



Approval body for construction products and types of construction

#### **Bautechnisches Prüfamt**

An institution established by the Federal and Laender Governments



### European Technical Assessment

### ETA-13/0915 of 26 September 2018

English translation prepared by DIBt - Original version in German language

### **General Part**

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Meffert PUR B1 premium
Product family to which the construction product belongs	Product area code: 4 External Thermal Insulation Composite System with rendering on rigid polyurethane foam for the use as external insulation of building walls
Manufacturer	Meffert AG Farbwerke Sandweg 15 55543 Bad Kreuznach DEUTSCHLAND
Manufacturing plant	Dinova GmbH & Co. KG Bachstraße 38 53639 Königswinter DEUTSCHLAND Meffert AG Farbwerke Sandweg 15 55543 Bad Kreuznach DEUTSCHLAND
This European Technical Assessment contains	<ul> <li>18 pages including 6 annexes which form an integral part of this assessment</li> <li>Annex 7 Control Plan contains confidential information and is not included in the European Technical</li> <li>Assessment when that assessment is publicly available</li> </ul>
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	ETAG 004, edition 2000, amended 2013, used as EAD according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011.

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### Specific Part

### 1 Technical description of the product

### 1.1 Definition and composition of the kit

This product is an External Thermal Insulation Composite System (ETICS) with rendering - a kit comprising components which are factory-produced by the manufacturer or component suppliers. It's made up on site from these. 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 polyurethane foam (PU) with UV-prevention primer on both sides to be bonded and if itnecessary additional mechanically fixed onto a wall. The method 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 is applied directly to the insulating panels, without any air gap or disconnecting layer.

The ETICS may include special fittings (e.g. base profiles, corner profiles ...) for connection to adjacent building elements (apertures, corners, parapets ...). 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.

	<b>Components</b> (National application documents shall be taken into account)	Coverage [kg/m²]	Thickness [mm]
Insulation material	Bonded ETICS: • Insulation product		
with associated method of fixing	(see annex 1 for product characteristics) factory made block-foamed rigid polyurethane foam (PU) with UV–prevention primer on both sides		≤ <b>300</b>
nxing	Supplementary Adhesives     (minimum bonded surface 40 %)		
	<ul> <li>Meffert Klebe- und Spachtelmasse grau (cement based powder requiring addition of about 30 % of water)</li> </ul>	6.0 to 7.0 (prepared)	_
	<ul> <li>Meffert Klebe- und Spachtelmasse AKS (cement based powder requiring addition of about 20 % of water)</li> </ul>	6.0 to 7.5	_
	<ul> <li>Meffert Klebe- und Spachtelmasse weiß (cement based powder requiring addition of about 20 % of water)</li> </ul>	(prepared)	_
	<ul> <li>Meffert Klebe- und Spachtelmasse leicht (cement based powder requiring addition of about 20 % of water)</li> </ul>	4.2 to 6.3 (prepared)	-
	<ul> <li>Meffert Spezialkleber (organic based ready to use paste)</li> </ul>	2.0 to 3.0	_

### **Composition of the ETICS**



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	Components	Coverage	Thickness
	(National application documents shall be taken into account)	[kg/m <sup>2</sup> ]	[mm]
Insulation	Mechanically fixed ETICS with anchors and		
material	supplementary adhesive:		
with	Insulation product		
associated	(see annex 1 for product characteristics)		
method of	factory made block-foamed rigid polyurethane foam (PU)		60 to 300
fixing	with UV–prevention primer on both sides		
	Supplementary adhesive		
	(equal to bonded ETICS)		
	Anchors for insulation product		
	all anchors with ETA according to EAD 330196-00-0604 <sup>1</sup>		
	with characteristics defined in annex 2		
Base coat	Meffert Klebe- und Spachtelmasse leicht	4.2 to 6.3	4.0 to 6.0
	identical with the equally named adhesives given above	(prepared)	
Glass fibre	Meffert Glasgewebe fein	_	_
mesh	Alkali- and slide-resistant glass fibre mesh with mass per unit		
	area of about 160 g/m <sup>2</sup> and mesh size of about		
	4.0 mm x 4.0 mm.		
	(see annex 3 for product characteristics)		
Key coat	Meffert Putzgrund	0.10 to 0.2 l/m <sup>2</sup>	_
-	Ready to use pigmented acrylic-resin dispersion liquid		
	For the compatibility with the finishing coats see below.		
Finishing	To use with key coat "Meffert Putzgrund" if applicable:		
coat	Thick layered cement based powder requiring addition of		
	about 27 - 33 % of water:		
	Meffert Mineralischer Kratzputz/Kratzputz leicht	1	
	(particle size 1.5 to 4.0 mm)	3.0 to 5.0	regulated by
	Meffert Mineralischer Reibeputz	(prepared)	particle size
	(particle size 2.5 to 5.0 mm)	ſ	
	Meffert Mineralischer Strukturputz		
	(particle size 1.5 to 2.5 mm)	ļ	
	<ul> <li>Ready to use pigmented acrylic-resin</li> </ul>		
	dispersion/potasiumsilicate liquid:		
	Meffert Silikat Reibeputz (particle size 2.0 to 3.0 mm)		
	Meffert Silikat Kratzputz (particle size 1.5 to 3.0 mm)		
	<ul> <li>Ready to use pigmented acrylic-resin dispersion:</li> </ul>		
	Meffert Siliconharz Reibeputz	3.0 to 4.5	regulated by
	(particle size 2.0 to 3.0 mm)	(prepared)	particle size
	Meffert Siliconharz Kratzputz (particle size 1.5 to 3.0 mm)		
	Meffert Kunstharz Reibeputz (particle size 2.0 to 3.0 mm)		
	Meffert Kunstharz Kratzputz (particle size 1.5 to 3.0 mm)	Į	
Ancillary material	Remains the responsibility of the manufacturer.		
The instructio	n to the installer concerning the use of a key coat remains the responsibility of th	e manufacturer.	
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### 2 Specification of the intended use in accordance with the applicable European assessment Document (hereinafter called EAD)

### 2.1 Intended use

This ETICS is intended to be used as external insulation to the walls of buildings made of masonry (bricks, blocks, stones ...) or concrete (cast on site or as prefabricated panels) with and without rendering. 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. It shall be designed to give the wall to which it is applied satisfactory thermal insulation.

The ETICS is non load-bearing construction element. 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 effects of weathering.

The ETICS can be used on new or existing (retrofit) vertical walls.

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

The verifications and assessment methods on which this European Technical Assessment (herinafter called ETA) is based lead to the assumption of a working life of the ETICS "Meffert PUR B1 premium" of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right products in relation to the assumed economically reasonable working life of the works

### 2.2 Manufacturing

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

### 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 of 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 Packing, 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 to ensure that this information is made know to the concerned people.



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### 2.5 Use, maintenance, repair

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

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

Only products which are compatible with the ETICS shall be used.

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

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

### 3 Characteristics of products and methods of verification

#### 3.0 General

The performances of the kit as described in this chapter are valid provided that the components of the kit comply with Annexes 1 - 3.

### 3.1 Mechanical resistance and stability (BWR 1)

not relevant

### 3.2 Safety in case of fire (BWR 2) Reaction to fire (ETAG 004 - clause 5.1.2)

Configurations	Organic content	Flame retardant content	Euroclass according to EN 13501-1
Base coat	max. 3.7 %	no flame retardant	
PU- insulation product	In quanity ensuring Euroclass E - s2,d0 according to EN 13501-1	In quanity ensuring Euroclass E - s2,d0 according to EN 13501-1	
Anchors	-	-	
<b>rendering system</b> Base coat with finishing coat and compatible key coat indicated hereafter:			
Meffert Mineralischer Kratzputz/Kratzputz leicht Meffert Mineralischer Reibeputz Meffert Mineralischer Strukturputz with key coat "Meffert Putzgrund"	max. 0.6 %	no flame retardant	B – s1,d0



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Configurations	Organic content	Flame retardant content	Euroclass according to EN 13501-1
Meffert Silikat Kratzputz Meffert Silikat Reibeputz with key coat "Meffert Putzgrund "	max. 4.5 %		B – s2,d0
Meffert Siliconharz Kratzputz Meffert Siliconharz Reibeputz with key coat "Meffert Putzgrund"	max. 8.8 %	no flame retardent	C 22 d0
Meffert Kunstharz Kratzputz Meffert Kunstharz Reibeputz with key coat "Meffert Putzgrund"	max. 6.6 %		C – s2,d0

### 3.3 Hygiene, health and environment (BWR 3)

### 3.3.1 Water absorption (capillarity test) (ETAG 004 - clause 5.1.3.1)

### • Base coat:

- Water absorption after 1 hour < 1.0 kg/m<sup>2</sup>
- Water absorption after 24 hours < 0.5 kg/m<sup>2</sup>

Water absorption after 24 h Rendering system: ≥ 0.5 kg/m<sup>2</sup> < 0.5 kg/m<sup>2</sup> **Rendering system:** Meffert Mineralischer Base coat with finishing Kratzputz/Kratzputz leicht х coat indicated hereafter Meffert Mineralischer Reibeputz Meffert Mineralischer Strukturputz Meffert Silikat Kratzputz х Meffert Silikat Reibeputz Meffert Siliconharz Kratzputz Х Meffert Siliconharz Reibeputz Meffert Kunstharz Kratzputz х Meffert Kunstharz Reibeputz

### 3.3.2 Hygrothermal behaviour (ETAG 004 - clause 5.1.3.2)

Pass (without defects)

### Freeze/thaw behaviour

The ETICS with finishing coats "Meffert Mineralischer Kratzputz/Kratzputz leicht", "Meffert Mineralischer Reibeputz", "Meffert Mineralischer Strukturputz", "Meffert Silikat Kratzputz", "Meffert Silikat Reibeputz", "Meffert Kunstharz Kratzputz" and "Meffert Kunstharz Reibeputz" has been assessed as freeze/thaw resistant according to the simulated method.

### 3.3.3 Impact resistance (ETAG 004 - clause 5.1.3.3)

The verified resistance to hard body impact has led to the classification of the ETICS in all combinations in category II.



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### 3.3.4 Water vapour permeability (ETAG 004 - clause 5.1.3.4)

Rendering system: Base coat with finishing an compatible key coat indicated hereafter	Equivalent air thickness s <sub>d</sub>
Meffert Mineralischer Kratzputz/Kratzputz leicht Meffert Mineralischer Reibeputz Meffert Mineralischer Strukturputz + Meffert Putzgrund	$\leq$ 1.0 m (Test result obtained with a layer thickness 8 mm: 0.15 m)
Meffert Silikat Kratzputz Meffert Silikat Reibeputz + Meffert Putzgrund	$\leq$ 1.0 m (Test result obtained with a layer thickness 8 mm: 0.16 m)
Meffert Siliconharz Kratzputz Meffert Siliconharz Reibeputz + Meffert Putzgrund	$\leq$ 1.0 m (Test result obtained with a layer thickness 8 mm: 0.30 m)
Meffert Kunstharz Kratzputz Meffert Kunstharz Reibeputz + Meffert Putzgrund	$\leq$ 1.0 m (Test result obtained with a layer thickness 8 mm: 0.19 m)

### 3.3.5 Release of dangerous substances (ETAG 004 - clause 5.1.3.5, EOTA TR 034)

Essential characteristic	Performance
Release of dangerous substances	no performance assessed

### 3.4 Safety and accessibility in use (BWR 4)

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

Conditioning		
Initial state After hygrothermal cycles After freeze/thaw test		
≥ 0.08 MPa	< 0.08 MPa but failure in the insulation product	Test not required because freeze/thaw cycles not necessary



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### 3.4.2 Bond strength between adhesive and substrate resp. insulation product (PU) (ETAG 004 – clause 5.1.4.1.2 and 5.1.4.1.3)

		Conditioning		
Adhesive	Substrate resp. insulation product	Initial state	2 d immersion in water + 2 h drying	2 d immersion in water + 7 d drying
Meffert Klebe- und	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
Spachtelmasse grau	PU	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa
Meffert Klebe- und Spachtelmasse AKS,	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
Meffert Klebe- und Spachtelmasse weiß	PU	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa
Meffert Klebe- und	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
Spachtelmasse leicht	PU	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa
	Concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
Meffert Spezialkleber	Brick	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
-1	PU	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa

### 3.4.3 Bond strength after ageing (ETAG 004 - clause 5.1.7.1)

<b>Rendering system:</b> Base coat with finishing coat and compatible key coat	Meffert Mineralischer Kratzputz/Kratzputz leicht, Meffert Mineralischer Reibeputz, Meffert Mineralischer Strukturputz + Meffert Putzgrund	
	Meffert Silikat Kratzputz, Meffert Silikat Reibeputz + Meffert Putzgrund	≥ 0,08 MPa
indicated hereafter	Meffert Siliconharz Kratzputz, Meffert Siliconharz Reibeputz + Meffert Putzgrund	
	Meffert Kunstharz Kratzputz, Meffert Kunstharz Reibeputz + Meffert Putzgrund	

### 3.4.4 Fixing strength (displacement test) (ETAG 004 - clause 5.1.4.2)

Test not required therefore no limitation of ETICS length required.

### 3.4.5 Wind load resistance (ETAG 004 - clause 5.1.4.3)

3.4.5.1 Safety in use of mechanically fixed ETICS using anchors The following failure loads only apply to the listed combination and the characteristics of the insulation product given in annex 1.



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Apply to all anchors listed in the Table in clause 1.2 mounted on the insulation panels surface.			
Plate diameter of anchor Ø 60 mm			Ø 60 mm
	Tensile strength perpendicular to the fa	ces	≥ 100 kPa
Characteristics of the PU	Shear modulus		≥ 1,0 N/mm²
	Thickness		$100 \text{ mm} > d \ge 60 \text{ mm}$
Failure loads	Anchors not placed at the panel joints (Static foam block test)	R <sub>panel</sub>	Minimal: 470 Average: 550
[N]	Anchors placed at the panel joints (Pull-through test)	R <sub>joint</sub>	Minimal: 355 Average: 415

The failure loads specified above only apply to the following anchors with deep mounting under the given conditions of installation (d  $\geq$  80 mm):

Anchor	Thickness of the PU panel [d]	Conditions of installation*
ejotherm STR U ejotherm STR U 2G (ETA-04/0023)	100 mm > d ≥ 80 mm	Maximum installation depth of the anchor plate: 20 mm (≙ thickness of insulation cover) deep mounted with EJOT Tool S
	≥ 100 mm	Maximum installation depth of the anchor plate: 35 mm (≙ thickness of insulation cover) deep mounted with EJOT Tool L

According to the appropriate ETA of anchor

Apply to all anchors listed in the Table in clause 1.2 mounted on the insulation panels surface and with deep mounting under conditions of installation above on a remaining thickness  $\geq$  100 mm

Plate diameter of	fanchor		Ø 60 mm
	Tensile strength perpendicular to the fa	ces	≥ 100 kPa
Characteristics of the PU	Shear modulus		≥ 1,0 N/mm²
	Thickness		d ≥ 100 mm
Failure loads	Anchors not placed at the panel joints (Pull-through test)	R <sub>panel</sub>	Minimal: 680 Average: 710
[N]	Anchors placed at the panel joints (Pull-through test)	R <sub>joint</sub>	Minimal: 510 Average: 560

### 3.4.6 Render strip tensile test (ETAG 004 - clause 5.5.4.1)

No performance assessed for the width of cracks.

### 3.5 Protection against noise (BWR 5)

For the protection against noise no performance was assessed for this product.

### 3.6 Energy economy and heat retention (BWR 6)

### 3.6.1 Thermal resistance

The nominal value of the additional thermal resistance R provided by the ETICS to the substrate wall is calculated in accordance with EN ISO 6946:2007 from the nominal value of the insulation product's thermal resistance R<sub>D</sub> given accompanied to the CE marking and from the thermal resistance of the rendering system R<sub>render</sub> which is about 0.02 (m<sup>2</sup> ·K)/W.

 $R = R_D + R_{render}$ 



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The thermal bridges caused by anchors increases the thermal transmittance U. This influence had to take into account according to EN ISO 6946:2007.

$U_c = U +$	$\chi_p \cdot n$	corrected thermal transmittance [W/(m ·K)]
where:	χ <sub>p</sub> · n	influence of thermal bridges
	n	number of anchors per m <sup>2</sup>
	χρ	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 technical approval
	$\chi_p = 0.004 \text{ W/K}$	for anchors with a galvanized steel screw with the head covered by a plastic material
	$\chi_p = 0.002 \text{ W/K}$	for anchors with a stainless steel screw with the head covered by plastic material, and for anchors with an air gap at the head of the screw

### 4 Assessment and verification of constancy of performance 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 assessment and verification of constancy of performance system (AVCP) applies suitable following table (see Annex V to Regulation (EU) No 305/2011):

Product	Intended use	Levels or classes (Reaction to fire)	Systems
"Meffert PUR B1 premium"	in external wall subject to fire regulations	A1 <sup>(1)</sup> , A2 <sup>(1)</sup> , B <sup>(1)</sup> , C <sup>(1)</sup> A1 <sup>(2)</sup> , A2 <sup>(2)</sup> , B <sup>(2)</sup> , C <sup>(2)</sup> , D, E, (A1 to E) <sup>(3)</sup> , F	1 2+
	in external wall not subject to fire regulations	any	2+

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

<sup>(2)</sup> 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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Deutsches Institut für Bautechnik.

Issued in Berlin on 26 September 2018 by Deutsches Institut für Bautechnik.

Dirk Brandenburger Head of Department *beglaubigt:* Windhorst



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### Annexes:

- Annex 1: Thermal insulation product characteristic
- Annex 2: Anchors
- Annex 3: Reinforcement
- Annex 4: Manufacturing plants
- Annex 5: Concordance list trade names Germany
- Annex 6: Concordance list trade names foreign country



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### Annex 1: Thermal insulation product characteristic

Factory made block-foamed rigid polyurethane foam (PU) to EN 13165:2015 with UV– prevention primer on both sides shall be used, having the description and characteristics defined in the Table below.

Description and characteristics	For bonded ETICS and with anchors and supplementary adhesive mechanically fixed ETICS
Reaction to fire; EN 13501-1:2010	Class E <sup>*</sup>
Thermal resistance [(m²·K)/W]	Defined in the CE marking in reference to EN 13163:2015
Tolerances	
Length; EN 822:2013	± 2
Width [mm]; EN 822: 2013	± 1
Thickness [mm]; EN 823: 2013	± 1
Squareness [mm/m]; EN 824: 2013	± 2
Flatness [mm]; EN 825: 2013	3
Dimensional stability under	
- laboratory conditions [%]; EN 1603: 2013	± 0.3
under specified temperature and humidity conditions $(48 \pm 1)$ h at $(70 \pm 2)$ °C / $(90 \pm 5)$ % RH) [%];EN 1604:1996	
- relative changes in length, width	± 1.0
- relative changes in thickness	± 1.0
(48 ± 1) h at (-20 ± 3) °C) [%]; EN 1604: 2013	
<ul> <li>relative changes in length and width</li> </ul>	± 0.5
- relative changes in thickness	± 1.0
Water absorption (long term totally immersion) [Vol-%]; EN 12087: 2013	W <sub>lt</sub> ≤ 1.5
Water absorption (short term immersion) [kg/m <sup>2</sup> ]; EN 1609: 2013	$W_p \le 0.3$
Water vapour diffusion resistance factor; EN 12086: 2013	μ = 50 – 110
Tensile strength perpendicular to the faces in dry conditions <sup>**</sup> [kPa]; EN 1607: 2013	$\sigma_{mt} \geq 100$
Compressive strength with 10 % compression <sup>**</sup> [kPa]; EN 826 2013	$\sigma_{10} \geq 120$
Bending strength <sup>**</sup> [kPa]; EN 12089:1997	$\sigma_b \ge 50$
Apparent density [kg/m3]; EN 1602: 2013	31 < ρ <sub>a</sub> < 36
Shear strength** [kPa]; EN 12090:2013	$50 \leq f_{\tau k} \leq 170$
Shear modulus [MPa]; EN 12090: 2013	$1,0 \le G_m \le 3,0$
Testing of characteristics see EN 13165:2015	
* See the conditions of clause 2.2.1 for the PU. Minimal value of all single values	



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### Annex 2: Anchors

All anchors with ETA according to EAD 330196-00-0604<sup>1</sup> with characteristics having the description below shall be used in the mechanically fixed ETICS:

- plate diameter of anchor  $\geq$  60 mm
- plate stiffness ≥ 0.3 kN/mm
- load resistance of the anchor plate ≥ 1.0 kN

These characteristics and the characteristic tension resistance of the anchors shall be taken from the corresponding ETA.



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### Annex 3: Reinforcement (glass fibre mesh)

Characteristics (alkali resistance): Pass

	Description	Residual strength after ageing [N/mm]	Relative residual resistance after ageing of the strength in the as-delivered state [%]
" Meffert Glasgewebe fein "	Alkali- and slide- resistant glass fibre mesh with mass per unit area of about 160 g/m <sup>2</sup> and mesh size of about 4.0 mm x 4.0 mm	≥ 20	≥ 50



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### Annex 4: Manufacturing plants:

### Manufacturing plant Ungarn:

Meffert Hungária Kft Rákoczi u. 6 2651 Rétság

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### Additional manufacturing plants Deutschland:

Tex-Color GmbH & Co. KG Heckerstieg 4 99085 Erfurt

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### Annex 5: Concordance list trade names Germany

Components	Trade name	Trade name	Trade name	Trade name
	D	D – ProfiTec Therm	D - DinoTherm	D - TexTherm
	Meffert Klebe und Spachtelmasse grau	P 1000 Klebe- und Spachtelmasse grau	Klebe- und Spachtelmasse grau	AK-Grau
	Meffert Klebe- und Spachtelmasse AKS	P 1020 Universal Allroundmörtel 4in1	Klebe- und Spachtelmasse AKS	AKS-Faser
Adhesive	Meffert Klebe- und Spachtelmasse weiß	P 1005 Klebe- und Spachtelmasse weiß	Klebe- und Spachtelmasse weiß	AK-Weiß
	Meffert Klebe und Spachtelmasse leicht	P 1010 Klebe- und Spachtelmasse leicht	Klebe- und Spachtelmasse leicht	AK-Leicht
	Meffert Spezialkleber	P 1040 Spezialkleber	Spezialkleber	Dispersionskleber
Base coat	Meffert Klebe und Spachtelmasse leicht	P 1010 Klebe- und Spachtelmasse leicht	Klebe- und Spachtelmasse leicht	AK-Leicht
Glass fibre mesh	Meffert Glasgewebe fein	P 1500 Armierungsgewebe fein	Glasgewebe fein	Armierungsgewebe fein
Key coat	Meffert Putzgrund	P 823 Putzgrund	Putzgrund grob	Quarzgrund LF
	Meffert Mineralischer			
Mineral	Kratzputz/Kratzputz leicht	P 1702 Kratzputz / P 1722 Leichtputz	Mineralica / Mineralica Bella	Mineralputz K / Mineralputz K leicht
finishing coats	Reibeputz	P 1712 Rillenputz	Rillo	Mineralputz R
	Strukturputz	P 1740 Filz- und Faschenputz	Struktura	Filz- und Faschenputz
	Meffert Silikat			
	Reibeputz	P 471 Silikat Fassadenputz R	DinoSil Reibeputz außen	Silikat Fassadenputz R
	Kratzputz	P 476 Silikat Fassadenputz K	DinoSil Kratzputz außen	Silikat Fassadenputz K
	Meffert Siliconharz			
Organic	Reibeputz	P 431 Silicon Fassadenputz R	Silicon Reibeputz	Silicon Fassadenputz R
finishing coats	Kratzputz	P 436 Silicon Fassadenputz K	Silicon Kratzputz	Silicon Fassadenputz K
	Meffert Kunstharz			
	Reibeputz	P 721 Fassadenputz R	Reibeputz außen	Fassadenputz R
	Kratzputz	P 726 Fassadenputz K	Kratzputz außen	Fassadenputz K

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### Annex 6: Concordance list trade names foreign country

Components	Trade name D	Trade name PL	Trade name CR	Trade name LT
	Meffert Klebe und Spachtelmasse grau	PROFITHERM Baukleber	ProfiTec Klebe- und Spachtelmasse grau / Düfa Klebemörtel 1000 (Stavebni lepidlo OK 1000)	Dűfa Baukleber
Adhesive	Meffert Klebe und Spachtelmasse AKS	PROFITHERM Universalkleber II / II S	Meffert Klebe und Spachtelmasse AKS ProfiTec Universal Allroundmörtel 4 in 1 / Dúfa Klebe- und Spachtelmasse A/B (Lepici sterkova hmota A / B)	Dúfa Universalkleber
	Meffert Klebe- und Spachtelmasse weiß	PROFITHERM Baukleber weiß	ProfiTec Klebe- und Spachtelmasse weiss	Düfa Universalkleber weiss (nicht im Programm, Name neu vergeben)
	Meffert Klebe und Spachtelmasse leicht	PROFITHERM Baukleber leicht	ProfiTec Klebe und Spachtelmasse leicht	Düfa Klebe und Spachtelmasse leicht
	Meffert Spezialkleber	PROFITHERM Spezialkleber	ProfiTec Spezialkleber	Düfa Spezialkleber
Base coat	Meffert Klebe und Spachtelmasse leicht	PROFITHERM Baukleber leicht	ProfiTec Klebe und Spachtelmasse leicht	Düfa Klebe und Spachtelmasse leicht
Glass fibre mesh	Meffert Glasgewebe fein	PROFITHERM Glasseidengewebe	Düfa Sklotextilni sitovina R131	Düfa Glasseidengewebe
Key coat	Meffert Putzgrund	PROFITHERM ProfiTec Unigrund	ProfiTec Putzgrund / Unigrund / Düfa OMÍTKOVÁ PENETRACE KOMFORT KOM4	Düfa Quarzgrund
	Meffert Mineralischer	PROFITHERM ProfiTec Mineralischer	ProfiTec Mineralischer	DÜFA THERM Mineralischer
Mineral	Kratzputz/Kratzputz leicht	Kratzputz/Kratzputz leicht	Kratzputz / Kratzputz leicht / SANAVER DUO	Kratzputz/Kratzputz leicht
finishing coats	Reibeputz	Reibeputz	Reibeputz / SANAVER DUO	Reibeputz
	Strukturputz	Strukturputz		Strukturputz
	Meffert Silikat	PROFITHERM ProfiTec Silikat	Silikat	DÜFA THERM Silikat
	Reibeputz	Fassadenputz R	ProfiTec Fassadenputz R / Düfa Komfortputz SIR	Silikat Reibeputz
	Kratzputz	Fassadenputz K	ProfiTec Fassadenputz K / Düfa Komfortputz SIK	Silikat Kratzputz
	Meffert Siliconharz	PROFITHERM ProfiTec Silicon/Siloxan	Silikon/Siloxan	DÜFA THERM Silicon/Siloxan
Organic	Reibeputz	Fassadenputz R	ProfiTec Fassadenputz R / Düfa Komfortputz SR	Reibeputz
finishing coats	Kratzputz	Fassadenputz K	ProfiTec Fassadenputz K / Düfa Komfortputz SK	Kratzputz
	Meffert Kunstharz	PROFITHERM Kunstharz	Kunstharz	DÜFA THERM Kunstharz
	Reibeputz	ProfiTec Fassadenputz R / Düfa Reibeputz / Reibeputz PT-D11	ProfiTec Fassadenputz R / Dűfa Fassaden-Komfortputz R	Reibeputz
	Kratzputz	ProfiTec Fassadenputz K / Düfa Fassadenputz / Fassadenputz PD-11d / Fassadenputz-Investputz	ProfiTec Fassadenputz K / Düfa Fassaden-Komfortputz K	Kratzputz

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