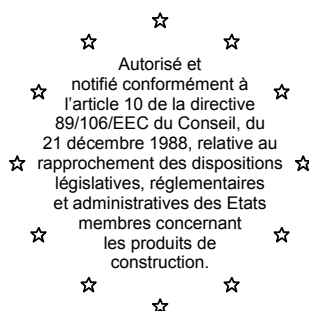


**UNION BELGE POUR L'AGREMENT
TECHNIQUE DANS LA
CONSTRUCTION**

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UBAtc
Member of EOTA

European Technical Approval **ETA-07/187**

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

Trade name:

Nom commercial:

MARMORIT WARM-WAND SYSTEM EPS/Lustro

Holder of approval:

Titulaire:

KNAUF MARMORIT GmbH

Ellighofen 6

D-79283 Bollschweil

**Generic type and use of
construction product:**

Type générique et utilisation prévue
du produit de construction :

**External Thermal Insulation Composite Systems with
rendering on polystyrene for use as external insulation to
the walls of buildings**

Système d'isolation thermique extérieure par enduit sur
polystyrène expansé destiné à l'isolation extérieure des
murs de bâtiments.

Validity from / to:

Validité du :

au :

16/10/2007

15/10/2012

Manufacturing plant:

Usine de fabrication :

KNAUF MARMORIT GmbH

**This European Technical Approval
contains:**

Le présent Agrément technique européen
contient :

18 pages including 1 annex

18 pages incluant 1 annex



European Organisation for Technical Approvals
Europäische Organisation für Technische Zulassungen
Organisation Européenne pour l'Agrément technique

I LEGAL BASES AND GENERAL CONDITIONS

1. This European Technical Approval is issued by the Union Belge pour l'Agrément Technique dans la Construction (UBAtc) 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/EEC²; and Regulation (EC) no. 1882/2003 of the European Parliament and of the Council³;
 - Belgian implementation of CPD according to the law of 25th of March 1996, coming into force on 11 September 1998⁴;
 - Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex of Commission Decision 94/23/EC⁵;
 - Guideline for European Technical Approval of « External Thermal Insulation Composite Systems with rendering » ETAG no. 004, edition 2000.
2. The UBAtc is authorised 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 with the European Technical Approval and for their fitness for the 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 the manufacturer other than those indicated on page 1; or manufacturing plants other than those laid down in the context of this European Technical Approval.
4. This European Technical Approval may be withdrawn by the UBAtc pursuant to information by the Commission according to Article 5 (1) of the 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 the 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 Approval.
6. The European Technical Approval is issued by the approval body in its official language. This version corresponds to the version circulated within EOTA. Translations into other languages have to be designated as such.

¹ Official Journal of the European Communities no. L 40, 11.2.1989, p.12

² Official Journal of the European Communities no. L 220, 30.8.1993, p.1

³ Official Journal of the European Union. L 284, 31.10.2003, p.1

⁴ Arrêté royal concernant les produits de construction (19 août 1998, décision ministérielle 11 septembre 1998)

⁵ Official Journal of the European Communities no. L 17, 20.1.1994, p.34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of product and intended use

The External Thermal Insulation Composite System, MARMORIT Warm-Wand EPS/Lustro, called ETICS in the following text, is designed and installed in accordance with the ETA-holder design and installation instructions, deposited with the UBAtc. The ETICS comprises the following components, which are factory-produced by the ETA-holder or a supplier.

1.1. Definition of the construction product (kit)

	Components (see §2.3 for further description, characteristics and performances of the components)	Coverage (kg/m²)	Thickness (mm)
Insulation materials with associated methods of fixing	BONDED ETICS (partially or fully bonded. National application documents shall be taken into account)		
	- Insulation product: Factory prefabricated expanded polystyrene (EPS) according to EN 13163 - standard EPS - elastified EPS		≤ 400 ≤ 200
	- Adhesives - MARMORIT SM700 (CEM I cement based powder requiring addition of 26 - 30% water) - MARMORIT Lusto (CEM I based powder requiring addition of 45 - 49% water)	3,5 3,0	
Insulation materials with associated methods of fixing	MECHANICALLY FIXED ETICS WITH PROFILES		
	- Insulation product: Factory prefabricated expanded polystyrene (EPS) according to EN 13163 - standard EPS - Supplementary adhesives: (see bonded ETICS) - Profiles (Halteleiste – Verbindungsleiste PVC) Polyvinyl chloride (PVC) profiles: - Anchors for profiles: - MARMORIT Schienen-Nageldübel - MARMORIT Schienen-Schraubdübel		60 to 200

Insulation materials with associated methods of fixing	MECHANICALLY FIXED ETICS WITH ANCHORS AND SUPPLEMENTARY ADHESIVE - Insulation product: Factory prefabricated expanded polystyrene (EPS) according to EN 13163 - standard EPS - elastified EPS - Supplementary adhesives (see bonded ETICS) - Anchors for EPS - Hilti X-IE 6 - Hilti XI-FV - Hilti SX-FV - SDM-T plus - SDM-T plus U - Ejotharm ST U - Ejotharm STR U - TERMOZ 8U - TERMOZ 8N - TERMOZ KS 8		60 to 400 80 to 200
Base coat	MARMORIT LUSTRO (CEM I based powder requiring addition of 25% water)	5,0 – 7,0	5 - 7
Glass fibres meshes	MARMORIT ARMIERGEWEBE Mesh size: 5,0 x 5,0 mm ²	0,200	
Finishing coats	- Ready to use paste – silicon-acrylate binder: - MARMORIT CONNI (particle size 1,5 – 2 - 3 mm) - Cement based powder requiring the addition of water: - MARMORIT CARRARA addition of 24 - 27 % water - particle size 1 mm - MARMORIT MAK 3 (addition of 24 - 30 % water - particle size 2 – 3 – 4 mm) - MARMORIT NOBLO (addition of 26 – 30 % water - particle size 1,5 – 2 - 3 mm) - MARMORIT PICO (addition of 38- 40 % water - particle size 0,6 mm) - MARMORIT ROLLS (addition of 22- 32 % water - particle size 2 – 3 mm) - MARMORIT RP 240 (addition of 26- 33 % water - particle size 2 – 3 – 5 mm) - MARMORIT SP 260 (addition of 24 - 32 % water - particle size 2 – 3 – 5 mm)	1,4 – 3,7 3 – 8 11 – 13 2,3 – 3,7 4 4 4 – 5 3,2 - 5	1,5 - 3 3 - 8 6 - 8 1,5 - 3 3 3 2 - 5 2 - 5
Ancillary materials	Description in accordance with § 3.2.2.5 of the ETAG 004 and decorative coatings compatible with the ETICS to be applied to the finishing coat. Remains 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). 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 that 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, provide that the conditions laid down in sections 4.2, 5.1 and 5.2 for 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

2.1. 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 – edition March 2000 (called ETAG no. 004 in this ETA).

2.2. ETICS characteristics

2.2.1 Reaction to fire

Euroclass according to EN 13501-1: 2002: F (no performance determined).

2.2.2 Water absorption (capillarity test)

- Base coat MARMORIT Lustro
 - Water absorption after 1 hour: $< 1 \text{ kg/m}^2$
 - Water absorption after 24 hours: $\geq 0.5 \text{ kg/m}^2$

• Rendering systems:

		Water absorption after 24 hours	
		< 0.5 kg/m ²	≥ 0.5 kg/m ²
Rendering system: MARMORIT Lustro base coat + Finishing coats: indicated here after	MARMORIT conni		X
	MARMORIT CARRARA		X
	MARMORIT MAK 3		X
	MARMORIT NOBLO		X
	MARMORIT pico		X
	MARMORIT ROLLS		X
	MARMORIT RP 240		X
	MARMORIT SP 260		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 the finishing coats **have been assessed as freeze/thaw resistant** according to the simulated method.

2.2.5 Impact resistance

The resistance to hard body impact (3 Joules and 10 Joules) leads to the following categories. The resistance to perforation is not determined as the thickness of the base coat is ca 6 mm.

Rendering systems: MARMORIT LUSTRO + Finishing coats Indicated hereafter		MARMORIT ARMIERGEWEBE	2 layers MARMORIT ARMIERGEWEBE
	MARMORIT conni	Category II	Category I
	MARMORIT CARRARA	Category II	No performance determined
	MARMORIT MAK 3	Category II	No performance determined
	MARMORIT NOBLO	Category II	Category I
	MARMORIT pico	Category II	Category I
	MARMORIT ROLLS	Category II	No performance determined
	MARMORIT RP 240	Category II	Category I
	MARMORIT SP 260	Category II	Category I

2.2.6 Water vapour permeability

		Equivalent air thickness s_d (m)
Rendering system: MARMORIT LUSTRO + finishing coat indicated hereafter:	MARMORIT conni	$\leq 2,0$ (Test result obtained with particle size 5 mm: 0,3)
	MARMORIT CARRARA	$\leq 2,0$ m (Test result obtained with a thickness of CARRARA of 5 mm: 0,2 m)
	MARMORIT MAK3	$\leq 2,0$ m (Test result obtained with particle size 3 mm: 0,2 m)
	MARMORIT NOBLO	$\leq 2,0$ m (Test result obtained with particle size 3 mm: 0,1 m)
	MARMORIT pico	$\leq 2,0$ m (Test result obtained with a thickness of pico of 3 mm: 0,1 m)
	MARMORIT ROLLS	$\leq 2,0$ m (Test result obtained with a particle size 3 mm : 0,1 m)
	MARMORIT RP 240	$\leq 2,0$ m (Test result obtained with particle size 5 mm: 0,1 m)
	MARMORIT SP 260	$\leq 2,0$ m (Test result obtained with particle size 5 mm: 0,1 m)

2.2.7 Dangerous substances

A written declaration was submitted by the ETA-holder.

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

- Base coat onto expanded polystyrene

Conditionings		
Initial state	Samples after the hygrothermal cycles followed by freeze/thaw test	After freeze/thaw cycles (on samples)
≥ 0.08 MPa	≥ 0.08 MPa	≥ 0.08 MPa

- Adhesives onto substrate and expanded polystyrene (safety in use for bonded ETICS)

		Conditionings		
		Initial	48 h immersion in water + 2 h 23°C/50% RH	48 h immersion in water + 7 days 23°C/50% RH
MARMORIT SM700	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
	Insulation product	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa
MARMORIT Lustro	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
	Insulation product	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa

The ETICS can so be installed on the substrate with application of the adhesive on a minimal surface of 40%.

2.2.8.2 Fixing strength (displacement test)

Test not required because the ETICS fulfils the following criteria:

- $E \times d < 50.000$ N/mm (E: modulus of the base coat without mesh - d: mean dried thickness of the base coat)

2.2.8.3 Wind load resistance:

a) Safety in use of mechanically fixed ETICS using profiles

Characteristics of the EPS panels for which the following failure loads apply	Thickness (mm)		≥ 60
	Tensile strength perpendicular to the face (kPa)		≥ 150
	Shear modulus (MPa)		$\geq 1,5$
Failure loads (N) (Static Foam Block Test)	Horizontal profiles fixed every 30 cm	(500 x 500) mm ² panels	Minimum value: 826 Average value: 860

b) Safety in use of mechanically fixed ETICS using anchors

The following values apply only for the combination of the anchors and panels mentioned in the first lines of each table:

Anchors for which the following failure loads apply	Plate diameter (mm)		≥ 60
Characteristics of the insulation panels for which the following failure loads apply	Thickness (mm)		≥ 60
	Tensile strength perpendicular to the face of the EPS (kPa)		≥ 100
Failure loads (N)	Anchors not placed at the panel joints	R_{panel}	Minimal: 510 Average: 520
	Anchors placed at the panel joints	R_{joint}	Minimal: 400 Average: 430

Anchors for which the following failure loads apply	Plate diameter (mm)		≥ 60
Characteristics of the EPS panels for which the following failure loads apply	Thickness (mm)		≥ 80
	Tensile strength perpendicular to the face of the EPS (kPa)		≥ 80
Failure loads (N)	Anchors not placed at the panel joints	R_{panel}	Minimal: 350 Average: 360
	Anchors placed at the panel joints	R_{joint}	Minimal: 300 Average: 310

The wind load resistance is calculated as follows:

$$R_d = \frac{R_{\text{panel}} \times n_{\text{panel}} + R_{\text{joint}} \times n_{\text{joint}}}{\gamma}$$

n_{panel} : number (per m²) of anchors not placed at the panel joints
 n_{joint} : number (per m²) of anchors placed at the panel joint
 γ : national safety factor

2.2.9 Thermal resistance

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:

$\chi_p \cdot n$ influence of thermal bridges. 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/ (m².K)

n: number of anchors (through insulation product) 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 not 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/ (m².K) 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 13163) in (m².K)/W

R_{render} : thermal resistance of the render (about 0.02 (m².K)/W)

$R_{\text{substrate}}$: thermal resistance of the substrate of the building (concrete, brick ...) in (m².K)/W)

R_{se} : external superficial thermal resistance (m².K)/W)

R_{si} : internal superficial thermal resistance (m².K)/W)

The influence of the PVC profiles is negligible.

2.2.10 Aspect of durability and serviceability

2.2.10.1 Experience on site of the system

An extensive experience on site has been assessed satisfactory by the Approval Body Germany.

2.2.10.2 Bond strength after ageing

Rendering system: MARMORIT Lustro + finishing coat indicated hereafter:	Finishing coat	Bond strength
	MARMORIT conni	$\geq 0,08 \text{ MPa}$
	MARMORIT CARRARA	
	MARMORIT pico	
	MARMORIT ROLLS	
	MARMORIT RP 240	
	MARMORIT SP 260	
	MARMORIT MAK3	
	MARMORIT NOBLO	

2.3. Components' characteristics

2.3.1 Insulation product

Factory prefabricated, uncoated panels made of expanded polystyrene (EPS) to EN 13163 with the following designation code and the other properties having the description in the table below shall be used.

Descriptions and characteristics	EPS panels		
	For bonded ETICS	For mechanically fixed ETICS	
		With anchors and additional bonding	With profiles and additional bonding
Reaction to fire / EN 13501-1	Euroclass F		
Thermal resistance ($\text{m}^2 \cdot \text{K/W}$)	Defined in the CE marking in reference to EN 13163		
Thickness (mm) / EN 823	EPS-EN 13163 – T1 and T2	EPS-EN 13163 – T2	+/- 1,5
Length (mm) / EN 822	EPS-EN 13163 – L2		+/- 1
Width (mm) / EN 822	EPS-EN 13163 – W2		+/- 1
Squareness (mm) / EN 824	EPS-EN 13163 – S2		

Flatness (mm) / EN 825		EPS-EN 13163 – P4	
Surface condition		Cut surface (homogeneous and without “skin”)	
Dimensional stability under:	Specified temperature and humidity / EN 1604	EPS-EN 13163 DS (70,1) ¹ DS(70,90) ¹	48h/70°C 500 x 500 mm panels: < 0,30% and no value > 0,35%
	Laboratory conditions / EN 1603	EPS-EN 13163-DS(N) ²	≤ 0,15%
Water absorption (partial immersion) / EN 1609		EPS-EN 13163 WL(T) ¹	
Water vapour diffusion resistance factor (μ) / EN 12086 – EN 13163		20 to 60	
Tensile strength perpendicular to the faces in dry conditions / (kPa)/EN 1607 - standard EPS		≥ 100 EPS-EN-13163 –TR 100, TR 150	≥ 150 EPS EN 13163 TR 150
- elastified EPS		≥ 80 EPS-EN-13163 – TR 80	Not used
Shear strength (MPa) / EN 12090		≥ 0,02	≥ 0,05
Shear modulus (MPa) / EN 12090 - standard EPS		≥ 1,0	≥ 1,5
- elastified EPS (*)		≥ 0,3	Not used
(*) Elastified EPS is standard EPS, which is put for a short time under high pressure in order to reduce the dynamic stiffness. As a result the sound insulation of the wall with elastified EPS is better than a wall with standard EPS.			

2.3.2 Anchor

The characteristic pull-out strength of anchor is determined according to ETAG 004 clause 5.3.4.1.

- Anchors for profiles:

Trade name	Characteristic resistance in the substrate
MARMORIT Schienen-Nageldübel	ETA-03/0019
MARMORIT Schienen-Schraubdübel	ETA 02/0019

- Anchors for insulation product

Trade name	Plate diameter (mm)	Characteristic resistance in the substrate
Hilti X-IE 6	≥ 60	ETA-00/0007
Hilti XI-FV	≥ 60	ETA-03/0004
Hilti SX-FV	≥ 60	ETA-03/0005
EJOT SDM-T plus SDM-T plus U	≥ 60	ETA-04/0064
Ejotharm ST U	≥ 60	ETA-02/0018
Ejotharm STR U	≥ 60	ETA 04/0023
TERMOZ 8 U	≥ 60	ETA-02/0019
TERMOZ 8 N	≥ 60	ETA -03/0019
TERMOZ KS 8	≥ 60	ETA-04/0114

2.3.3 Profiles

- Polyvinyl chloride (PVC) profiles: PVC-U, E P, 082-25-28 (EN ISO 1163-1:1999) (see Annex 1)
 - Horizontal fixed profiles each 30 cm
 - Vertical connection profiles: 49,4 cm
- Pull-through resistance of fixings from profile: ≥ 500 N.

2.3.4 Render

The average value of the crack width of the base coat with the glass fibre mesh MARMORIT Armierungsgewebe fein, measured at a render strain value of 1,0 % is about 0,12 mm.

2.3.5 Glass fibres meshes

	Alkali resistance	
	Marmorit Armierungsgewebe	
	Warp	Weft
Residual strength after ageing (N/mm)	≥ 20	≥ 20
Relative residual resistance: % (after ageing) of the strength in the as delivered state	≥ 50	≥ 50

3 Evaluation 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 applies with regard to the reaction of fire.

Considering the Euroclass 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 control plan.

b) Tasks for the Notified Body:

4. Certification of the 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 initial/raw/constituent materials (as relevant) 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 shall make 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 the 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" is laid down in the context of the factory production control system operated by the manufacturer and deposited at the UBAtc.

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

The results of the factory production control shall be recorded and evaluated in accordance with the provisions of the "control plan".

3.2.1.2 Other tasks of the manufacturer

The manufacturer shall, on the basis of a contract, involve bodies which 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 the sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the notified bodies involved.

For initial type testing, 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 UBAtc 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 Bodies

The notified bodies shall perform the:

- Initial inspection of factory and of factory production control
The notified body (bodies) shall ascertain that, in accordance with the control plan, 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 (bodies) shall visit the factory:
 - At least once a year for surveillance of this manufacturer having an FPC system complying with ISO 9001:2000 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 plan.

These tasks shall be performed in accordance with the provisions laid down in the Control plan of this European Technical Approval.

The notified bodies shall retain essential points of their actions referred to above and state the results obtained and conclusions drawn in written reports.

The Notified body (bodies) involved by the manufacturer shall issue an EC certificate of conformity of 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 are no longer fulfilled, the certification body shall withdraw the certificate of conformity and inform the UBAtc without delay.

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 EC certificate of conformity of Factory Production Control,
- The number of the European Technical Approval,
- The ETICS trade name,

- The number of the ETAG.

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

4.1. Manufacturing

The European Technical Approval is issued for the ETICS on the basis of agreed data/information, deposited with the UBAtc, which identifies the ETICS that has been assessed and judged. Changes to the ETICS or 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 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. This information can be given using reproductions of the respective parts of the European Technical Approval. 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 depth, characteristic resistance ... – in the ETA of the anchor and/or in the annex(es) of this ETA),
 - 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 the manufacturers

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 have to be protected against damage.

It is the responsibility of the manufacturer 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 and ad hoc reparation)

Necessary repairs should be done rapidly.

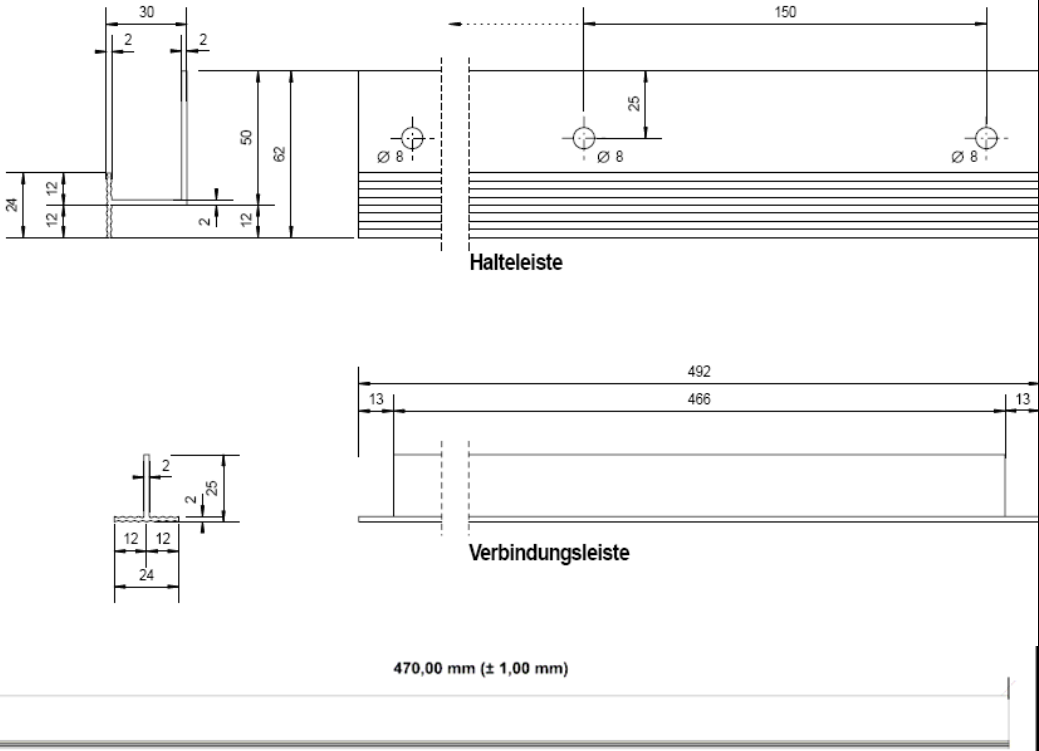
It is important to be able to carry out maintenance as far as possible using readily available products and equipment, without spoiling appearance.

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

**The original French version is
signed by
the UBAtc
representative**

 PVC - Profile

Werkstoff:
PVC-hart nach DIN 7748 (PVC-U; E D L P; 080-25-28)



ETICS MARMORIT WARM-WAND SYSTEM EPS/Lustro	Annex 1 Of the European Technical Approval
Horizontal and vertical PVC profiles	