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European Technical Assessment

ETA-14/0231
of 20.09.2021

English version prepared by ZAG

GENERAL PART

**Technical Assessment Body issuing the
European Technical Assessment**

ZAG Ljubljana

Trade name of the construction product

BEKATHERM Standard

**Product family to which the construction
product belongs**

**04: External Thermal Insulation Composite
Systems with rendering (ETICS) on
expanded polystyrene (EPS) for use as
external insulation on walls of buildings**

Manufacturer

**BANJA KOMERC BEKAMENT d.o.o. Banja
UI. Kralja Petra Prvog 132 Banja Arandjelovac
34304 Banja
Srbija
<https://www.bekament.com>**

Manufacturing plant

**BANJA KOMERC BEKAMENT d.o.o. Banja
UI. Kralja Petra Prvog 132 Banja Arandjelovac
34304 Banja
Srbija**

**This European Technical Assessment
contains**

**26 pages including 1 annex (2 pages) which
form an integral part of the document.**

**This European Technical Assessment is
issued in according to Regulation (EU)
No. 305/2011, on the basis of**

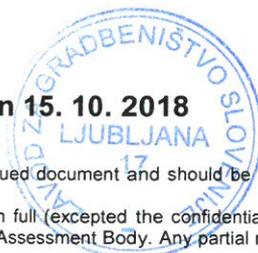
EAD 040083-00-0404; January 2019

This version replaces

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SPECIFIC PART

1 Technical description of the product

1.1 General

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 expanded polystyrene (EPS) to be bonded or bonded and additionally 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 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, ...) 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.

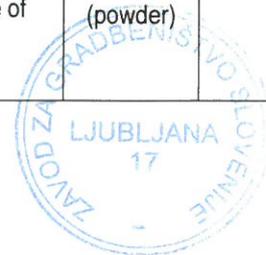
1.2 Composition of the kit

1.2.1 Composition of the ETICS

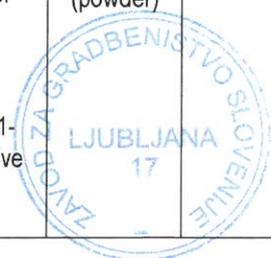
The ETICS comprises the following: adhesive or mechanical fixings (anchors), insulation core, base coat reinforced with glass fibre mesh, key coat applied on the base coat, finishing coat and ancillary materials. The definition of the product and description of the components is following:



	Components (see § 3.6 for further description, characteristics and performances of the components)	Coverage (kg/m ²)	Thickness (mm)		
Insulation materials with associated methods of fixing	<p>Bonded ETICS</p> <ul style="list-style-type: none"> <p>Insulation product</p> <p>Austrotherm EPS AF EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR150-BS115-WL(T)3 or</p> <p>Austrotherm EPS F 60 EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR100-BS110-WL(T)3, or</p> <p>Bekatherm EPS Gold EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,90)1-CS(10)80-BS150-WL(T)3,5-TR150, or</p> <p>Bekatherm EPS F EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS135-TR120-WL(T)3,5 or</p> <p>Bekatherm EPS Grafit EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS150-TR150-WL(T)2,5 or</p> <p>Plastopor EPS F Grafitni EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR120 or</p> <p>Plastopor EPS F 038 EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR150-WL(P)0,1 or</p> <p>Kempor EPS F Premium EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR160 or</p> <p>Kempor EPS F Standard EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS115-WL(P)0,5-TR120 or</p> <p>Kempor EPS F Plus EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR150 or</p> <p>Europor EPS FAS EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(T)2-TR150 or</p> <p>Pimitpor EPS FAS Grafitni EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS125-WL(T)2-TR100</p> <p>thermal conductivity 0.031 - 0.039 W/mK</p> 	/	50 to 300		
	<ul style="list-style-type: none"> <p>Adhesive</p> <p>BK-StirolFix 1 – dry mix cement based adhesive requiring addition of water (28 % - 7.0 l per 25 kg), applied on edges and spots in the middle of the surface</p> 			4.0 – 5.0 (powder)	/
	<ul style="list-style-type: none"> <p>BK-StirolFix WDVS – dry mix cement based adhesive requiring addition of water (28 % = 7.0 l per 25 kg), applied on edges and spots in the middle of the surface. NOT APPLICABLE with graphite EPS.</p> 			4.0 – 5.0 (powder)	/
	<ul style="list-style-type: none"> <p>BK-StirolFix Base – dry mix cement based adhesive requiring addition of water (26 - 28 % = 6.5 - 7.0 l per 25 kg), applied on edges and spots in the middle of the surface. NOT APPLICABLE with graphite EPS.</p> 			4.0 – 5.0 (powder)	/



	Components (see § 3.6 for further description, characteristics and performances of the components)	Coverage (kg/m ²)	Thickness (mm)		
Insulation materials with associated methods of fixing	<p>Bonded ETICS with supplementary mechanical fixings</p> <ul style="list-style-type: none"> Insulation product Austrotherm EPS AF EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR150-BS115-WL(T)3 or Austrotherm EPS F 60 EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR100-BS110-WL(T)3, or Bekatherm EPS Gold EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,90)1-CS(10)80-BS150-WL(T)3,5-TR150, or Bekatherm EPS F EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS135-TR120-WL(T)3,5 or Bekatherm EPS Grafit EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS150-TR150-WL(T)2,5 or Plastopor EPS F Grafitni EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR120 or Plastopor EPS F 038 EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR150-WL(P)0,1 or Kempor EPS F Premium EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR160 or Kempor EPS F Standard EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS115-WL(P)0,5-TR120 or Kempor EPS F Plus EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR150 or Europor EPS FAS EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(T)2-TR150 or Pimitpor EPS FAS Grafitni EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS125-WL(T)2-TR100 thermal conductivity 0.031 - 0.039 W/mK 	/	50 to 300		
	<ul style="list-style-type: none"> Adhesive BK-StirolFix 1 – dry mix cement based adhesive requiring addition of water (28 % - 7.0 l per 25 kg), applied on edges and spots in the middle of the surface 			4.0 – 5.0 (powder)	/
	<ul style="list-style-type: none"> BK-StirolFix WDVS – dry mix cement based adhesive requiring addition of water (28 % = 7.0 l per 25 kg), applied on edges and spots in the middle of the surface. NOT APPLICABLE with graphite EPS. 			4.0 – 5.0 (powder)	/
	<ul style="list-style-type: none"> BK-StirolFix Base – dry mix cement based adhesive requiring addition of water (26 - 28 % = 6.5 - 7.0 l per 25 kg), applied on edges and spots in the middle of the surface. NOT APPLICABLE with graphite EPS. 			4.0 – 5.0 (powder)	/
<ul style="list-style-type: none"> Anhors Anchors with valid ETA according to EAD 330196-00-0604 or EAD 330196-01-0604. Anchors are used only where necessary to provide stability until adhesive has dried. 					



	Components (see § 3.6 for further description, characteristics and performances of the components)	Coverage (kg/m ²)	Thickness (mm)
Base coat	BK-StirolFix 1 – dry mix cement based adhesive requiring addition of water (28 % - 7.0 l per 25 kg), applied in two layers.	5.0 – 6.0 (powder)	4 - 5 mm
	BK-StirolFix White – dry mix cement based adhesive requiring addition of water (26 - 28 % - 6.5 - 7.0 l per 25 kg), applied in two layers, NOT APPLICABLE with graphite EPS.	5.0 – 6.0 (powder)	4 - 5 mm
Glass fibre mesh	Bekament mrežica 160 (Keltex - Primafas 160, or Masterplast YU E132L) Standard mesh (glass fibres mesh 160 g/m ² , 3.6 by 3.3 mm or 3.9 by 3.8 mm)	1.1 m ² /m ²	/
	Bekament mrežica 145 (Keltex - Primafas 145, or Masterplast YU E118L) Standard mesh (glass fibres mesh 145 g/m ² , 3.6 by 4.6 mm or 4.7 by 4.0 mm)		
Key coat	BK-Grund Universal , applied as delivered, or diluted with water up to 20 %	0.20–0.25	/
	BK-Grund Silicat , applied as delivered, or diluted with water up to 15 %		
Finishing coats	Ready to use paste – BK-Plastacrylic based finishing coat floated structure (1.0 mm / 1.5 mm / 2.0 mm) ribbed structure (1.0 mm / 1.5 mm / 2.0 mm)	2.2 – 3.3	Regulated by particles size
	Ready to use paste – BK-Sil silicone based finishing coat floated structure (1.0 mm / 1.5 mm / 2.0 mm) ribbed structure (1.0 mm / 1.5 mm / 2.0 mm)	2.2 – 3.3	
	Ready to use paste – BK-S Plastsilicate based finishing coat floated structure (1.0 mm / 1.5 mm / 2.0 mm) ribbed structure (1.0 mm / 1.5 mm / 2.0 mm)	2.2 – 3.4	
	Ready to use paste – BK-Sil Si&Sisilicate-silicone based finishing coat floated structure (1.0 mm / 1.5 mm / 2.0 mm) ribbed structure (1.0 mm / 1.5 mm / 2.0 mm)	2.2 – 3.4	
	Dry mix – BK-Briv Specialmineral based finishing coat requiring addition of water (25-26 % - 6.25-6.50 l per 25 kg). floated structure (1.0 mm / 1.5 mm / 2.0 mm) ribbed structure (1.0 mm / 1.5 mm / 2.0 mm)	2.5 – 3.5	
Ancillary materials	Descriptions of the ancillary materials shall be in accordance with cl. 1.3.13 of the EAD 040083-00-0404. The description and use of the appropriate materials remains under the ETA-holder'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 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 air-tightness of the building structure.

The choice of the method of fixing depends on the characteristics of the substrate, which may need preparation (see cl. 1.3.1 of the EAD 040083-00-0404) and shall be done in accordance with the national instructions.

The ETICS belong to Category SW2, according to EOTA Technical Report No 034.

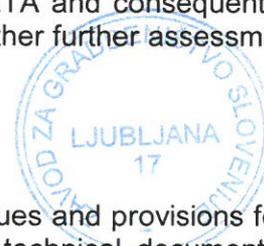
The provisions made in this European Technical Assessment (ETA) are based on an assumed intended working life of at least 25 years, provided that the conditions laid down in the following sections 2.2 – 2.5 for the packaging, transport, storage, installation are met and that the installed ETICS is subjected to an appropriate use, maintenance and repair as well. The indications given on the working life cannot be interpreted as a guarantee given by the producer, 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.

2.2 Manufacturing

The European Technical Assessment is issued for the ETICS on the basis of agreed data/information, deposited with the Zavod za gradbeništvo Slovenije (ZAG Ljubljana), 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 ZAG Ljubljana before the changes are introduced. The ZAG Ljubljana 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.

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 1.1 and 1.2 of EAD 040083-00-0404, which summarizes 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 known 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
- the repairing of localised damaged areas due to accidents,
- the aspect maintenance with products adapted and compatible with the ETICS (possibly after washing or ad hoc preparation).

Necessary repairs should be 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 known to the concerned people.



3 Performance of the product and references to the methods used for its assessment

The identification tests and the assessment for the intended use of this ETICS according to the Essential Requirements were carried out in compliance with EAD 040083-00-0404.

The performances of the kit as described in this chapter are valid, provided that the components of the kit comply clauses 3.3.6.1, 3.6.1 and 3.6.2.

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

Configuration	Maximum declared organic content of the rendering system (dry)	Declared flame retardant content of the rendering system	Thickness of the ETICS [mm]	Reaction to fire class acc. to EN 13501-1
ETICS BEKATHERM Standard (including all finishing coats as described in Clause 1.2.1.)	base coat < 3.0 % finishing coat < 9.0 %	0 %	50 – 300	B – s1, d0
Any other configuration	-	-	-	F

Mounting and fixing

The assessment of reaction to fire is based on two tests (EN 13823 and EN ISO 11925-2). The SBI test (EN 13823) is done on a sample with insulation layer thickness 180 mm, (overall ETICS thickness 200 mm) and with insulation material type according to EN 13163 with apparent density 18 kg/m³, while the ignitability of building products subjected to direct impingement of flame tests (EN ISO 11925-2) are done on app. 60 mm thick sample (including rendering), at EPS apparent density 18 kg/m³. Selected rendering system is the one including finishing coat with maximum organic content, established.

For the SBI test this ETICS is mounted directly to a calcium silicate substrate (A2-s1, d0) with a minimum density of 820 kg/m³.

The installation of the ETICS was carried out by the manufacturer, 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.

Note: An European reference fire scenario has not been laid down for façades. In some Member States, the classification of ETICS according to EN 13501-1 might not be sufficient for the use in façades. 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.

Extended application

The test results cover arrangements with insulation material (EPS) of a lower thickness and density as well as render systems (binder types) with lower organic content (i.e. all render systems, mentioned in this ETA).

3.2 Hygiene, health and the environment (BWR 3)

3.2.1 Release of dangerous substances

ETICS BEKATHERM Standard belongs to Category SW2.

3.2.2 Water absorption

3.2.2.1 Water absorption of the base coat and the rendering system

- Base coat **BK-StirolFix 1**:
 - Water absorption after 1 hour: $0.02 \text{ kg/m}^2 < 1 \text{ kg/m}^2$
 - Water absorption after 24 hours: $0.10 \text{ kg/m}^2 < 0.5 \text{ kg/m}^2$

- Rendering systems:

description of the ETICS:					
<ul style="list-style-type: none"> - insulation product: EPS panels - base coat: BK-StirolFix 1 - finishing coat and key coat indicated hereafter 					
key coat	finishing coat	Water absorption after 1 hour		Water absorption after 24 hours	
		< 1 kg/m ²	≥ 1 kg/m ²	< 0.5 kg/m ²	≥ 0.5 kg/m ²
BK-Grund Universal	BK-Plast	X 0.03 kg/m ²		X 0.26 kg/m ²	
	BK-Sil	X 0.06 kg/m ²		X 0.21 kg/m ²	
	BK-Briv Special	X 0.03 kg/m ²		X 0.23 kg/m ²	
BK-Grund Silicate	BK-S Plast	X 0.04 kg/m ²		X 0.34 kg/m ²	
	BK-Sil Si&Si	X 0.03 kg/m ²		X 0.22 kg/m ²	

- Base coat **BK-StirolFix White**:
 - Water absorption after 1 hour: $0.02 \text{ kg/m}^2 < 1 \text{ kg/m}^2$
 - Water absorption after 24 hours: $0.17 \text{ kg/m}^2 < 0.5 \text{ kg/m}^2$
- Rendering systems:

description of the ETICS: - insulation product: EPS panels - base coat: BK-StirolFix 1 - finishing coat and key coat indicated hereafter					
key coat	finishing coat	Water absorption after 1 hour		Water absorption after 24 hours	
		< 1 kg/m ²	≥ 1 kg/m ²	< 0.5 kg/m ²	≥ 0.5 kg/m ²
BK-Grund Universal	BK-Plast	X 0.04 kg/m ²		X 0.16 kg/m ²	
	BK-Sil	X 0.05 kg/m ²		X 0.43 kg/m ²	
	BK-Briv Special	X 0.05 kg/m ²		X 0.30 kg/m ²	
BK-Grund Silicate	BK-S Plast	X 0.13 kg/m ²		X 0.48 kg/m ²	
	BK-Sil Si&Si	X 0.26 kg/m ²		X 0.46 kg/m ²	

3.2.3 Watertightness

3.2.3.1 Hygrothermal behaviour

Hygrothermal cycles have been performed on two rigs in hygrothermal chamber. 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.



3.2.3.2 Freeze/thaw performance

For all rendering systems in this ETA the water absorption of both, base coat and the rendering systems, are less than 0.5 kg/m² after 24 hours and so **all configurations of the ETICS are assessed as freeze/thaw resistant without further testing.**

3.2.4 Impact resistance

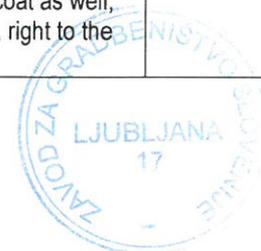
The resistance to hard body impacts (3 and 10 Joules) lead to the following use categories:

description of the ETICS: <ul style="list-style-type: none"> - insulation product: EPS panels Austrotherm EPS AF - base coat: BK-StirolFix 1 - finishing coat and key coat indicated hereafter 			
key coat	finishing coat	Single standard mesh "BEKAMENT mrežica 160"	
BK-Grund Universal	BK-Plast	Tested on the hygrothermal rig 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 25 mm	Category I
	BK-Sil	Tested on the hygrothermal rig 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 22 mm	Category I
	BK-Briv Special	Tested on the sample 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 35 mm	Category I
BK-Grund Silicate	BK-S Plast	Tested on the hygrothermal rig 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 28 mm	Category I
	BK-Sil Si&Si	Tested on the hygrothermal rig 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 27 mm	Category I



description of the ETICS: <ul style="list-style-type: none"> - insulation product: EPS panels Austrotherm EPS AF - base coat: BK-StirolFix 1 - finishing coat and key coat indicated hereafter 			
key coat	finishing coat	Single standard mesh "BEKAMENT mrežica 145"	
BK-Grund Universal	BK-Plast	Tested on the sample 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 29 mm	Category I
	BK-Sil	Tested on the sample 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 28 mm	Category I
	BK-Briv Special	Tested on the sample 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 39 mm	Category I
BK-Grund Silicate	BK-S Plast	Tested on the sample 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 35 mm	Category I
	BK-Sil Si&Si	Tested on the sample 3J: no visible injuries or defects, no deterioration; ID: 0 mm; 10 J: superficial damages with some individual minor cracks in the finishing coat alone d= 0.05 mm, no deterioration, ID _{max} : 27 mm	Category I

description of the ETICS: <ul style="list-style-type: none"> - insulation product: EPS panels Austrotherm EPS AF - base coat: BK-StirolFix White - finishing coat and key coat indicated hereafter 			
key coat	finishing coat	Single standard mesh "BEKAMENT mrežica 145"	
BK-Grund Universal	BK-Plast	Tested on the hygrothermal rig 3J: superficial damages with small depth and some individual cracks in the finishing coat d= 0.10 mm, rendering not penetrated, ID _{max} : 25 mm 10 J: cracks in the finishing coat and in the base coat as well, perforation of the base coat, through the mesh, right to the EPS; rendering penetrated, ID _{max} : 83 mm	Category III



description of the ETICS: <ul style="list-style-type: none"> - insulation product: EPS panels Austrotherm EPS AF - base coat: BK-StirolFix White - finishing coat and key coat indicated hereafter 			
key coat	finishing coat	Single standard mesh "BEKAMENT mrežica 145"	
BK-Grund Universal	BK-Sil	Tested on the hygrothermal rig 3J: superficial damages with small depth and some individual cracks in the finishing coat $d = 0.10$ mm, rendering not penetrated, ID_{max} : 30 mm 10 J: cracks in the finishing coat and in the base coat as well, perforation of the base coat, through the mesh, right to the EPS; rendering penetrated, ID_{max} : 84 mm	Category III
	BK-Briv Special	Tested on the hygrothermal rig 3J: superficial damages with small depth and some individual cracks in the finishing coat $d = 0.15$ mm, rendering not penetrated, ID_{max} : 27 mm 10 J: cracks in the finishing coat and in the base coat as well, perforation of the base coat, through the mesh, right to the EPS; rendering penetrated, ID_{max} : 70 mm	Category III
BK-Grund Silicate	BK-S Plast	Tested on the sample 3J: superficial damages with small depth and some individual cracks in the finishing coat $d = 0.10$ mm, rendering not penetrated, ID_{max} : 40 mm 10 J: cracks in the finishing coat and in the base coat as well, but not beyond the mesh layer; rendering not penetrated, ID_{max} : 62 mm	Category II
	BK-Sil Si&Si	Tested on the hygrothermal rig 3J: superficial damages with small depth and some individual cracks in the finishing coat $d = 0.10$ mm, rendering not penetrated, ID_{max} : 35 mm 10 J: cracks in the finishing coat and in the base coat as well, perforation of the base coat, through the mesh, right to the EPS; rendering penetrated, ID_{max} : 70 mm	Category III

3.2.5 Water vapour permeability

description of the ETICS: <ul style="list-style-type: none"> - insulation product: EPS panels - base coat: BK-StirolFix 1 - finishing coat and key coat indicated hereafter 			
key coat	finishing coat	Equivalent air thickness s_d (m)	
BK-Grund Silicate	BK-S Plast	$0.12 \leq 2.0$ (Test result obtained with finishing coat BK-S Plast ribbed structure, particle size 1.5 mm)	
	BK-Sil Si&Si	$0.13 \leq 2.0$ (Test result obtained with finishing coat BK-Sil Si&Si ribbed structure, particle size 1.5 mm)	

description of the ETICS: <ul style="list-style-type: none"> - insulation product: EPS panels - base coat: BK-StirolFix 1 - finishing coat and key coat indicated hereafter 		
key coat	finishing coat	Equivalent air thickness s_d (m)
BK-Grund Universal	BK-Plast	0.13 ≤ 2.0 (Test result obtained with finishing coat BK-Plast ribbed structure, particle size 1.5 mm)
	BK-Sil	0.15 ≤ 2.0 (Test result obtained with finishing coat BK-Sil ribbed structure, particle size 1.5 mm)
	BK-Briv Special	0.14 ≤ 2.0 (Test result obtained with finishing coat BK-Briv Special ribbed structure, particle size 1.5 mm)

description of the ETICS: <ul style="list-style-type: none"> - insulation product: EPS panels - base coat: BK-StirolFix White - finishing coat and key coat indicated hereafter 		
key coat	finishing coat	Equivalent air thickness s_d (m)
BK-Grund Silicate	BK-S Plast	0.16 ≤ 2.0 (Test result obtained with finishing coat BK-S Plast ribbed structure, particle size 1.5 mm)
	BK-Sil Si&Si	0.18 ≤ 2.0 (Test result obtained with finishing coat BK-Sil Si&Si ribbed structure, particle size 1.5 mm)
BK-Grund Universal	BK-Plast	0.18 ≤ 2.0 (Test result obtained with finishing coat BK-Plast ribbed structure, particle size 1.5 mm)
	BK-Sil	0.19 ≤ 2.0 (Test result obtained with finishing coat BK-Sil ribbed structure, particle size 1.5 mm)
	BK-Briv Special	0.13 ≤ 2.0 (Test result obtained with finishing coat BK-Briv Special ribbed structure, particle size 1.5 mm)



3.3 Safety in use (BWR 4)

3.3.1 Bond strength

3.3.1.1 Bond strength between the base coat and the thermal insulation product

- Base coats onto **expanded polystyrene**:

Bond strength between:	Acceptance criteria or failure occurs in the insulation product instead	mean value	minimum value
Base coat <i>BK-StirolFix 1</i> and insulation product (white EPS) - under dry conditions - after hygrothermal cycles - after freeze/thaw performance	$\geq 80 \text{ kN/m}^2$ $\geq 80 \text{ kN/m}^2$ $\geq 80 \text{ kN/m}^2$	253 kN/m ² ^B 214 kN/m ² ^B test not required	188 kN/m ² ^B 152 kN/m ² ^B test not required
Base coat <i>BK-StirolFix White</i> and insulation product (white EPS) - under dry conditions - after hygrothermal cycles - after freeze/thaw performance	$\geq 80 \text{ kN/m}^2$ $\geq 80 \text{ kN/m}^2$ $\geq 80 \text{ kN/m}^2$	94 kN/m ² ^B 174 kN/m ² ^B test not required	69 kN/m ² ^B 155 kN/m ² ^B test not required
Base coat <i>BK-StirolFix 1</i> and insulation product (graphite EPS) - under dry conditions - after hygrothermal cycles - after freeze/thaw performance	$\geq 80 \text{ kN/m}^2$ $\geq 80 \text{ kN/m}^2$ $\geq 80 \text{ kN/m}^2$	145 kN/m ² ^B 160 kN/m ² ^B test not required	132 kN/m ² ^B 149 kN/m ² ^B test not required

^A .. cohesive failure within the tested base coat or adhesive

^{A/B} .. adhesive failure between the tested base coat or adhesive and insulation product or substrate

^B .. cohesive failure within insulation product or substrate

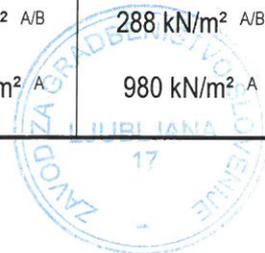
The minimum requirements of EAD 040083-00-0404, clause 2.2.11.1 are fulfilled for a purely bonded ETICS.



3.3.1.2 Bond strength between the adhesive and the substrate / thermal insulation product

- Adhesive onto **substrate** and onto **expanded polystyrene**:

Bond strength between:	Acceptance criteria or failure occurs in the insulation product instead	mean value	minimum value
<p><i>Adhesive BK StirolFix 1 and insulation product (white EPS)</i></p> <ul style="list-style-type: none"> - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water 	<p>$\geq 80 \text{ kN/mm}^2$</p> <p>$\geq 30 \text{ kN/mm}^2$</p> <p>$\geq 80 \text{ kN/mm}^2$</p>	<p>82 kN/m² B</p> <p>72 kN/m² A/B</p> <p>83 kN/m² B</p>	<p>64 kN/m² B</p> <p>55 kN/m² A/B</p> <p>75 kN/m² B</p>
<p><i>Adhesive BK StirolFix 1 and insulation product (graphite EPS)</i></p> <ul style="list-style-type: none"> - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water 	<p>$\geq 80 \text{ kN/mm}^2$</p> <p>$\geq 30 \text{ kN/mm}^2$</p> <p>$\geq 80 \text{ kN/mm}^2$</p>	<p>145 kN/m² B</p> <p>109 kN/m² A/B</p> <p>155 kN/m² B</p>	<p>132 kN/m² B</p> <p>102 kN/m² A/B</p> <p>138 kN/m² B</p>
<p><i>Adhesive BK StirolFix 1 and substrate</i></p> <ul style="list-style-type: none"> - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water 	<p>$\geq 250 \text{ kN/mm}^2$</p> <p>$\geq 80 \text{ kN/mm}^2$</p> <p>$\geq 250 \text{ kN/mm}^2$</p>	<p>578 kN/m² A/B</p> <p>315 kN/m² A/B</p> <p>658 kN/m² A/B</p>	<p>552 kN/m² A/B</p> <p>256 kN/m² A/B</p> <p>572 kN/m² A/B</p>
<p><i>Adhesive BK StirolFix Base and insulation product (white EPS)</i></p> <ul style="list-style-type: none"> - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water 	<p>$\geq 80 \text{ kN/mm}^2$</p> <p>$\geq 30 \text{ kN/mm}^2$</p> <p>$\geq 80 \text{ kN/mm}^2$</p>	<p>146 kN/m² B</p> <p>120 kN/m² B</p> <p>190 kN/m² B</p>	<p>68 kN/m² B</p> <p>100 kN/m² B</p> <p>112 kN/m² B</p>
<p><i>Adhesive BK StirolFix Base and substrate</i></p> <ul style="list-style-type: none"> - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water 	<p>$\geq 250 \text{ kN/mm}^2$</p> <p>$\geq 80 \text{ kN/mm}^2$</p> <p>$\geq 250 \text{ kN/mm}^2$</p>	<p>662 kN/m² A</p> <p>596 kN/m² A/B</p> <p>1077 kN/m² A</p>	<p>564 kN/m² A</p> <p>288 kN/m² A/B</p> <p>980 kN/m² A</p>



Bond strength between:	Acceptance criteria or failure occurs in the insulation product instead	mean value	minimum value
Adhesive BK-StirolFix WDVS and insulation product (white EPS) - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water	$\geq 80 \text{ kN/mm}^2$ $\geq 30 \text{ kN/mm}^2$ $\geq 80 \text{ kN/mm}^2$	211 kN/m ² B 172 kN/m ² B 213 kN/m ² B	152 kN/m ² B 148 kN/m ² B 152 kN/m ² B
Adhesive BK-StirolFix WDVS and substrate - under dry conditions - 2 hours after removing the samples from the water - 7 days after removing the samples from the water	$\geq 250 \text{ kN/mm}^2$ $\geq 80 \text{ kN/mm}^2$ $\geq 250 \text{ kN/mm}^2$	459 kN/m ² A 342 kN/m ² A/B 546 kN/m ² A	384 kN/m ² A 280 kN/m ² A/B 432 kN/m ² A

^A .. cohesive failure within the tested base coat or adhesive

^{A/B} .. adhesive failure between the tested base coat or adhesive and insulation product or substrate

^B .. cohesive failure within insulation product or substrate

The ETICS shall be installed on the substrate with application of the adhesive **BK-StirolFix WDVS** on the minimal surfaces of 20%, or **BK-StirolFix 1** on the minimal surfaces of 37 %, or **BK-StirolFix Base** on the minimal surfaces of 21%.

The ETICS shall be installed on the substrate with application of the adhesive on the surfaces which is defined for single adhesive above, must exceed 20% and was calculated as follows:

$S (\%) = [0.03 (\text{MPa}) \times 100] / B$; where:

- B: minimum mean failure resistance of the adhesive to the insulation product in dry conditions.
- 0.03 MPa correspond to the minimum requirements.

3.3.2 Fixing strength

Test not required because the ETICS fulfils the following criteria: $E \times d < 50000 \text{ N/mm}$ for both base coat **BK-StirolFix White** and **BK-StirolFix 1**,

Where: E : modulus of elasticity of the base coat,
d : mean dried thickness of the base coat



3.3.3 Wind load resistance

The ETICS "BEKATHERM Standard" is not foreseen to be mechanically fixed in any way (neither using anchors, nor using profiles). PVC anchors are foreseen to be used only where necessary to provide stability until adhesive has dried and as an ancillary component without any contribution to wind-load resistance.

All anchors with valid ETA according to EAD 330196-01-0604 can be used.

3.3.4 Render strip tensile test /statement of crack

The mean value of the width of multiple cracks of the base coat **BK-StirolFix 1** with the glass fibres mesh, measured at a render strain value of 0.8 % **in warp and weft direction** was between **0.05 and 0.10 mm**.

The mean value of the width of multiple cracks of the base coat **BK-StirolFix White** with the glass fibres mesh, measured at a render strain value of 0.8 % **in warp direction** was between **0.05 and 0.10 mm**, and **in weft direction** was **less than 0.05 mm**.

3.3.5 Bond strength after ageing

description of the ETICS: Rendering systems: <ul style="list-style-type: none"> - insulation product: EPS panels - base coat: BK-StirolFix 1 - finishing coat and key coat indicated hereafter 			
key coat	finishing coat	Bond strength after hygrothermal cycles in kPa individual values / mean value type of failure	Bond strength after freeze / thaw cycles in kPa individual values / mean value type of failure
BK-Grund Universal	BK-Plast	128, 168, 196, 136, .148 / 155 A A A A A	Test not required because freeze/thaw cycles not necessary
	BK-Sil	244, 172, 184, 156, .220 / 195 A A A A A	
	BK-Briv Special	328, 216, 312, 236, 244 / 267 A A A A A	
BK-Grund Silicate	BK-S Plast	244, 180, 220, 208, 164 / 203 A A A A A	
	BK-Sil Si&Si	276, 172, 200, 208, 188 / 209 A A A A A	

A ... cohesive failure within insulation product



description of the ETICS: Rendering systems:			
<ul style="list-style-type: none"> - insulation product: EPS panels - base coat: BK-StirolFix White - finishing coat and key coat indicated hereafter 			
key coat	finishing coat	Bond strength after hygrothermal cycles in kPa individual values / mean value type of failure	Bond strength after freeze / thaw cycles in kPa individual values / mean value type of failure
BK-Grund Universal	BK-Plast	144, 128, 110, 132, .152 / 154 A A A A A	Test not required because freeze/thaw cycles not necessary
	BK-Sil	148, 188, 188, 172, .172 / 174 A A A A A	
	BK-Briv Special	156, 84, 152, 144, 128 / 133 A A A A A	
BK-Grund Silicate	BK-S Plast	112, 120, 116, 152, 144 / 129 A A A A A	
	BK-Sil Si&Si	80, 72, 200, 148, 98 / 100 A A A A A	

A .. cohesive failure within insulation product

The ETICS fulfils the acceptance criteria given in EAD 040083-00-0404.

3.3.6 Mechanical and physical characteristics of the mesh

3.3.6.1 Tensile strength of the glass fibre mesh in as-delivered state and after ageing

Glass fibre meshes with 3.3 – 4.7 mm wide grid of fibres.

	Weight (g/m ²)	Tensile strength in as-delivered state mean value (N/mm)		Elongation at break in as-delivered state mean value (%)	
		Warp	Weft	Warp	Weft
BEKAMENT MREŽICA 160 (Keltex Primafas 160)	167	48	50	3.90	4.00
BEKAMENT MREŽICA 145 (Keltex Primafas 145)	152	45	47	3.70	4.20
BEKAMENT MREŽICA 160 (Masterplast YU E132L)	163	43	48	3.56	3.60
BEKAMENT MREŽICA 145 (Masterplast YU E118L)	145	43	41	3.34	3.34

3.3.6.2 Tensile strength and elongation of the glass fibre mesh after ageing

Glass fibre meshes with 3.3 – 4.7 mm wide grid of fibres.

	Tensile strength after ageing mean value (N/mm)		Elongation at break after ageing mean value (%)		Relative residual resistance after ageing of the strength in as delivered state (%)	
	Warp	Weft	Warp	Weft	Warp	Weft
BEKAMENT MREŽICA 160 (Kelteks Primafas 160)	33	38	2.90	3.00	69	76
BEKAMENT MREŽICA 145 (Kelteks Primafas 145)	23	28	2.10	2.40	53	58
BEKAMENT MREŽICA 160 (Masterplast YU E132L)	26	29	2.15	2.17	60	60
BEKAMENT MREŽICA 145 (Masterplast YU E118L)	23	29	1.87	2.36	53	71

3.4 Protection against noise (BWR 5)

3.4.1 Airborne sound insulation

No performance assessed.

3.5 Energy economy and heat retention (BWR 6)

3.5.1 Thermal resistance and thermal transmittance of the ETICS

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

$$U = U_c + \chi_p \cdot n, \text{ where:}$$

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

U: overall 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

- $\chi_p =$ 0.002 W/K for anchors with a stainless steel screw covered by plastic anchors and for anchors with an air gap at the head of the screw ($\chi_p \cdot n$ negligible for $n < 20$)
- $\chi_p =$ 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 $n < 10$)
- $\chi_p =$ 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:

$$U_c = \frac{1}{R_i + R_{render} + R_{substrate} + R_{se} + R_{si}}, \text{ where:}$$

- R_{design} : thermal resistance of the insulation product - see CE marking in reference to EPS EN 13163 ((m².K)/W)
- R_{render} : thermal resistance of the render (about 0.02 (m².K)/W)
- $R_{substrate}$: thermal resistance of the substrate of the building (concrete, brick ...) ((m².K)/W)
- R_{se} : external surface thermal resistance ((m².K)/W)
- R_{si} : internal surface thermal resistance ((m².K)/W)

The value of thermal resistance of each insulation product shall be given in the Declaration of performance 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.

Note: in some countries treatment of data beyond EN 13163 may be needed, such as derivation of the design thermal values, based on declared values for insulation product, calculated according EN ISO 10456. If such treatment is not foreseen declared values may be used instead.

3.6 Characteristics of the components

3.6.1 Insulation product – expanded polystyrene (EPS)

EPS panels	
Description and characteristics	Cut surface (homogeneous and without "skin"). White or graphite. Executed as bonded ETICS, or as bonded ETICS with supplementary fixings (anchors)
Water absorption (kg/m²) / EN 1609	< 0.5
Water diffusion resistance factor (μ) / EN 12086 – EN 13163	< 60



EPS panels			
Designation code	<p>Austrotherm EPS AF EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR150-BS115-WL(T)3 or</p> <p>Austrotherm EPS F 60 EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR100-BS110-WL(T)3, or</p> <p>Bekatherm EPS Gold EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,90)1-CS(10)80-BS150-WL(T)3,5-TR150, or</p> <p>Bekatherm EPS F EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS135-TR120- WL(T)3,5 or</p> <p>Bekatherm EPS Grafit EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS150-TR150-WL(T)2,5</p> <p>Plastopor EPS F Grafitni EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR120 or</p> <p>Plastopor EPS F 038 EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR150-WL(P)0,1 or</p> <p>Kempor EPS F Premium EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR160 or</p> <p>Kempor EPS F Standard EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS115-WL(P)0,5-TR120 or</p> <p>Kempor EPS F Plus EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR150 or</p> <p>Europor EPS FAS EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(T)2-TR150 or</p> <p>Pimitpor EPS FAS Grafitni EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS125-WL(T)2-TR100</p>		
Reaction to fire acc. EN 13501-1	Maximum density (kg/m³)	Maximum thickness (mm)	class
	approx. 18	300	E
Thickness (mm) / EN 823	EPS-EN 13163 – T2		
Length (mm) / EN 822	EPS-EN 13163 – L2		
Width (mm) / EN 822	EPS-EN 13163 – W2		
Squareness (mm) / EN 824	EPS-EN 13163 – S2		
Flatness (mm) / EN 825	EPS-EN 13163 – P5		



EPS panels		
Dimensional stability under:	specified temperature and humidity / EN 1604	EPS-EN 13163-DS (70,-)1
	laboratory condition / EN 1603	EPS-EN 13163-DS(N)2
Thermal resistance ((m ² .K)/W)		Defined in reference to EN 13163
Tensile strength perpendicular to the faces / EN 1607		≥100 kPa; EPS-EN 13163 - TR 100
Bending strength / EN 12089		≥110 kPa; EPS-EN 13163 - BS 110
Shear strength (N/mm ²) / EN 12090		≥ 0.02
Shear modulus (N/mm ²) / EN 12090		≥ 1.0

3.6.2 Anchors

PVC anchors for insulation product (used as an ancillary component without contribution to windload resistance), with valid ETA according to EAD 330196-01-0604 (Plastic anchors made of virgin or non-virgin material for fixing of external thermal insulation composite systems with rendering) shown in the control plan and the declaration of performance.

4 Assessment and verification of constancy of performance (AVCP)

According to the decision 97/556/EC of the European Commission¹ amended by the European Commission decision 2001/596/EC, the **AVCP system 2+** (further described in Annex V to Regulation (EU) No 305/2011) apply.



¹ Official Journal of the European Communities L 254 of 8.10.1996

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 plan² deposited at ZAG Ljubljana.

Issued in Ljubljana on 20th of September 2021

Signed by:
Franc Capuder, M.Sc.
Head of Service of TAB



² The Control plan is a confidential part of the technical documentation of this European Technical Assessment, but not published together with the ETA, and handed over only to the approved body or bodies involved in the procedure of attestation of conformity.

Use

ETICS

Adhesive

BK-StirolFix 1

BK-StirolFix WDWS (not applicable with graphite EPS)

BK-StirolFix Base (not applicable with graphite EPS)

Insulation

Expanded polystyrene panels (EPS); see clauses 1.2.1 & 3.6.1

Austrotherm EPS AF: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR150-BS115-WL(T)3 or

Austrotherm EPS F 60: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-TR100-BS110-WL(T)3, or

Bekatherm EPS Gold: EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,90)1-CS(10)80-BS150-WL(T)3,5-TR150, or

Bekatherm EPS F: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS135-TR120-WL(T)3,5 or

Bekatherm EPS Grafit: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,90)1-CS(10)70-BS150-TR150-WL(T)2,5 or

Plastopor EPS F Grafitni: EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR120 or

Plastopor EPS F 038: EPS-EN13163-L2-W2-T2-S2-P5-DS(N)2-DS(70,-)1-BS115-TR150-WL(P)0,1 or

Kempor EPS F Premium: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR160 or

Kempor EPS F Standard: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS115-WL(P)0,5-TR120 or

Kempor EPS F Plus: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(P)0,5-TR150 or

Europor EPS FAS: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS135-WL(T)2-TR150 or

Pimitpor EPS FAS grafitni: EPS-EN13163-L2-W2-T1-S2-P5-DS(N)2-DS(70,-)1-BS125-WL(T)2-TR100

Base coat

BK-StirolFix 1

BK-StirolFix White (not applicable with graphite EPS)

Glass fibre mesh

Bekament mrežica 160 (Kelteks Primafas 160 or Masterplast YU E132L)

Bekament mrežica 145 (Kelteks primafas 145 or Masterplast Yu E118L)

BEKATHERM Standard

Trade names of the components

Annex A1; 1/2



Key coat + Finishing coats

BK-Grund Universal + BK-Plast
BK-Grund Universal + BK-Sil
BK-Grund Universal + BK-Briv Special
BK-Grund Silicat + BK-S Plast
BK-Grund Silicat + BK-Sil Si&Si

Anchors

Anchors with valid ETA according to ETAG 014 or according to EAD 330196-01-0604
(Plastic anchors made of virgin or non-virgin material for fixing of external thermal insulation
composite systems with rendering).

BEKATHERM Standard

Annex A1; 2/2

Trade names of the components

