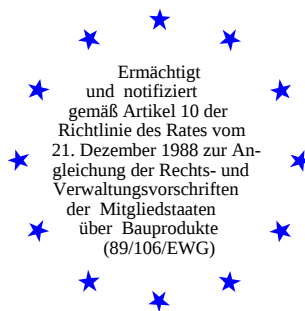


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Mitglied der EOTA

European Technical Approval

ETA-05/0047

(English language translation, the original version is in German language)

Handelsbezeichnung
Trade name

weber.therm flex / terratherm flex

Zulassungsinhaber
Holder of approval

**Saint-Gobain Weber Terranova GmbH
Gleichentheilgasse 6
1230 Wien**

Zulassungsgegenstand
und Verwendungszweck

**Außenseitiges Wärmedämm-Verbundsystem mit
Putzschicht zur Wärmedämmung von Gebäuden**

*Generic type and use
of construction product*

*External Thermal Insulation Composite System with
rendering for the use as external insulation of building
walls*

Geltungsdauer vom
Validity from
bis
to

19. 9. 2005

18. 9. 2010

Herstellwerk
Manufacturing plant

**Saint-Gobain Weber Terranova GmbH
Gleichentheilgasse 6
1230 Wien**

Diese europäische
technische Zulassung umfaßt
*This European Technical Approval
contains*

20 Seiten

20 pages

OIB-290-001/03-150

I LEGAL BASES AND GENERAL CONDITIONS

- 1 This European technical approval is issued by the Österreichisches Institut für Bautechnik in accordance with:
 - Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products¹, modified by the Council Directive 93/68/EEC of 22 July 1993²;
 - Wiener Bauprodukte- und Akkreditierungsgesetzes, LGBl. Für Wien Nr. 30/1996, in der Fassung der WBAG-Novelle 2001, LGBl. für Wien Nr. 71/2001.
 - Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex of Commission Decision 94/23/EC³.
 - Guideline for European Technical Approval of “External Thermal Insulation Composite Systems with rendering” ETAG 004, edition March 2000.
- 2 The Österreichisches Institut für Bautechnik is authorized to check whether the provisions of this European technical approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to the European technical approval and for their fitness for the intended use remains with the holder of the European technical approval.
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- 6 The European technical approval is issued by the approval body in its official language. This version fully corresponds to the version circulated within EOTA. Translations into other languages have to be designated as such.

¹⁾ Official Journal of the European Communities N° L 40, 11.02.1989, p. 12

²⁾ Official Journal of the European Communities N° L 220, 30.08.1993, p. 1

³⁾ Official Journal of the European Communities N° L 17, 20.01.1994, 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 is designed and installed in accordance with the ETA-holder's design and installation instructions, deposited at the Österreichisches Institut für Bautechnik. The ETICS comprises components which are factory-made by the ETA-holder or the component suppliers. The ETA-holder is ultimately responsible for the ETICS. The components of the ETICS are specified by the ETA-holder as follow:

Component	Base	Grain size [mm]	Thickness [mm]	Coverage approx. [kg/m ²]	Approx. water consumption [l/kg]
Adhesive: partially bonded (spot-and-bead) or fully bonded (ridged-bed method) national application documents have to be taken into account					
weber.therm family KS / terra Klebespachtel	sand, cement, dispersion powder, additives	-	-	4,5 (powder)	0,25
weber Dispersions- kleber / terra Dispersionskleber	vinyllic-copolymer binder, fillers, additives	-	-	4,0 (paste)	-
Insulation product: (EPS-EN 13163-L1-W2-T2-S2-P4-DS(N)2-DS(70,-)1-TR150-BS100)					
Insulation panels	expanded polystyrene	-	20-200	-	-
Anchor: According to ETAG 014 or CUAP „Powder actuated fastener for the fixing of insulation products“ edition August 2000 or CUAP “Anchor for External Thermal Insulation Composite Systems (ETICS)” edition April 2002 with a local thermal bridging influence ($\chi_p = 0,004 \text{ W/K}$)					
ETA-02/0018 EJOT Schraubdübel ejotherm ST U	-	-	to be used with EPS $\geq$ 60mm	-	
ETA-02/0019 fischer TERMOZ 8U	-	-	to be used with EPS $\geq$ 50mm	-	-
ETA-03/0004 Hilti-Dämmstoff- Befestigungselement XI- FV	-	-	to be used with EPS $\geq$ 60mm	-	-
ETA-03/0005 Hilti SX-FV	-	-	to be used with EPS $\geq$ 60mm	-	-
ETA-03/0019 Fischer Schlagdübel TERMOZ 8 N	-	-	to be used with EPS $\geq$ 50mm	-	-
ETA-03/0028 Hilti Dämmstoffdübel SD-FV 8	-	-	to be used with EPS $\geq$ 50mm	-	-
ETA-04/0023 EJOT EJOTHERM STR U	-	-	to be used with EPS $\geq$ 80mm	-	-

Component	Base	Grain size [mm]	Thickness [mm]	Coverage approx. [kg/m ²]	Approx. water consumption [l/kg]
ETA-04/0032 Iso Fux NDT-8Z und NDT-8SZ	-	-	to be used with EPS $\geq$ 60mm	-	-
ETA-04/0064 EJOT SDM-T plus und SDF-K plus	-	-	to be used with EPS $\geq$ 60mm	-	-
ETA-04/0114 fischer Dämmstoffdübel TERMOZ KS 8	-	-	to be used with EPS $\geq$ 60mm	-	-
ETA-05/0009 ejotherm NT U und ejotherm NK U	-	-	to be used with EPS $\geq$ 60mm	-	-
ETA-05/0039 Hilti WDVS-Schraubdübel D-FV und D-FV T	-	-	to be used with EPS $\geq$ 50mm	-	-
Base coat:					
weber Armierungsspachtel / terra Armierungsspachtel	vinyllic-copolymer binder, fillers, additives	-	2-3 mm	4,0 (paste)	-
Standard glass fibre mesh:					
weber.therm Textilglasgitter / terratherm Textilglasgitter	mesh size between 3,5 mm to 4,7 mm	-	-	-	-
Finishing coat :					
weber Silikonharzputz / terrasol Silikonharzputz	silicon resin	1,5/2,0/3,0	according to grain size	2,5-5,0 (paste)	-
weber Kunstharzputz / terraplast Kunstharzputz	organic (polymeric) binder	1,5/2,0/3,0		2,5-5,0 (paste)	-

Note: General application conditions: the material data sheets have to be taken into account.

Depending on the end use the external thermal insulation composite system for “weber.therm flex” / “terratherm flex” can be used as purely bonded ETICS, bonded ETICS with supplementary mechanical fixings or as mechanically fixed ETICS with supplementary adhesive.

1.2 Intended use

The external thermal insulation composite system is intended for use as external insulation to the *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 or A2-s1, 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 can be used on new or existing (retrofit) vertical walls. They can also be used on horizontal or inclined surfaces which are not exposed to precipitation.

The ETICS are not intended to ensure the air tightness of the building structure.

The provisions made in this ETA are based on an assumed intended working life of the External Thermal Insulation Composite System with rendering of at least 25 years provided that the installed ETICS is subject to an appropriate use and maintenance.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or the approval body, but are to be regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

2 Characteristics of the products and methods of verification

Information on the ETICS

2.1 Reaction to fire

The reaction to fire is determined according to ETAG 004 clause 5.1.2.1. The product as defined under clause 1.1 reached the following classification:

Table 1

	Maximum declared organic content of the rendering system	Declared flame retardant content of the rendering system	Maximum thickness (mm)	class according to EN 13501-1
weber.therm flex / terratherm flex	5,4 %	5 %	200	C-s2, d0

Mounting and fixing

(for all end use applications given in clause 1.2 of the ETA)

The assessment of reaction to fire is based on tests with a maximum insulation layer thickness of SBI /200mm, EN ISO 11925-2 /50mm and a maximum insulation material (EPS) density of 18 kg/m³ as well as a render system (binder type – synthetic resin) with maximum organic content (5,4%) and thickness (6mm).

For the SBI and the EN ISO 11925 test this ETICS is mounted directly to a calcium silicate substrate (A2-s1, d0) with a minimum density of 820 kg/m².

The installation of the ETICS was carried out by the approval holder following the manufacturer's specifications (instruction sheet) using a single layer of the glass fibre mesh all over the test specimen (no overlapping glass fibre mesh).

The test specimens were prefabricated and did not include any joints. The panel edges were rendered.

Anchors were not included in the tested ETICS as they have no influence on the test result.

Please note that in some member states the classification on the basis of SBI test is not accepted. Additional tests might be required e.g. large scale tests to demonstrate compliance with a member state's fire regulation.

Extended application

The test results covers arrangements with insulation material (EPS) of a lower thickness and density as well as render systems (binder types) with a lower organic content.

2.2 Water absorption

The water absorption of the base coat and the various rendering systems is determined according to ETAG 004 clause 5.1.3.1.

Table 2

		Water absorption after 1 h		Water absorption after 24 h	
		< 1kg/m ²	≥ 1kg/m ²	< 0,5 kg/m ²	≥ 0,5 kg/m ²
weber Armierungsspachtel / terra Armierungsspachtel		X		X	
base coat + finishing coat indicated here after:	weber Silikonharz- putz / terrasol Silikonharzputz	X		X	
	weber Kunstharz- putz / terraplast Kunstharzputz	X		X	

Note: If the water absorption of the base coat after 1 hour is more or equal than 1 kg/m², the water absorption after 1 hour of each rendering system shall be less than 1 kg/m².

2.3 Hygrothermal performance

The hygrothermal performance is determined according to ETAG 004 clause 5.1.3.2.1.

Non of the following defects occur during the testing:

- 1) blistering or peeling of any paint finish
- 2) failure or cracking associated with joints between insulation product boards or profiles fitted with system
- 3) detachment of the render
- 4) cracking allowing water penetration to the insulation layer

The ETICS can be seen as **resistant to hygrothermal cycles**.

2.4 Freeze/thaw performance

The freeze/thaw performance is determined according to ETAG 004 clause 5.1.3.2.2.

As shown in Table 2 of this European technical approval the water absorption of both basecoat and the rendering system is less than 0,5 kg/m² after 24 hours and so the ETICS can be seen as **freeze/thaw resistant** without any further testing.

2.5 Impact resistance

The impact resistance is determined according to ETAG 004 clause 5.1.3.3, 5.1.3.3.1, 5.1.3.3.2.

After testing the hard body impact (3 Joules & 10 Joules) and the Perfotest the following categorization of all rendering results:

Table 3

Rendering system tested with:		Single standard layer	Double standard layer
base coat + finishing coat indicated hereafter:	weber Silikonharzputz / terrasol Silikonharzputz	Category II	Category I
	weber Kunstharputz / terraplast Kunstharputz		

2.6 Water vapour permeability (Resistance to water vapour diffusion)

The resistance to water vapour diffusion is determined according to ETAG 004 clause 5.1.3.4.

Table 4⁴⁾

		Equivalent air thickness sd
base coat + finishing coat indicated here after:	weber Silikonharzputz / terrasol Silikonharzputz	≤ 1 m (test result obtained with particle size 2,0 mm: 0,75 m)
	weber Kunstharputz / terraplast Kunstharputz	≤ 2 m (test result obtained with particle size 2,0 mm: 1,00 m)

⁴⁾ According to the EOTA GD 004 existing data was used after EOTA consensus has been reached that the deviations of the test methods used from the EOTA test methods are not relevant or the results are on the safe side.

2.7 Release of dangerous substances

The external thermal insulation composite system complies with the provisions of guidance paper H (A harmonized approach relating to Dangerous substances under the construction products directive, edition 2002) about dangerous substances.

A declaration of conformity in this respect was made by the manufacturer.

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

2.8 Bond strength

The bond strength is determined according to ETAG 004 clause 5.1.4.1.1. +2.+3

Table 5⁴⁾

Bond strength between:	Acceptance criteria
<i>Base coat and insulation products</i> - under dry conditions - after hygrothermal cycles - after freeze/thaw cycles	$\geq 0,08$ MPa $\geq 0,08$ MPa test not required because freeze/thaw cycles not necessary
<i>Adhesive and substrate</i> - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water	$\geq 0,25$ MPa $\geq 0,08$ MPa $\geq 0,25$ MPa
<i>Adhesive and insulation products</i> - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water	$\geq 0,08$ MPa $\geq 0,03$ MPa $\geq 0,08$ MPa
The ETICS fulfils the above given acceptance criteria and can be bonded with a minimum surface area of 20%.	

When the minimum requirements of ETAG 004 clause 6.1.4.1.1 +2. 3. are fulfilled for a purely bonded ETICS, it can be judged to satisfy the performance requirements with regard to wind loads when applied to buildings up to a height of 100 m, without further assessment.

2.9 Bond strength after ageing

The bond strength after ageing is determined according to ETAG 004 clause 5.1.7.1.

Table 6

Bond strength of the finishing coat after ageing	Acceptance criteria
weber Silikonharzputz / terrasol Silikonharzputz	≥ 0,08 MPa
weber Kunstharputz / terraplast Kunstharputz	≥ 0,08 MPa
The ETICS fulfils the above given acceptance criteria.	

2.10 Wind load resistance

The wind load resistance of mechanically fixed ETICS is determined according to ETAG 004 clause 5.1.4.3.

These given test results are valid for the following anchors:

ETA-02/0018 (EJOT Schraubdübel ejotherm ST U), **ETA-03/0004** (Hilti-Dämmstoff-Befestigungselement XI-FV), **ETA-03/0005** (Hilti SX-FV), **ETA-03/0028** (Hilti Dämmstoffdübel SD-FV 8) and **ETA-04/0023** (Ejotherm STR U), **ETA-04/0009** (ejotherm NT U und ejotherm NK U), **ETA-04/0064** (EJOT SDM-T plus und SDF-K plus) and **ETA-05/0039** (Hilti WDVS-Schraubdübel D-FV und D-FV T).

Table 7

Plate diameter of anchor:		Ø 60 mm or more
Characteristic of the EPS panels for which the following failure loads apply	Thickness (mm)	≥ 60
	Tensile strength perpendicular to the face of the EPS (kPa)	≥ 100
Anchors not placed at the panel joint (kN): (static foam block test)	R _{panel} :	Minimum: 0,51 Average: 0,52
Anchors placed at the panel joint (kN): (pull through test)	R _{joint} :	Minimum: 0,40 Average: 0,43

These given test results are valid for the following anchors:

ETA-04/0023 (EJOT EJOTHERM STR U).

Table 8

Plate diameter of anchor:		Ø 60 mm or more
Characteristic of the EPS panels for which the following failure loads apply	Thickness (mm)	≥ 80
	Tensile strength perpendicular to the face of the EPS (kPa)	≥ 150
Anchors not placed at the panel joint (kN): (static foam block test)	R _{panel} :	Minimum: 0,58 Average: 0,58
Anchors placed at the panel joint (kN): (static foam block test)	R _{joint} :	Minimum: 0,48 Average: 0,50

These given test results are valid for the following anchors:

ETA-02/0019 (fischer TERMOZ 8 U) and **ETA-03/0019** (fischer Schlagdübel TERMOZ 8 N) and **ETA-04/114** (fischer Dämmstoffdübel TERMOZ KS 8).

Table 9

Plate diameter of anchor:		Ø 60 mm or more
Characteristic of the EPS panels for which the following failure loads apply	Thickness (mm)	≥ 50
	Tensile strength perpendicular to the face of the EPS (kPa)	≥ 150
Anchors not placed at the panel joint (kN): (static foam block test)	R _{panel} :	Minimum: 0,44 Average: 0,46
Anchors placed at the panel joint (kN): (static foam block test)	R _{joint} :	Minimum: 0,40 Average: 0,41

These given test results are valid for the following anchors:

ETA-04/0032 (Iso Fux NDT-8Z und NDT-8SZ).

Table 10

Plate diameter of anchor:		Ø 60 mm or more
Characteristic of the EPS panels for which the following failure loads apply	Thickness (mm)	≥ 60
	Tensile strength perpendicular to the face of the EPS (kPa)	≥ 150
Anchors not placed at the panel joint (kN): (static foam block test)	R _{panel} :	Minimum: 0,61 Average: 0,64

For all calculations the following formula shall be used:

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

where n_{panel} : number of anchors not placed at the panel joint
 n_{joint} : number of anchors placed at the panel joint
 γ : safety factor

2.11 Thermal resistance of the ETICS

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

$$U = U_c + \chi_p \cdot n$$

where: $\chi_p \cdot n$: has only to be taken into account if it is greater than 0,04 W/m²K
 U : global thermal transmittance of the covered wall (W/ m²K)
 n : number of anchors (through expanded polystyrene) per m²
 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:
 = 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 ($\chi_p \cdot n$ negligible for $n < 20$)
 = 0.004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material ($\chi_p \cdot n$ negligible for $n < 10$)
 = negligible for anchors with plastic nails (reinforced or not with glass fibres ...)
 U_c : thermal transmittance of the current part of the covered wall (excluding thermal bridges) (W/m²K) determined as follows:

$$U_c = (R_i + R_{\text{render}} + R_{\text{substrate}} + R_{\text{se}} + R_{\text{si}})^{-1}$$

where: R_i : thermal resistance of the insulation product (see CE-Marking in reference to EPS EN 13 163)
 R_{render} : thermal resistance of the render (about 0.02 m²K/W)
 $R_{\text{substrate}}$: thermal resistance of the substrate of the building (concrete, brick...) (m²K/W)
 R_{se} : external superficial thermal resistance (m²K/W)
 R_{si} : internal superficial thermal resistance (m²K/W)

Information on components of the ETICS**2.12 Insulation product**

Table 11

Designation code	EPS-EN 13163-L1-W2-T2-S2-P4-DS(N)2-DS(70,-)1-TR150-BS100		
Reaction to fire according to EN 13501-1	Maximum density (kg/m ³)	Maximum thickness (mm)	class
EPS board d _w = 20mm to 200mm	18	200	E
Water absorption according EN 1609	approx. 0,5kg/m ² at a tested density of approx. 16,5kg/m ²		
Water vapour diffusion resistance factor (μ) according to EN 12086	μ is less than 60 at a tested density of approx. 16,5 kg/m ²		
Tensile test according to EN 1607	≥ 0,150 MPa		
Shear strength according to EN 12090	Acceptance criteria for bonded ETICS	Declared value	
	≥ 0,02 N/mm ²	f _{tk} ≥ 0,02 N/mm ²	
	at a tested density of approx. 16,5 kg/m ²		
Shear modulus according to EN 12090	Acceptance criteria for bonded ETICS	Declared value	
	≥ 1,0 N/mm ²	G _m = 1,0 N/mm ²	
	at a tested density of approx. 16,5 kg/m ²		
Thermal resistance to be calculated according the following formula	R _{ins} = d _{ins} · λ _{ins} ⁻¹	R _{ins} : thermal resistance of the insulation product d _{ins} : thickness of the insulation product (m) λ _{ins} : = 0,040 W/m.K	

Table 12

Designation code		EPS-EN 13163-L1-W2-T2-S2-P4-DS(N)2-DS(70,-)1-TR150-BS100	
Reaction to fire according to EN 13501-1	Maximum density (kg/m³)	Maximum thickness (mm)	class
EPS board d _w = 20mm to 200mm	21	200	E
Water absorption according EN 1609	approx. 0,5kg/m ² at a tested density of approx. 16,5kg/m ²		
Water vapour diffusion resistance factor (μ) according to EN 12086	μ is less than 60 at a tested density of approx. 16,5 kg/m ²		
Tensile test according to EN 1607	≥ 0,150 MPa		
Shear strength according to EN 12090	Acceptance criteria for bonded ETICS	Declared value	
	≥ 0,02 N/mm ²	f _{tk} ≥ 0,02 N/mm ²	
	at a tested density of approx. 16,5 kg/m ²		
Shear modulus according to EN 12090	Acceptance criteria for bonded ETICS	Declared value	
	≥ 1,0 N/mm ²	G _m = 1,0 N/mm ²	
	at a tested density of approx. 16,5 kg/m ²		
Thermal resistance to be calculated according the following formula	R _{ins} = d _{ins} · λ _{ins} ⁻¹	R _{ins} : thermal resistance of the insulation product d _{ins} : thickness of the insulation product (m) λ _{ins} : = 0,034 W/m.K	

2.13 Pull-out strength of anchor

The characteristic pull-out strength of anchor is determined according to ETAG 004 clause 5.3.4.1. Evaluated is according to ETAG "plastic anchors" or having obtained an ETA.

The characteristic pull-out strength of the anchor is given in the **ETA-02/0018** EJOT Schraubdübel ejotherm ST U, **ETA-02/0019** fischer TERMOZ 8U, **ETA-03/0004** Hilti-Dämmstoff-Befestigungselement XI-FV, **ETA-03/0005** Hilti SX-FV, **ETA-03/0019** Fischer Schlagdübel TERMOZ 8 N, **ETA-03/0028** Hilti Dämmstoffdübel SD-FV 8, **ETA-04/0023** EJOT EJOTHERM STR U, **ETA-04/0032** Iso Fux NDT-8Z und NDT-8SZ, **ETA-04/0064** EJOT SDM-T plus und SDF-K plus, **ETA-04/0114** fischer Dämmstoffdübel TERMOZ KS 8, **ETA-05/0009** ejotherm NT U und ejotherm NK U und **ETA-05/0039** Hilti WDVS-Schraubdübel D-FV und D-FV T.

2.14 Statement of crack width for render

The statement of crack width for render is determined according to ETAG 004 clause 5.5.4.1.

Table 13

weber.therm Textilglasgitter / terratherm Textilglasgitter	Mean crack width of render	Render strain value 0,8 %
	warp direction	0,0 mm
	weft direction	0,0 mm

2.15 Tearing strength after ageing of the glass fibre mesh

The tearing strength after ageing of the glass fibre mesh is determined according to ETAG 004 clause 5.6.7.1.

Table 14

weber.therm Textilglasgitter / terratherm Textilglasgitter	Declared value warp direction	Declared value weft direction	Acceptance criteria
tearing strength after ageing in %	≥ 50 %	≥ 50 %	≥ 50 %
tearing strength after ageing in N/mm	≥ 20 N/mm	≥ 20 N/mm	≥ 20 N/mm

2.16 Identification

The ETA is issued for “weber.therm flex” resp. “terratherm flex” on the basis of agreed data, deposited at the Österreichisches Institut für Bautechnik, which identifies the ETICS that has been assessed and judged. Changes to the for “weber.therm flex” resp. “terratherm flex” production process, which could result in this deposited data being incorrect, should be notified to the Österreichisches Institut für Bautechnik before the changes are introduced. The Österreichisches Institut für Bautechnik 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/alterations to the ETA, shall be necessary.

3 Evaluation of conformity and CE marking

3.1 Attestation of conformity system

System 2+ applies for which the following is valid:

- there exists “any” intended uses of the product

the system of attestation of conformity specified by the European commission is described in the Council Directive 89/106/EEC Annex III, 2 (ii), First possibility and detailed as follows:

a) Tasks of the manufacturer

- (1) initial type-testing of the product,
- (2) factory production control.
- (3) further testing of samples taken at the factory by the manufacturer in accordance with a control plan.

b) Tasks of 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.

Considering the Euroclass B for the reaction to fire and that a clearly stage in the production process has been identified which results in an improvement of the reaction to fire classification (addition of fire retardant), system 1 applies for which the following is valid:

- the intended use of the product is subject to regulations on reaction to fire

the system of attestation of conformity specified by the European commission is system 1 described in the Council Directive 89/106/EEC Annex III, 2 (ii), First possibility and detailed as follows:

Certification of the conformity of the ETICS by a notified certification Body on the basis of:

a) Tasks of the manufacturers:

- (1) factory Production Control
- (2) further testing of samples taken at the factory by the manufacturer in accordance with a control plan

b) Tasks of the Notified Body:

- (3) initial type-testing of the ETICS and the components,
- (4) initial inspection of factory and of factory production control,
- (5) continuous surveillance, assessment and approval of factory production control.

3.2 Responsibilities

3.2.1 Tasks of the manufacturer

3.2.1.1 Initial Type Testing

Approval tests had been conducted by the approval body or under its responsibility (which may include a proportion conducted by a notified laboratory or by the manufacturer, witnessed by the approval body).

These tests should be used for the purposes of Initial Type Testing⁵⁾.

For system 2+ this work could be taken over by the manufacturer for Declaration of Conformity purposes.

3.2.1.2 Factory production control

The manufacturer exercises permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer are documented in a systematic manner in the form of written policies and procedures. This production control system ensures that the product is in conformity with the European Technical Approval (ETA).

In the framework of factory production control the manufacturer carries out tests and controls in accordance with the control plan⁶⁾ which is fixed with this European technical approval.

Details of the extent, nature and frequency of testing and controls to be performed within the factory production control correspond to this control plan⁶⁾ which is part of the technical documentation of this European technical approval.

The results of factory production control are recorded and evaluated. The records include at least the following information:

- designation of the products and of the basic materials,
- type of control or testing,
- date of manufacture of the products and date of testing of the products or basic materials or components,
- result of control and testing and, if appropriate, comparison with requirements,
- signature of person responsible for factory production control.

On request the records must be presented to the Österreichisches Institut für Bautechnik.

3.2.2 Tasks of the notified body

3.2.2.1 Initial inspection of the factory and of factory production control

The Notified Body shall ascertain that, in accordance with the control plan⁶⁾, 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.

⁵⁾ In this respect Approval Bodies shall be able to have open arrangements with relevant Notified Bodies to avoid duplication, respecting each others responsibilities.

⁶⁾ The control plan has been deposited at the Österreichisches Institut für Bautechnik and is handed over only to the notified bodies involved in the conformity attestation procedure.

3.2.2.2 Continuous surveillance, assessment and approval of Factory Production Control

The Notified Body shall visit the factory at least one 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 taking into account the control plan⁶⁾.

Continuous surveillance and assessment of factory production control have to be performed according to the control plan⁶⁾.

During each visit, the Notified Body shall examine:

- the control register of raw materials, products in course of manufacture and finished products,
- the document attesting the application of the control frequencies,
- the conformity of the products subjected to the ETA.

The results of continuous surveillance shall be made available on demand by inspection body, to the Österreichisches Institut für Bautechnik. In cases where the provisions of the European Technical Approval and the control plan⁶⁾ are no longer fulfilled, the conformity certificate shall be withdrawn.

3.3 CE marking

The CE marking shall be affixed on the ETICS/components itself/themselves, an attached label, the packaging, or the accompanying commercial documents.

The symbol "CE" shall be accompanied by the following information:

- identification number of the certification body
- name and identifying mark and address of the ETA-holder
- the last two digits of the year in which the CE marking was affixed
- number of the European technical approval guideline
- number of the European technical approval
- number of the EC certificate of conformity
- identification of ETICS (commercial name)

4 Assumptions under which the fitness of the products for the intended use was favourably assessed

4.1 Manufacturing

The composition and manufacturing process used for the components shall comply with those on which the approval tests were based on. Composition and manufacturing process are deposited at Österreichischen Institut für Bautechnik.

4.2 Installation

4.2.1 General

The ETICS is installed on site. It is the responsibility of the ETA holder to guarantee that the information about design and installation of the ETICS are effectively communicated to the people concerned. Besides, all the data concerned the execution shall be clearly indicated on the packaging and/or the enclosed instruction sheets using one or several illustrations.

In any case, it is suitable to comply with national regulations and particularly concerning fires and wind load resistance.

Only the components described in paragraph 1.1 with characteristics according to paragraph 2 can be used.

The requirements given in ETAG 004, chapter 7, have to be considered.

4.2.2 Parameters for the design of construction works or parts of construction works

The works including the details (connection, joint,...) shall be designed in order to avoid water penetration behind the ETICS. pr EN ISO 13788 provides guidance as to the risk of condensation.

The wall on which the ETICS is applied shall be sufficiently stable and airtight. Its stiffness shall be large enough to ensure that the ETICS is not subject to deformation, which could lead to damage.

It should be possible to attach fixtures (down pipes, etc) into the substrate without damaging the integrity of the ETICS to a degree likely to reduce the overall performance.

The sound insulation factor of the wall may change after application of an ETICS.

4.2.3 Parameters for construction works or parts of construction works

4.2.3.1 Substrates suitable for bonded ETICS

Where the ETICS relies on being bonded the minimum surface area and the method of bonding shall comply with characteristics of the ETICS as well as the national regulations and the suitability of the substrate needs to be established as follows:

- new concrete or masonry surfaces may be suitable provided they are not contaminated eg by mould, mould oil (concrete) or other pollutants.
- old substrates may need surface preparation for example removal of paint finishes or existing renders where their load transfer to the wall cannot be confirmed.
- whenever there is doubt about the quality of an existing substrate, on-site testing shall be undertaken.
- where testing is undertaken no result shall be less than 0.08 N/mm² for a bonded ETICS to be used.

4.2.3.2 Substrates suitable for mechanically fixed ETICS

Concrete walls (acc. to EC 2) or masonry (acc. to EC 6) for which anchors have been accepted are deemed to satisfy the requirements.

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,
- safety in use of the ETICS according to the method of fixing.

4.2.4 Parameters for the installation of ETICS in the construction works or parts of construction works

The installation of the ETICS shall be carried out by appropriate personnel under the supervision of the person responsible for technical matters on the site.

The installation shall be in accordance with the manufacturer's specifications (instruction sheet)

5 Recommendations for the manufacturer

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.

5.2 Use, maintenance and repair of the works

It is accepted that the finishing coats shall normally be maintained in order to fully preserve the ETICS performance.

Maintenance includes:

- the repairing of localized damaged areas due to accidents,
- the application of various products, possible 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.

Comment: Care should be taken to use products which are compatible with the ETICS.

On behalf of Österreichisches Institut für Bautechnik

Dipl. – Ing. Dr. Rainer Mikulits
Managing Director

Original document is signed by Rainer Mikulits