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European Technical Assessment

ETA 10/0079
of 26/02/2016

General Part

Technical Assessment Body issuing the ETA	Technický a zkušební ústav stavební Praha, s.p.
Trade name of the construction product	**MITECH M**
Product family to which the construction product belongs	Product area code: 4 External Thermal Insulation Composite Systems with rendering on mineral wool MW for the use as external insulation to walls of buildings
Manufacturer	MITECH CHEMIA BUDOWLANA s.c. Miłosz i Piotr Szupina ul. Tetmajera 87 34-300 Żywiec Republic of Poland www.mitech.pl
Manufacturing plant	MITECH CHEMIA BUDOWLANA s.c. Miłosz i Piotr Szupina ul. Tetmajera 87 34-300 Żywiec Republic of Poland
This European Technical Assessment contains	21 pages including 4 Annexes which form an integral part of this assessment. Annex No. 4 Control Plan contains confidential information and is not included in the European Technical Assessment when that assessment is publicly disseminated.
This European Technical Assessment is issued in accordance with regulation (EU) No. 305/2011 on the basis of	ETAG 004, edition 2013, used as European Assessment Document (EAD)
This European Technical Assessment replaces	ETA-10/0079 issued on 16/03/2010

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Specific part

1 TECHNICAL DESCRIPTION OF THE PRODUCT

1.1 Definition and composition of the kit

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

The ETICS kit comprises a prefabricated insulation product of mineral wool (MW) to be mechanically fixed onto a wall. The methods of fixing and the relevant components are specified in the table below. The insulation product is faced with a rendering system consisting of one or more layers (site applied), one of which contains reinforcement. The rendering system is applied directly to the insulating boards, without any air gap or disconnecting layer.

The ETICS may include special fittings (e.g. base profiles, corner profiles ...) to treat details of ETICS (connections, apertures, corners, parapets, sills ...). Assessment and performance of these components is not addressed in this ETA, however the ETICS manufacturer is responsible for adequate compatibility and performance within the ETICS when the components are delivered as a part of the kit.

Composition of the ETICS

Table No. 1

	Components	Coverage (kg/m^2)	Thickness (mm)
Insulation products with associated methods of fixing	**Mechanically fixed ETICS with anchors and supplementary adhesive (see Cl. 3.4.5 and Annex No. 2 for possible associations MW/anchors)**		
	• Insulation product: EPS according to EN 13162: 2012 see Annex No. 1 for product characteristics	/	50 - 220
	• Supplementary adhesives: - **MITECH KS-W** - cement based powder requiring addition of water 0.25 l/kg	3.0 to 4.0 (dry matter)	max. 10
	• Anchors see Annex No. 2 for individual product characteristics. In addition to the following list. Other anchors can be used provided that they comply with the requirements introduced in the Annex No. 2.		
	- **Ejotherm STR U, STR U 2G** plastic screw-in anchors - **EJOT H1 eco and EJOT H4 eco** plastic nailed-in anchors - **KOELNER TFIX-8M** plastic nailed-in anchors - **KOELNER KI-10, KI-10PA, KI-10M** plastic nailed-in anchors	ETA-04/0023 ETA-11/0192 ETA-08/0336 ETA-07/0291	

	Components	Coverage (kg/m^2)	Thickness (mm)
Insulation products with associated methods of fixing	- **KOELNER TFIX-8S and TFIX-8ST** plastic screw-in anchors	ETA-11/0144	
	- **WKRET - MET LFM o 8** plastic nailed-in anchors	ETA-06/0080	
	- **WKRET – MET LMX ø 8** plastic nailed-in anchors	ETA-09/0001	
	- **WKTHERM ø 8** plastic screw-in anchors	ETA-11/0232	
	- **Klimas Wkret-med screw-in plug eco-drive, eco-drive S** plastic screw-in anchors	ETA-13/0107	
	- **WKTHERM S** plastic screw-in anchors	ETA-13/0724	
Base coat	- **MITECH KO-W** - cement based powder requiring addition of water 0.25 l/kg	3.0 – 3.5 dry matter	3.0
Reinforcement	• Standard mesh applied in single layer see Annex No. 3 for product characteristics:		
	- **AKE 145**	/	/
	- **OMFA 117S**	/	/
Key coat	- **MITECH FX MICROSPHERE** - to be used with acrylic and mineral binder finishing coats - pigmented ready to use liquid - **MITECH GSK MICROSPHERE** - to be used with silicate binder finishing coats - pigmented ready to use liquid - **MITECH GSL MICROSPHERE** - to be used with siloxane binder finishing coats - pigmented ready to use liquid - **MITECH GSI MICROSPHERE** - to be used with silicone binder finishing coats - pigmented ready to use liquid	0.25 – 0.28	0.2
	- **MITECH FOX** - to be used with mineral binder finishing coats - pigmented ready to use liquid	0.10 – 0.14	0.1

	Components	Coverage (kg/m^2)	Thickness (mm)
Finishing coats	• Powder requiring addition of water 0.25 l/kg – mineral binder - **MITECH TMB** - grain structure (grain size 1.5; 2.0 mm) - **MITECH TMK** - ribbed structure (grain size 1.5; 2.0 mm)	2.5 – 3.5 2.0 – 3.0	Regulated by particle size
	• Ready to use paste - silicate binder: - **MITECH TSK BR MICROSPHERE** - grain structure (grain size 1.5; 2.0 mm) - **MITECH TSK KR MICROSPHERE** - ribbed structure (grain size 1.5; 2.0 mm)	2.3 – 3.5	Regulated by particle size
	• Ready to use paste – siloxane binder: - **MITECH TSL BR MICROSPHERE** - grain structure (grain size 1.5; 2.0 mm) - **MITECH TSL KR MICROSPHERE** - ribbed structure (grain size 1.5; 2.0 mm)	2.3 – 3.5	Regulated by particle size
	• Ready to use paste – silicone and silicate binder: - **MITECH TSISI BR MICROSPHERE** - grain structure (grain size 1.5; 2.0 mm) - **MITECH TSISI KR MICROSPHERE** - ribbed structure (grain size 1.5; 2.0 mm)	2.3 – 3.5	Regulated by particle size
	• Ready to use paste – silicone binder: - **MITECH TSI BR MICROSPHERE** - grain structure (grain size 1.5; 2.0 mm) - **MITECH TSI KR MICROSPHERE** - ribbed structure (grain size 1.5; 2.0 mm)	2.3 – 3.5	Regulated by particle size

	Components	Coverage (kg/m^2)	Thickness (mm)
Protection coat to be used only with mineral finishing coat	• It is compulsory to use one of the protection coat if a mineral binder finishing coat is used (MITECH TMB, TMK) - **MITECH FSK MICROSPHERE** - ready to use liquid, dilute with max. 10 % of water - **MITECH FSL MICROSPHERE** - ready to use liquid, dilute with max. 10 % of water - **MITECH FSI MICROSPHERE** - ready to use liquid, dilute with max. 10 % of water - **MITECH FSIR MICROSPHERE** - ready to use liquid, dilute with max. 10 % of water	0.25 – 0.30	0.2
Ancillary materials	Remain under the manufacturer's responsibility		

2 SPECIFICATION OF THE INTENDED USE(S) IN ACCORDANCE WITH THE APPLICABLE EUROPEAN ASSESSMENT DOCUMENT (HEREINAFTER EAD)

2.1 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 characteristics of the walls shall be verified prior to use of the ETICS, especially regarding conditions for reaction to fire classification and for fixing of the ETICS either by bonding or mechanically. 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 airtightness of the building structure.

The choice of the method of fixing depends on the characteristics of the substrate, which may need preparation (see cl. 7.2.1 of the ETAG 004) and shall be done in accordance with the national instructions.

The ETICS belong to Category S/W2, according to EOTA Technical Report No 034.

2.2 Manufacturing

The European Technical Assessment is issued for the ETICS on the basis of agreed data/information, deposited with the Technical and Test Institute Prague, which identifies the ETICS that has been assessed and judged.

2.3 Design and installation

The installation instructions including special installation techniques and provisions for the qualification of the personnel are given in the manufacturer's technical documentation.

Design, installation and execution of ETICS are to be in conformity with national documents. Such documents and the level of their implementation in Member States' legislation are different. Therefore, the assessment and declaration if performance are done taking into account general assumptions introduced in the chapters 7.1 and 7.2 of ETAG 004 used as EAD, which summarize how information introduced in the ETA and related documents is intended to be used in the construction process and gives advice to all parties interested when normative documents are missing.

2.4 Packaging, transport and storage

The information on packaging, transport and storage is given in the manufacturer's technical documentation. It is the responsibility of the manufacturer(s) to ensure that this information is made know to the concerned people.

2.5 Use, maintenance and repair

The finishing coat shall normally be maintained in order to fully preserve the ETICS performance. Maintenance includes at least:

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

Necessary repairs should be performed as soon as the need has been identified.

It is important to be able to carry out maintenance as far as possible using readily available products and equipment, without spoiling appearance. Only products which are compatible with the ETICS shall be used.

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

3 PERFORMANCE OF THE PRODUCT AND REFERENCES TO THE METHODS USED FOR ITS ASSESSMENT

The performances of the kit as described in this chapter are valid provided that the components of the kit comply with Annexes 1 – 4.

3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

3.2 Safety in case of fire (BWR 2)

3.2.1 Reaction to fire (ETAG 004 - clause 5.1.2.1, EN 13501-1+A1)

Table No. 2

Configuration	Heat of combustion	Flame retardant content	Euroclass according to EN 13501-1+ A1
Adhesive	Max. 0.05 MJ/kg	No flame retardant	**A2 - s1, d0**
boards of mineral wool MW maximal density 220 kg/m^3	In quantity ensuring Euroclass A1 or A2 according to 13501-1 + A1	/	
Base coat render	Max. 0.31 MJ/kg	No flame retardant	
Glass fibre mesh	Max 7.81 MJ/kg	No flame retardant	
Renderings with mineral binder Renderings with silicate binder Renderings with siloxane binder Renderings with silicone and silicate binder Renderings with silicone binder	Max. 2.46 MJ/kg	No flame retardant	

Note: A European reference fire scenario has not been laid down for facades. In some Member States, the classification of ETICS according to EN 13501-1+A1 might not be sufficient for the use in facades. An additional assessment of ETICS according to national provisions (e.g. on the basis of a large scale test) might be necessary to comply with Member State regulations, until the existing European classification system has been completed.

3.3 Hygiene, health and environment (BWR 3)

3.3.1 Water absorption (ETAG 004 - clause 5.1.3.1)

- Base coat **MITECH KO-W:**

Water absorption after 1 hour < 1 kg/m²

Water absorption after 24 hours < 0.5 kg/m²

- Rendering system:

Table No. 3

			Water absorption after 24 hours	
			< 0.5 kg/m²	≥ 0.5 kg/m²
Rendering system: Base coat + finishing coats as indicated here:	MITECH TMB MITECH TMK with protection coats	MITECH FSK	X	
		MITECH FSL		X
		MITECH FSI		X
		MITECH FSIR	X	
	MITECH TSK BR MICROSPHERE MITECH TSK KR MICROSPHERE		X	
	MITECH TSL BR MICROSPHERE MITECH TSL KR MICROSPHERE		X	
	MITECH TSISI BR MICROSPHERE MITECH TSISI KR MICROSPHERE		X	
	MITECH TSI BR MICROSPHERE MITECH TSI KR MICROSPHERE		X	

3.3.2 Watertightness (ETAG 004 - clause 5.1.3.2)

3.3.2.1 Hygrothermal behavior

Pass (without defects).

3.3.2.2 Freeze–thaw behavior

Finishing coats that proved to have water absorption value, in accordance with water absorption test, after 24 hours higher than 0.5 kg/m² were subjected to the freeze-thaw test and are assessed as freeze-thaw resistant.

Pass (without defects, satisfactory bond strength).

3.3.3 Impact resistance (ETAG 004 - clause 5.1.3.3)

Table No. 4

Render coating: base coat + reinforcement and finishing coats listed hereafter:	**Single standard mesh**
MITECH TMB **MITECH TMK** with protection coats **MITECH FSK**, **MITECH FSL**, **MITECH FSI**, **MITECH FSIR**	Category III
MITECH TSK BR MICROSPHERE **MITECH TSK KR MICROSPHERE**	Category III
MITECH TSL BR MICROSPHERE **MITECH TSL KR MICROSPHERE**	Category II
MITECH TSISI BR MICROSPHERE **MITECH TSISI KR MICROSPHERE**	Category II
MITECH TSI BR MICROSPHERE **MITECH TSI KR MICROSPHERE**	Category II

3.3.4 Water vapor permeability (ETAG 004 - clause 5.1.3.4)

Table No. 5

Rendering system: base coat + reinforcement and finishing coats indicated hereafter		**Equivalent air layer thickness s_d** **Single standard mesh**
MITECH TMB **MITECH TMK** with protection coats	**MITECH FSK**	≤ 0.19 m
	MITECH FSL	≤ 0.17 m
	MITECH FSI	≤ 0.17 m
	MITECH FSIR	≤ 0.24 m
MITECH TSK BR MICROSPHERE **MITECH TSK KR MICROSPHERE**		≤ 0.25 m
MITECH TSL BR MICROSPHERE **MITECH TSL KR MICROSPHERE**		≤ 0.28 m
MITECH TSISI BR MICROSPHERE **MITECH TSISI KR MICROSPHERE**		≤ 0.44 m
MITECH TSI BR MICROSPHERE **MITECH TSI KR MICROSPHERE**		≤ 0.30 m

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

No performance assessed.

3.4 Safety and accessibility in use (BWR 4)

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

- Initial state: bond strength ≥ 0.013 MPa but a cohesive failure in the insulation product
- After hygrothermal cycles: bond strength ≥ 0.014 MPa but a cohesive failure in the insulation product
- After freeze-thaw cycles: test not required (see Cl. 3.3.2.2 of this ETA)

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

Table No. 6

		Initial state	48 hours immersion in water + 2 hours. 23 °C/50 % RH	48 hours immersion in water + 7 days 23 °C/50 % RH
MITECH KS-W	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
	MW panel (TR15)	< 0.08 MPa failure in the insulation product	< 0.03 MPa failure in the insulation product	< 0.08 MPa failure in the insulation product

3.4.3 Bond strength after ageing (ETAG 004 - clauses 5.1.7.1)

- After ageing: bond strength ≥ 0.013 MPa but a cohesive failure in the insulation product
- After freeze-thaw cycles: test not required ≥ 0.011 MPa but cohesive failure in insulation product.

3.4.4 Fixing strength (ETAG 004 - clause 5.1.4.2)

Test not required (no limitation of ETICS length).

3.4.5 Wind load resistance (ETAG 004 - clause 5.1.4.3)

- Insulation product MW board (TR15)

Table No. 7

Anchor description	Trade name		**see Annex No. 2**	
	Assembly method		Surface assembly	Countersunk assembly
	Plate diameter (mm)		60 or more	
MW board characteristics (TR15)	Thickness (mm)		≥ 50	≥ 100
	Tensile strength (kPa)		≥ 15	
Maximal load	Anchors placed at the body of the insulation product	R_{panel} in dry conditions	min. value: **0.43 kN** mean value: **0.45 kN**	
		R_{panel} in wet conditions	min. value: **0.27 kN** mean value: **0.30 kN**	
	Anchors placed at joints of the insulation product	R_{joint} in dry conditions	min. value: **0.38 kN** mean value: **0.40 kN**	
		R_{joint} in wet conditions	min. value: **0.20 kN** mean value: **0.22 kN**	

3.4.6 Render strip tensile test

- Base coat **MITECH KO-W**

Table No. 8

		Glass fiber mesh **AKE 145** (manufacturer: SAINT-GOBAIN ADFORS CZ s.r.o.)					
		Crack width W_{typ} [mm]/ number of cracks at relative elongation ε					
Load direction		**ε = 0.3 %**	**ε = 0.5 %**	**ε = 0.8 %**	**ε = 1.0 %**	**ε = 1.5 %**	**ε = 2.0 %**
Warp	Sample No. 1	-	-	≤ 0.05/1	≤ 0.05/3	≤ 0.10/5	≤ 0.15/6
	Sample No. 2	-	≤ 0.05/1	≤ 0.05/2	≤ 0.05/5	≤ 0.05/6	≤ 0.10/7
	Sample No. 3	-	-	≤ 0.05/1	≤ 0.05/3	≤ 0.10/5	≤ 0.15/6
Weft	Sample No. 1	-	≤ 0.05/1	≤ 0.05/2	≤ 0.05/4	≤ 0.10/6	≤ 0.15/7
	Sample No. 2	-	-	≤ 0.05/1	≤ 0.05/4	≤ 0.10/6	≤ 0.15/8
	Sample No. 3	-	-	≤ 0.05/2	≤ 0.05/5	≤ 0.10/7	≤ 0.10/8

Table No. 9

		Glass fiber mesh **117S** (distributor: Technical textiles, s.r.o.)					
		Crack width W_{typ} [mm]/ number of cracks at relative elongation ε					
Load direction		**ε = 0.3 %**	**ε = 0.5 %**	**ε = 0.8 %**	**ε = 1.0 %**	**ε = 1.5 %**	**ε = 2.0 %**
Warp	Sample No. 1	-	-	≤ 0.05/2	≤ 0.10/3	≤ 0.15/4	≤ 0.15/7
	Sample No. 2	-	-	≤ 0.05/3	≤ 0.10/5	≤ 0.10/6	≤ 0.15/7
	Sample No. 3	-	-	≤ 0.05/3	≤ 0.05/5	≤ 0.10/6	≤ 0.10/7
Weft	Sample No. 1	-	-	≤ 0.05/2	≤ 0.10/5	≤ 0.10/8	≤ 0.15/9
	Sample No. 2	-	-	≤ 0.05/1	≤ 0.05/3	≤ 0.10/7	≤ 0.15/9
	Sample No. 3	-	-	≤ 0.05/2	≤ 0.05/4	≤ 0.10/8	≤ 0.15/8

The characteristic crack width W_{rk} [mm] at a render strain value of 0.8 %, determined with simple Method II pursuant to ETAG 004, cl. 5.5.4.1.

Table No. 10

	Characteristic width of cracks W_{rk} [mm] at render strain value of 0.8 %	
	Warp direction	**Weft direction**
AKE 145	0.050	0.050
OMFA 117S	0.050	0.050

The width of cracks in reinforced base coat at 2% elongation is equal or lower than 0.15 mm.

3.5 Protection against noise (BWR 5)

3.5.1 Airborne sound insulation

No performance assessed.

3.6 Energy economy and heat retention (BWR 6)

3.6.1 Thermal resistance

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

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

Where:

$\chi_p \times n$ has only to be taken into account if it is greater than 0.04 W/(m².K)

U_c global (corrected) thermal transmittance of the covered wall (W/ (m².K)

n number of anchors (through insulation product) per 1 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
($\chi_p \times n$ negligible for n < 20)

= 0.004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material
($\chi_p \times n$ negligible for n < 10)

= negligible for anchors with plastic nails (reinforced or not with glass fibres …)

U thermal transmittance of the current part of the covered wall (excluding thermal bridges) (W/ (m².K)) determined as follows:

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

Where:

R_i thermal resistance of the insulation product (according to declaration in reference to EN 13162) in (m².K)/W

R_{render} thermal resistance of the rendering system (about 0.02 in (m².K)/W) or determined by test according to EN 12667 or EN 12664

$R_{substrate}$ 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

The value of thermal resistance of each insulation product shall be given in the manufacturer's documentation along with the possible range of thicknesses. In addition, the point thermal conductivity of anchors shall be given when anchors are used in the ETICS.

3.7 Sustainable use of natural resources (BWR 7)

No performance assessed.

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

According to the European Commission decision 97/556/EC amended by the European Commission decision 2001/596/EC, the AVCP systems 1 and 2+ are valid (further described in Annex V to Regulation (EU) No. 305/2011).

Table No. 11

Product(s)	Intended use(s)	Level(s) or class(es) (Reaction to fire)	System(s)
External thermal insulation composite systems/kits (ETICS) with rendering	In external wall subject to fire regulations	A1 (1), A2 (1), B (1), C (1)	1
		A1 (2), A2 (2), B (2), C (2), D, E, (A1 to E) (3), F	2+
	In external wall not subject to fire regulations	Any	2+

(1) Products/materials for which a clearly identifiable stage in the production process results in an improvement of he reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)

(2) Products/materials not covered by footnote (1)

(3) Products/materials that do not require to be tested for reaction to fire (e.g. Products/materials of Classes A1 according to Commission Decision 96/603/EC)

5 TECHNICAL DETAILS NECESSARY FOR THE IMPLEMENTATION OF THE AVCP SYSTEM, AS PROVIDED FOR IN THE APPLICABLE EAD

In order to help the Notified Body to make an evaluation of conformity, the Technical Assessment Body issuing the ETA shall supply the information detailed below. This information together with the requirements given in EC Guidance Paper B will generally form the basis on which the factory production control (FPC) is assessed by the Notified Body.

This information shall initially be prepared or collected by the Technical Assessment Body and shall be agreed with the manufacturer. The following gives guidance on the type of information required:

1) ETA

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.

2) Basic manufacturing process

The basic manufacturing process is described in sufficient detail to support the proposed FPC methods.
The different components of the ETICS are generally manufactured using conventional techniques. Any critical process or treatment of the components which affects performance are highlighted in the manufacturer's documentation.

3) Product and materials specifications

The manufacturer's documentation includes:
- detailed drawings (possibly including manufacturing tolerances),
- incoming (raw) materials specifications and declarations,
- references to European and/or international standards,
- technical data sheets.

4) Control Plan (as a part of FPC)

The manufacturer and the Technical and Test Institute for Construction Prague have agreed a Control Plan which is deposited with the Technical and Test Institute for Construction Prague in documentation which accompanies the ETA. The Control Plan specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacture on properties that cannot be inspected at a later stage and for checks on the final product.

Products not manufactured by the ETICS manufacturer shall also be tested according to the Control Plan. It must be demonstrated to the Notified Body that the FPC system contains elements securing that the ETICS manufacturer takes products conforming to the Control Plan from his supplier(s).

Where materials/components are not manufactured and tested by the supplier in accordance with agreed methods, then where appropriate they shall be subject to suitable checks/tests by the ETICS manufacturer referring to the Control Plan once again.

In cases where the provisions of the European Technical Assessment and its Control Plan are no longer fulfilled, the Notified Body shall withdraw the certificate and inform the Technical and Test Construction Institute Prague without delay.

Issued in Prague on 26/02/2016

By
Ing. Mária Schaan
Head of the TAB

Annexes:

Annex No. 1	Insulation product characteristics for mechanically fixed ETICS with additional bonding - MW board (TR15)
Annex No. 2	Anchors, description of individual product characteristics contained in the ETA
Annex No. 3	Description of glass fibre mesh

Annex No. 1 Insulation product characteristics for mechanically fixed ETICS with additional bonding - MW board (TR15)

Description and characteristics		Regulation	Declared characteristics MW board (TR 15)	
			Class, level according to EN 13162:2012	Value
Reaction to fire		EN 13501-1 +A1	A1	Apparent density ≤ 220 kg/m³
Thermal resistance			Defined in CE mark in accordance with EN 13162:2012	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,-)	1 %
			DS(70,90)	
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m²
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m²
Diffusion factor (μ)		EN 12086 - EN 13162:2012	MU1	1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR15	≥ 15 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 6 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

* - highest value applies

Note: Classes and levels for individual characteristics comply with EN 13162:2012

Annex No. 2 Anchors, description of individual product characteristics contained in the ETA

Trade name	Plate diameter (mm)	Characteristic pull-out resistance	Plate stiffness (kN/mm)	Load at plate rupture (kN)
Surface assembly				
Ejotherm STR U, STR U 2G	60	See ETA - 04/0023	0.60	2.08
Ejot H1 eco a Ejot H4 eco	60	See ETA - 11/0192	0.60	1.40
KOELNER TFIX-8M	60	See ETA - 07/0336	1.00	1.75
KOELNER KI-10, KI-10PA, KI-10M	60	See ETA - 07/0291	0.45	0.85
Koelner TFIX-8S	60	See ETA - 11/0144	0.60	2.04
WKRET - MET LFM ø 8	60	See ETA - 06/0080	0.50	1.28
WKRET - MET LMX ø 8	60	See ETA - 09/0001	0.50	1.53
WKTHERM ø 8	60	See ETA - 11/0232	0.60	4.30
WKTHERM S	60	See ETA - 13/0724	0.60	4.30
Countersunk assembly				
Ejotherm STR U, STR U 2G	60	See ETA - 04/0023	0.60	2.08
BRAVOLL PTH-S 60/8-La	60	See ETA - 08/0267	0.90	2.60
KOELNER TFIX-8ST	60	See ETA - 11/0144	0.60	2.04
Klimas Wkret-met screw-in plug eco-drive, eco drive S	60	See ETA - 13/0107	0.60	2.80

In addition to this list, anchors assessed In accordance with ETAG 014 can be used provided that such anchors meet the following requirements:

	Requirements	
Plate diameter	≥ 60 mm	
Plate stiffness	Surface assembly:	≥ 0.45 kN/mm
	Countersunk assembly:	≥ 0.60 kN/mm
Rupture force of anchor´s plate	≥ Higher of figures R_{panel} and R_{joint} in relevant table in Cl. 3.4.5	

Annex No. 3 Description of glass fiber mesh

	Description	Strength after ageing	
	Standard fibre mesh applied in one or two layers with aperture size	Absolute strength after ageing (N/mm)	Relative residual strength after ageing, of the strength in the as-delivered state (%)
AKE 145	3.5 × 4.5 mm	≥ 20	≥ 50
OMFA 117S	4.0 × 4.0 mm		