderlinge aanpassing van de wettelijke en bestuursrechtelijke bepalingen der lidstaten inzake voor de bouw bestemde producten (89/106/EEG)

Lid van de EOTA
Member of EOTA

European Technical Approval ETA-07/0162

Handelsnaam **Trade name**	**ISOFacade- in situ**
Houder van de goedkeuring **Holder of approval**	**ISO Fassade GmbH** **Middelicherstraße 305** **D-45892 Gelsenkirchen** **Germany** **Postfach 150117** **D-45241 ESSEN** **Germany** **Tel.: +49-(0)-209 405 35 16 17** **Fax: +49-(0)-209 405 35 18** **e-Mail: info@ISOFassade.com**
Algemeen type en gebruik van het bouwproduct **Generic type and use of construction product**	Buitengevelisolatiesysteem met een gepleisterde afwerking op geëxpandeerd polystyreenschuim (EPS) voor toepassing als thermisch isolerende gevelbekleding van gebouwen **External Thermal Insulation Composite System with rendering on expanded polystyrene (EPS) for the use as external insulation of building walls**
Geldig van **Validity from** tot **to**	2007-07-16 2012-07-16
Fabrieken **Manufacturing plants**	**ISO Fassade GmbH** **Middelicherstraße 305** **D-45892 Gelsenkirchen** **Germany**
Deze Europese Technische Goedkeuring bevat: **This European Technical Approval contains:**	16 bladzijden **16 pages**

I LEGAL BASES AND GENERAL CONDITIONS

1 This European Technical Approval is issued by IKOB-BKB in accordance with

- Council Directive 89/106/EEC[1] of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products, amended by the Council Directive 93/68/EEC[2] and Regulation (EC) no 1892/2003 of the European Parliament and of the Council[3]
- Bouwbesluit 2003[4], and the Ministeriële regeling Bouwbesluit 2003[5]
- Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex to Commission Decision 94/23/EC [6]
- Guideline for European Technical Approval for « External Thermal Insulating Composite Systems with Rendering» ETAG 004, edition March 2000

2 The IKOB-BKB is authorised to check whether the provisions of this European Technical Approval are met. Checking may take place in the manufacturing plant(s). Nevertheless, the responsibility for the conformity of the products to the European Technical Approval and for their fitness for their intended use remains with the holder of the European Technical Approval.

3 This European technical approval is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1 of this European technical approval

4 This European Technical Approval may be withdrawn by IKOB-BKB in particular after information of the Commission on the basis of Article 5.1 of Council Directive 89/106/EEC.

5 Reproduction of this European technical approval including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of IKOB-BKB. 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 approval.

6 The European technical approval is issued by the approval body in the English language.
This version should correspond to the version circulated within EOTA. Translations in other languages have to be designated as such.

---

1 Official Journal of the European Communities N° L40, 11 Feb 1989, p 12
2 Official Journal of the European Communities N° L220, 30.Aug 1993, p. 1
3 Official Journal of the European Union N° L284, 31.10.2003, p.1
4 Staatsblad 2001 410; Staatsblad 2002 203, 516, 518, 582; Staatsblad 2005 1, 368, 417, 528; Staatsblad 2006. 148
5 Staatscourant 2002, nr. 241; Staatscourant 2003, nr. 101; Staatscourant 2005, nr. 163 en nr. 249
6 Official Journal of the European Communities N° L17, 20 Jan 1994, p 34.

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of products and intended use

1.1 Definition of products

The External Thermal Insulation Composite System, "ISOFacade- in situ" called ETICS in the following text, is designed and installed in accordance with the ETA-holder's design and installation instructions, deposited with the IKOB-BKB.
The ETICS comprises the following components, which are factory-produced by the ETA-holder or a supplier.

	Components (see § 2.3 for further description, characteristics and performances of the components)	**Coverage (kg/m²)**	**Thickness (mm)**
Insulation material with associated method of fixing	**Bonded ETICS:** • Insulation product: Factory-prefabricated expanded polystyrene (EPS) to EN 13163 Adhesive: cement based powder requiring addition of about 30 % in weight water (amount of 7,5 l water on 25 kg powder) **ISOFacade Kleber**	- 4,0 – 6,0	40 - 300 -
	Mechanically fixed ETICS with anchors and supplementary adhesive: • Insulation product: Factory-prefabricated expanded polystyrene (EPS) to EN 13163 • Supplementary adhesive: Identical to bonded ETICS: **ISOFacade Kleber** Anchors: - ejotherm ST U - ejotherm STR U - ejotherm NT U - ejotherm NTK US - Ejot SDM TPlus	- 4,0 – 6,0	60 - 200 -
Basecoat	• Cement based powder: **ISOFacade-Situ** containing alkali-resistant vegetable natural fibres requiring the addition of 30 % in weight water (amount of 8 l water on 25 kg powder).	8,0	Mean dry: 5. Minimum dry: 3
Reinforcement	• Integrated in basecoat	-	-
Key coat	• Resin binder (acrylic binder): **ISOFacade Aufbrennsperre** (key coat is used e.g. if required for aesthetic reasons)	0,12 - 0,13 (l/m²)	
Finishing coat	Optionally to be used with key coat: • Ready to use paste – stryrol acryl-silicone resin binder: **ISOFacade Silco (Scheibenputz-/ Kratzputzstruktur)** **(particle size 1,5-2-3 mm; number indicates max. size)**	2,0 – 4,0	Regulated by particle size
Ancillary materials	Description in accordance with clause 3.2.2.5 of ETAG 004 Remain under the ETA-holder responsibilities.	-	-

1.2 Intended use

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) with a reaction to fire classification A1 or A2-s2,d0 according to EN 13501-1 and a minimum density of 820 kg/m3 or A1 according to the EC decision 96/603/EC as amended. 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 can contribute to durability by providing enhanced protection from the effect of weathering.

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

The ETICS is not intended to ensure the air tightness of the building structure. The choice of the method of fixing depends on the characteristics of the substrate, which could need preparation (see § 7.2.1 of the ETAG no. 004) and shall be done in accordance with the national instructions.

The provisions made in this European Technical Approval (ETA) are based on an assumed intended working life of at least 25 years, provided that the conditions laid down in sections 4.2, 5.1, 5.2 for the packaging, transport, storage, installation as well as appropriate use, maintenance and repair are met. The indications given as to the working life cannot be interpreted as a guarantee given by the manufacturer or the Approval Body, but should only be regarded as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

2. Characteristics of products and methods of verification

2.3 General

The identification tests and the assessment of the fitness for use of this ETICS according to the Essential Requirements were carried out in compliance with the "ETA Guidance no. 004" concerning External Thermal Insulation Composite Systems with rendering (called ETAG no. 004 in this ETA)

2.2 ETICS Characteristics

2.2.1 Reaction to fire

		Thickness EPS	Euroclass according to EN 13501-1: 2003
Rendering systems: Base coat ISOFacade-Situ + finishing coats indicated hereafter:	ISOFacade Silco (particle size 3 mm)	≤ 100 mm	Class B-s1/d0
		> 100 mm	Class F

The assessment of the reaction to fire is based upon tests with a maximum insulation layer with a thickness of 100 mm (testing according EN ISO 13823-SBI-test) and a thickness of 60 mm (testing according EN ISO 11925).

The apparent density of the EPS-board in the used configuration is about 15 kg/m³.
The organic content of the basecoat and the finishing coat is deposited with IKOB-BKB.

For the SBI test the ETICS was mounted directly with adhesive to a gypsum fibre board substrate of 10 mm (Euroclass A2 according to EN 13501-1:2003). No anchors were used.
For the SBI test prefabricated boards with rendering measuring 500 mm x 1000 mm have been used. For the SBI test the lateral edges were covered with the rendering system. The joints between the boards have been sealed with a silicon sealant.

For the testing according EN ISO 11925 no substrate was used. For the testing according EN ISO 11925 the edges were not covered with the rendering system.

The installation of the ETICS was carried out by the approval holder following his design and installation instructions.

An European reference fire scenario has not been laid down for facades. In some Member States, the classification of ETICS according to EN 13501-1: 2003 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.

2.2.2 Water absorption (capillarity test)

- Base coat ISOFacade-Situ (reinforced with vegetable natural fibres):
  - water absorption after 1 hour < 1 kg/m²
  - water absorption after 24 hours > 0.5 kg/m²
- Rendering systems:

		Water absorption after 24 hours	
		< 0.5 kg/m²	**≥ 0.5 kg/m²**
Rendering systems: Base coat ISOFacade-Situ + finishing coat indicated hereafter:	**ISOFacade Silco**		X

2.2.3 Hygrothermal behaviour

Hygrothermal cycles have been performed on a rig.
None of the following defects occur during the testing:
- blistering or peeling of any finishing,
- failure or cracking associated with joints between insulation product boards or profiles fitted with system,
- detachment of render,
- cracking allowing water penetration to the insulation layer.

The ETICS is so assessed resistant to hygrothermal cycles.

2.2.4 Freeze / thaw behaviour

Rendering systems with finishing coat ISOFacade Silco : the ETICS has been assessed as freeze/thaw resistant according to the freeze-thaw test (simulated method).

2.2.5 Impact resistance

The resistance(s) to hard body impacts (3 Joules and 10 Joules) and to perforation lead to the following categories:

		Reinforcement: fibres dispersed in base coat
Rendering systems: Base coat ISOFacade-Situ (thickness 3,5 mm) + finishing coats indicated hereafter:	**ISOFacade Silco (particle size 2 mm)**	Category III

2.2.6 Water vapour permeability

		Equivalent air thickness (m)
Rendering systems: Base coat ISOFacade-Situ + finishing coats indicated hereafter:	*Basecoat alone reinforced with vegetable natural fibres without finishing coat*	≤ 1,0 m (Test result obtained with basecoat ISOFacade-Situ 7,8 mm: 0,18 m)
	ISOFacade Silco	≤ 1,0 m (Test result obtained with ISOFacade Silco 7,6 mm: 0,28 m)

2.2.7 Dangerous substances

The ETICS complies with the provisions of Guidance Paper H ("A harmonized approach related to dangerous substances under the construction products directive Revision August 2002")

In addition to the specific clauses relating to dangerous substances contained in this ETA, there may be other requirements applicable to the ETICS falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Product Directive, these requirements need also to be complied with, when and where they apply.

2.2.8 Safety in use

2.2.8.1 Bond strength

- Bond strength of base coat ISOFacade-Situ onto expanded polystyrene

Conditionings		
Initial State	After the hygrothermal cycles (on the rig)	After the freeze/thaw cycles (on samples)
≥ 0,08 MPa	< 0,08 MPa, but failure into insulation product	≥ 0,08 MPa

- Bond strength of adhesive ISOFacade-Kleber onto substrate and expanded polystyrene

		Conditionings		
		Initial state	48 h immersion in water + 2 h 23 °C/50% RH	48 h immersion in water + 7 days 23 °C/50% RH
Adhesive ISOFacade-Kleber	Concrete	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
	Expanded Polystyrene	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa

The ETICS can so be installed on the substrate with application of the adhesive ISOFacade-Kleber on a **minimal surface of 20%**.

2.2.8.2 Fixing strength (displacement test)

Test not required because the ETICS fulfils the following criteria: E.d < 50 000 N/mm.
(E: modulus of elasticity of the base coat without fibres - d: mean dried thickness of the base coat).

2.2.8.3 Wind load resistance
Safety in use of mechanically fixed ETICS using anchors

The following values only apply for the combination (anchor's trade name) / (EPS panel's characteristics) mentioned in the first lines of each table.

Anchors for which the following loads apply	Trade name		ejotherm ST U (ETA-02/0018) ejotherm STR U (ETA-04/0023) ejotherm NT U (ETA-05/0009) ejotherm NTK U (ETA-07/0026) ejot SDM T Plus (ETA-04/0064)
	Plate diameter (mm)		Ø 60
Characteristics of the EPS panels for which the following loads apply	Thickness (mm)		≥ 60*
	Tensile strength perpendicular to the face (kPa)		≥ 100
Failure loads (N)	Anchors not placed at the panel joints (Static Foam Block Test)	R_{panel}	Minimal: 510 Average: 520
	Anchors placed at the panel joints (Pull-through test and Static Foam Block Test)	R_{joint}	Minimal: 400 Average: 430

*
For use of the ejotherm STR U the above indicated values apply for
- Thickness ≥ 60 mm for mounting on the surface
- Thickness ≥ 80 mm for deep mounting with a maximum depth of die of 5 mm and
- Thickness ≥ 100 mm for deep mounting with a maximum depth of die of 20 mm.

For the definition of die see annex 2 of ETA-04/0023, validity from 15.03.2005.

The design value of the wind load resistance R_d of the ETICS is calculated by using the following formula:

$$R_d = (R_{panel} \times n_{panel} + R_{joint} \times n_{joint}) \times \gamma^{-1}$$

where

R_d	design value of the wind load resistance of the ETICS in N/m²
R_{panel}	failure load of anchor not placed at the panel joint N
R_{joint}	failure load of anchor placed at the panel joint in N
n_{panel}	number (per m²) of anchors not placed at the panel joint
n_{joint}	number (per m²) of anchors placed at the panel joint
γ	national safety factor

2.2.9 Thermal transmittance

The thermal transmittance U of the substrate wall covered by the ETICS is calculated in accordance with the standard EN ISO 6946 as follows:

$$U = 1/(R_i + R_{render} + R_{substrate} + R_{se} + R_{si})$$

Where:

U	Thermal transmittance of the current part of the covered wall in W/ (m².K) (excluding thermal bridges)
R_i	Thermal resistance of the insulation product (see CE marking in reference to EPS EN 13163) in (m².K)/W.
R_{render}	Thermal resistance of the render (about 0.02 (m².K)/W)
$R_{substrate}$	Thermal resistance of the substrate of the building (concrete, brick …) in (m².K)/W.
R_{se}	External superficial thermal resistance in (m².K)/W.
R_{si}	Internal superficial thermal resistance in (m².K)/W.

A correction ΔU shall be applied to the thermal transmittance, which is determined as follows:

$$U_c = U + \Delta U$$

With $\Delta U = \chi_p.n$

ΔU has only to be taken into account if it is greater than 0.04 W/(m².K)

Where:

U_c	Corrected thermal transmittance in W/ (m².K) (= Global thermal transmittance of the covered wall)
ΔU	Correction factor
χ_p	Local influence of thermal bridge caused by an anchor. The values listed below can be taken into account if not specified in the anchor's ETA: χ_p = 0.002 W/K for anchors with a stainless steel screw covered by plastic anchors and for anchors with an air gap at the head of the screw (χ_p.n negligible for n < 20) χ_p = 0.004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material (χ_p.n negligible for n < 10) χ_p = negligible for anchors with plastic nails (reinforced or not with glass fibres)
n	Number of anchors (through insulation product) per m²

2.2.10 Aspect of durability and serviceability

2.2.10.1
Bond strength after ageing

Rendering systems: Base coat ISOFacade-Situ + finishing coats indicated hereafter:	ISOFacade Silco	≥ 0,08 MPa, or failure in insulation product

2.3 Components' characteristics

2.3.1 Insulation product

Expanded polystyrene panels for bonded ETICS or mechanically fixed ETICS with anchors and supplementary bonding.
Factory-prefabricated, uncoated boards with right edges or with tong and groove edges, made of expanded polystyrene (EPS) according to EN 13163 and having the description and characteristics defined in the table below. The surface condition of the panels is of the type cut surface (homogeneous and without "skin")

Description and characteristics		Designation code EN 136163	Clarification Declared value
Tolerance	Thickness	T2	± 1 mm
	Length	L2	± 2mm
	Width	W2	± 2 mm
Squareness		S2	± 2 mm/m
Flatness **)		P4	± 5 mm/m
Dimensional stability ***)		DS(70,-)2	2% at 48 h, 70 °C
Dimensional stability		DS(N)2	± 0,2% (normal)
Tensile strength perpendicular to faces		TR100	≥ 100 kPa
Water absorption (partial emersion 24 h)		WL(T)1	≤ 1,0 %
Water vapour diffusion resistance factor (μ)		-	20 - 60
Reaction to fire / EN 13501-1		-	Euroclass E (Defined in CE-marking in reference to EN 13163)
Thermal resistance		-	R_D (Defined in CE-marking in reference to EN 13163)
Shear strength		-	$f_{\tau k}$ ≥ 0,02 N/mm²
Shear modulus		-	G_m ≥ 0,1 N/mm²

**) For the flatness the more severe ETA-holders requirement of ± 3 mm/m applies
***) For the dimensional stability the more severe ETA-holders requirement of 0,15 % applies.

2.3.2 Anchors for insulation product

Anchors made of a plastic expansion sleeve with a plate and of a galvanized or stainless steel screw

Trade name	Plate diameter (mm)	Characteristic resistances in the substrate
ejotherm ST U	60	See ETA-02/0018
ejotherm STR U	60	See ETA-04/0023
ejotherm NT U	60	See ETA-05/0009
ejotherm NTK U	60	See ETA-07/0026
Ejot SDM-T Plus	60	See ETA-04/0064

ETA-02/0018: EJOT Schraubdübel ejotherm ST U and ejotherm SK U – screwed-in anchor for fixing of external thermal insulation composite systems with rendering in concrete and masonry

ETA-04/0023: Ejotherm STR U - screwed-in anchor for fixing of external thermal insulation composite systems with rendering in concrete and masonry

ETA-05/0009: EJOT Schlagdübel ejotherm NT U and ejotherm NK U – Nailed -in plastic anchor for fixing of external thermal insulation composite systems with rendering in concrete and masonry

ETA-07/0026: EJOT Schlagdübel ejotherm NTK U – Nailed -in plastic anchor for fixing of external thermal insulation composite systems with rendering in concrete and masonry

ETA-04/0064: EJOT SDM-T plus - screwed- in plastic anchor for fixing of external thermal insulation composite systems with rendering in concrete and masonry

2.3.3 Render

No performance determined for the width of cracks. (Render Strip Tensile Test not performed)

2.3.4 Reinforcement

Residual tensile strength after ageing:

The residual strength after ageing of the vegetable natural fibres (alkaline solution NaOH) is increasing the strength in the as delivered state.
A significant difference of tensile strength of the basecoat reinforced with the vegetable natural fibres in the as delivered state and in the after ageing state (hygrothermal cycling of samples placed in the window of the testrig) is not shown.

3 Evaluation and attestation of Conformity and CE marking

3.1 System of attestation of Conformity

According to the decision 97/556/EC of the European Commission amended by 2001/596/EC, the system 2+ of attestation of conformity applies.

In addition, according to the decision 2001/596/EC of the European Commission, the system 1 and 2+ of attestation of conformity apply with regard to reaction to fire.

Considering the Euroclasses B and F for the reaction to fire, the system of attestation of conformity, regarding other characteristics than reaction to fire, is system 2+. This system is described in the Council Directive 89/106/EEC Annex III, 2 (ii), First possibility as follows:

Declaration of conformity of the ETICS by the manufacturer on the basis of:

a) Tasks for the manufacturer:
   (1) Initial type-testing of the ETICS and the components
   (2) Factory Production Control
   (3) Testing of samples taken at the factory in accordance with a prescribed test plan.

b) Tasks for the Notified Body:
   (4) Certification of factory production control on the basis of:
      - Initial inspection of factory and of factory production control
      - Continuous surveillance, assessment and approval of factory production control.

3.2 Responsibilities

3.2.1 Tasks of the manufacturer

3.2.1.1 Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall insure that the product is in conformity with this European Technical Approval.
The manufacturer may only use components stated in the technical documentation of this European Technical Approval.

For the components of the ETICS which the ETA-holder does not manufacture by himself, he makes sure that factory production control carried out by the other manufacturers gives the guaranty of the components compliance with the European Technical Approval.

The factory production control and the provisions taken by the ETA-holder for components not produced by himself shall be in accordance with the “Control plan[1])” relating to this European Technical Approval which is part of the technical documentation of this European Technical Approval. The “Control plan[1])” is laid down in the context of the factory production control system operated by the manufacturer and deposited at the IKOB-BKB.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the “control plan[1])”.

[1]) The control plan is a confidential part of the European Technical Approval and only handed over to the notified body or bodies involved in the procedure of attestation of conformity. See section 3.2.2.

3.2.1.2 Other tasks of the manufacturer

The manufacturer shall, on the basis of a contract, involve a body (bodies) which is (are) notified for the tasks referred to in section 3.1 in the field of ETICS in order to undertake the actions laid down in section 3.3. For this purpose, the “control plan” referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the notified body or bodies involved.

For initial type testing (in case of system 2+), the results of the tests performed as part of the assessment for the European Technical Approval can be used unless there are changes in the production line or plant. In such cases, the necessary initial type testing has to be agreed between the IKOB-BKB and the Notified Bodies involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of the European Technical Approval. The initial type-testing mentioned above could be taken over by the manufacturer for this declaration.

3.2.2 Tasks of the notified body

The notified body (bodies) shall perform the:

- initial inspection of factory and of factory production control
  The Notified Body shall ascertain that, in accordance with the “Control plan[1])” , the factory (in particular the employees and the equipment) and the factory production control are suitable to ensure continuous and orderly manufacturing of the components according to the specifications mentioned in clause 2 of this ETA.

- continuous surveillance, assessment and approval of factory production control
  The Notified Body shall visit the factory at least once a year for surveillance of this manufacturer having a FPC system complying with EN ISO 9001 covering the manufacturing of the ETICS components.
  It has to be verified that the system of factory production control and the specified automated manufacturing process are maintained.

  These tasks shall be performed in accordance with the provisions laid down in the “Control plan[1])” of this European Technical Approval. The Notified Body (Bodies) shall retain the essential points of its (their) actions referred to above and state the results obtained and conclusions drawn in (a) written report (reports).

- In the case of Attestation of Conformity system 2+:

  The Approved Certification Body involved by the manufacturer shall issue an EC certificate of conformity of the factory production control stating the conformity with the provisions of this European Technical Approval.

  In cases where the provisions of the European Technical Approval and its “Control plan[1])” are no longer fulfilled, the Certification Body shall withdraw the certificate of conformity and inform the IKOB-BKB without delay.

[1]) The control plan is a confidential part of the European Technical Approval and only handed over to the notified body or bodies involved in the procedure of attestation of conformity. See section 3.2.2.

3.3 **CE marking**

The CE marking shall be affixed either on the product itself, on a label attached to it, on its packaging or on the commercial documents accompanying the components of the ETICS.

The letters "CE" shall be followed by the identification number of the Notified Body involved and shall be accompanied by the following additional information:

- the name or identifying mark and address of the ETA-holder,
- the last two digits of the year in which the CE marking was affixed,
- the number of the European Technical Approval,
- the number of the EC certificate of conformity of Factory Production Control (system 2+),
- the ETICS trade name,
- the number of the ETAG (European Technical Approval Guideline).

4 Assumptions under which the fitness of the product(s) for the intended use was favourably assessed

2.2 Manufacturing

The European Technical Approval is issued for the ETICS on the basis of agreed data/information, deposited with the IKOB-BKB, which identifies the ETICS that has been assessed and judged. Changes to the ETICS or production process, which could result in this deposited data/information being incorrect, should be notified to the IKOB-BKB before the changes are introduced. The IKOB-BKB will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

4.2 Installation

4.2.1 General

It is the responsibility of the ETA-holder to guarantee that the information about design and installation of this ETICS are easily accessible to the concerned people. These information can be given using reproductions of the respective parts of the European Technical Agreement.
Besides, all the data concerning the execution shall be clearly indicated on the packaging and/or the enclosed instruction sheets using one or several illustrations.

In any case, the user shall comply with the national regulations and particularly concerning fires and wind load resistance.

Only the components described in clause 1.1 with characteristics according to clause 2 of this ETA can be used for the ETICS.

The requirements given in ETAG 004, chapter 7, as well as the information of paragraphs 4.2.2 and 4.2.3, have to be considered.

4.2.2 Design

- To bond the ETICS, the minimal bonded surface and the method of bonding shall comply with characteristics of the ETICS (see § 2.1.8.1 of this ETA) as well as the national regulations. In any case, the minimal bonded surface shall at least be 20%.

- To mechanically fix the ETICS, the choice and the rate of the fixings shall be determined considering:

  - the design wind load suction and the national regulations (taking into account the national safety factors, the design rules, …),
  - the characteristic resistance of the anchors into the considered substrate (see installation parameters – effective anchorage, characteristic resistance ... – in the ETA of the anchor),
  - the safety in use of the ETICS (cf. § 2.1.8), according to the method of fixing.

4.2.3 Execution

The recognition and preparation of the substrate as well as the generalities about the execution of the ETICS shall be carried out in compliance with:

- chapter 7 of the ETAG no. 004 with imperative removal of any existing paint finishes and any organic renders,

- national regulations in effect.

The particularities in execution linked to the different methods of fixing and the application of the rendering system shall be handled in accordance with ETA-holder prescriptions. In particular it is suitable to comply with the quantities of rendering applied, the thickness regularity and the drying periods between two layers.

5. Indications to manufactures

5.1 Packaging, transport and storage

Packaging of the components has to be such that the products are protected from moisture during transport and storage, unless other measures are foreseen by the manufacturer for this purpose.

The components are to be protected against damage.

It is the responsibility of the manufacturer(s) to ensure that these provisions are easily accessible to the concerned people.

5.2 Use, maintenance and repair

The finishing coat shall normally be maintained in order to fully preserve the ETICS's performances.

Maintenance includes at least:

- the repairing of localised 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 done rapidly.

It is important to be able to carry out maintenance as far as possible using readily available products and equipment, without spoiling appearance.

It is the responsibility of the manufacturer(s) to ensure that these provisions are easily accessible to the concerned people.

The original English version is signed on behalf of IKOB-BKB BV
by its
managing director
Mr P.K. van der Schuit