

® TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA (Technical and Test Institute for Construction Prague), s.p

Technical and Test Institute for Construction Prague

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**Authorized body 204 according to Decision No. 5/2017 of ÚNMZ (Ústav pro technickou normalizaci, metrologii a státní zkušebnictví - Office for Standards, metrology and testing)  
Branch 0200 - České Budějovice**

issues

in accordance with Act No. 22/1997 Coll., on technical requirements for products and on amendments to certain acts, as later amended, and Sections 2 and 3 of Government Order No. 163/2002 Coll., as amended by Government Order No. 312/2005 Coll. and Government Order No. 215/2016 Coll.

# CONSTRUCTION TECHNICAL CERTIFICATE

no. 020-038768

for the following product:

**Baumit system with WILD STONE decorative stone**

type / variant: external thermal insulation composite system with insulated foam polystyrene (EPS) and lining

for the following manufacturer:

**BAUMIT, spol. s r.o.**

ID: 48038296

address: Průmyslová 1841, 250 01 Brandýs nad Labem, Czech Republic

for the following production plant: BAUMIT, spol s r.o.

ID: 48038296

address: Průmyslová 1841, 250 01 Brandýs nad Labem, Czech Republic

for the following contract: Z020180144

By this building technical certificate, the authorized body 204 certifies the data on the technical characteristics of the product, its level and procedures for its detection in relation to the basic requirements specified in Annex No. 1 to Government Order No. 163/2002 Coll., as amended by Government Order No. 312/2005 Coll. and Government Order No. 215/2016 Coll.

The certificate is a technical specification intended to assess the conformity of the product in question.

Number of pages of the building technical certificate including the cover page: 11

Processor of this building technical certificate:

  
Ing. Barbora Šerá  
senior assessor

Certificate validity until: 30 April 2022

Person responsible for the accuracy of this building technical certificate:

České Budějovice, 25 April 2019

stamp of authorized person 204  
Ing. Milan Pálka

deputy manager of the authorized body 204

Warning: This building technical certificate must not be reproduced except in whole without the written consent of the head manager of the authorized body 204.

### 1. Description of the product and definition of its use in construction:

**Baunit system with WILD STONE decorative stone** is an external thermal insulation composite system with tiling and insulating material made of EPS polystyrene.

The external thermal insulation composite system **Baunit system with WILD STONE decorative stone** with contact applied lining is designed for external thermal insulation of facades of existing and new residential, civil and industrial buildings. The variant of the external thermal insulation composite system with insulating foam polystyrene is designed for thermal insulation to heights corresponding to fire regulations. In case of fire, the persons escaping from the building must be protected against flowing down and falling off of the foamable plastic elements.

When applying this external thermal insulation composite system, it is necessary to proceed according to the project documentation, which must be processed for each specific building in a specific composition. The integral part of the project is the compliance with ČSN 73 2901 - Implementation of external thermal insulation composite systems (ETICS) and ČSN 73 2902 - Design and use of mechanical fastening for connection to the base, solution of expansion section sizes, solution of thermal technical properties including solution of water vapour condensation - assessment of the construction as a whole according to ČSN 73 0540, and fire report.

**Static calculation, taking into account only the wind suction, can be accepted only if the system anchoring is made with glass mesh with at least 6 pieces of dowels per 1 m<sup>2</sup> and the basic weight of the lining is maximum 25 kg/m<sup>2</sup>. If the two above-mentioned conditions are not met at the same time, the load-bearing capacity of the external thermal insulation composite system with lining must be documented by a detailed static calculation taking into account the weight of the lining; taking into account the combination of horizontal force from the wind and vertical force from the own weight.**

The assembly of the external thermal insulation composite system may only be performed by companies that hold a valid certificate of training of their personnel in implementation according to the provisions of the document "Technological regulation for professional implementation of external thermal insulation composite systems (ETICS) of polystyrene with contact applied lining".

**Type of the external thermal insulation composite system according to the method of attachment to the substrate**

Table No. 1

Type of the external thermal insulation composite system (ETICS)	Requirements
<b>Anchored ETICS with additional bonding</b>	<i>Quantity of the bonding substance on the board:</i> According to the the ETICS manufacturer instructions, the bonding area must be 40% of the EPS board surface.
	<i>Insulator type:</i> <b>Boards of expanded polystyrene</b> <b>EPS F Facade</b> For declared properties see Table No. 3.
	<i>Dowels:</i> Anchoring elements certified according to ETAG 014, EAD 330196-00-0604 or EAD 330196-01-0604 and according to ETAG 004 (Anchoring elements assessed for tear resistance and insulator elongation). For basic weight of $\leq 25$ kg/m <sup>2</sup> , use drive or screw dowels, for $> 25$ kg/m <sup>2</sup> use only screw dowels. Anchored with glass mesh The number of dowels is determined by the project documentation on the basis of the properties of the particular substrate (at least 6 pieces of dowels per 1 m <sup>2</sup> )



**Composition of the external thermal insulation composite system**

Table No. 2

Components		Consumption	Thickness
		[kg/m <sup>2</sup> ]	[mm]
<b>Bonding compound</b>	<b>Baumit StarContact</b> <i>Main product components:</i> cement, quartz sand, additives <i>At delivery:</i> powder <i>Preparation process:</i> powder requiring water addition of about 5.0-6.0 l/25 kg for bonding <i>Quantity of the bonding substance on the board:</i> According to the the ETICS manufacturer instructions, the bonding area must be 40% of the EPS board surface.	3.0-4.0 kg/m <sup>2</sup> dry mixtures	2-3
<b>Insulation product</b>	<b>Boards of expanded polystyrene</b> <b>EPS 70F Facade, EPS 100F Facade</b> <i>Declaration of properties according to Table No. 3</i>	-	50-250
<b>Substance for creating the base layer</b>	<b>Baumit StarContact</b> <i>Main product components:</i> cement, quartz sand, additives <i>At delivery:</i> powder <i>Preparation process:</i> powder requiring water addition of about 5.0-6.0 l/25 kg for gravelling	3.0-4.0 kg/m <sup>2</sup> dry mixtures	at least 3
<b>Glass mesh</b>	<b>Baumit KeraTex</b> applied in one layer	1.1-1.2 m <sup>2</sup> /m <sup>2</sup>	-
<b>Dowels</b>	Dowels with metal pin according to Table No. 1		
	<b>ejotherm STR U 2G</b> plastic screw dowels	ETA-04/0023	Number of pieces according to project documentation or technical instruction of the ETICS manufacturer
	<b>fischer TermoZ CS 8</b> plastic screw dowels	ETA-14/0372	
<b>Substance for bonding the lining</b>	<b>WILD STONE LM</b> <i>Main product components:</i> cement, filler, additives <i>At delivery:</i> powder <i>Preparation procedure:</i> powder requiring water addition of about 0.28 l/kg	2.5-6.3 kg/m <sup>2</sup> dry mixtures	6.0-8.0 mm
	<b>Baumit Baumacol Fiex Top</b> <i>Main product components:</i> cement, filler, additives <i>At delivery:</i> powder <i>Preparation procedure:</i> powder requiring water addition of about 0.26 l/kg	1.6-4.5 kg/m <sup>2</sup> dry mixtures	2.0-6.0 mm



Components		Consumption	Thickness
		[kg/m <sup>2</sup> ]	[mm]
Lining	<b>Lining elements</b> <sup>1) 2)</sup>		
	<p><i>Name of the lining element No. 1</i>  <b>Lining strip WILD STONE (Wild Stone)</b></p> <hr/> <p><i>Names o product lines:</i>  no. 1.1 Slanec  no. 1.2 Ornel  no. 1.3 Merock  no. 1.4 Monte Negro/Lumina  no. 1.5 Castelo  no. 1.6 Štípaný pískovec  no. 1.7 Říční kámen  no. 1.8 Hradní zeď  no. 1.9 Lámaná skála  no. 1.10 Opuka  no. 1.11 Mix Alpina  no. 1.12 Mix Colorado  no. 1.13 Mix Rustico  no. 1.14 Mix Grigio  no. 1.15 Mix Toscana  no. 1.16 Mix Country  no. 1.17 Mix Tirol  no. 1.18 Holland brick  no. 1.19 Castle brick</p> <hr/> <p><i>Manufacturer:</i>  Wild Stone International s.r.o.,  Podhořská 806/31, 104 00 Prague 8  Czech Republic</p> <hr/> <p><i>According to:</i></p> <ul style="list-style-type: none"> <li>• Declaration of properties No. WILDSTONE_1_2013</li> <li>• Protocol No. 010-026090 of 15 March 2010</li> <li>• Protocol No. 010-031734 of 13/06/2013</li> <li>• Protocol No. 010-033901 of 29/09/2014</li> <li>• Table of properties of the lining strips for lining strip No. 1 WILD STONE of 18 March 2019</li> </ul> <hr/> <p style="text-align: center;"><i>Declaration of properties according to Table No. 4</i></p>		
Jointing substance	<p><b>WILD STONE SH</b>  <i>Main product components:</i>  cement, quartz filler, modifying additives  <i>At delivery:</i> powder  <i>Preparation:</i> powder requiring water addition of about 0.17-0.20 l/kg</p>	6.0-8.0 kg/m <sup>2</sup> according to strip thickness and joint depth	Joint width: maximum 25 mm Layer thickness maximum 25 mm

<sup>1)</sup> Resistance to freeze/thaw cycles according to EN 1348 C1, Article 8.5 is required

<sup>2)</sup> Resistance to freeze/thaw cycles according to EN 12808 is required



**Properties of the thermal insulation material**

Prefabricated, rectangular sheets made of expanded polystyrene (EPS) according to EN 13163+A1, described in the table below.

Table No. 3

Properties		Standard	Declared EPS properties	
			class, level according to ČSN EN 13163+A1	value
Reaction to fire		ČSN EN 13501 -1+A1	E	volume weight ≤ 20 kg/m <sup>3</sup>
Thermal resistance		defined on CE marking according to the declaration in accordance with ČSN EN 13163+A1		
Thickness		ČSN EN 823	T(1)	±1 mm
Length		ČSN EN 822	L(2)	±2 mm
Width			W(2)	±2 mm
Rectangularity		ČSN EN 824	S(2)	±2 mm/m
Flatness		ČSN EN 825	P(5)	5 mm
Surface		ETAG 004	Cutting surface (homogeneous, uncoated)	
Dimensional stability	under specified temperature and humidity conditions	ČSN EN 1604	DS(70.-)1	1%
			DS(70.90)1	1%
	under constant laboratory conditions	ČSN EN 1603	DS(N)2	0.2%
Short-term water absorption at partial immersion		ČSN EN 1609	—	<1 kg/m <sup>2</sup>
Diffusion resistance factor (μ)		ČSN EN 13163+A1	MU 20-40 MU 30-70	20-70
Tensile strength perpendicular to the plane of the board		ČSN EN 1607	TR100	≥100 kPa
Shear strength		ČSN EN 12090	SS20	≥20 kPa
Modulus of shearing			GM1000	≥1000 kPa

**Note:** Colour marking of boards according to the EPS association or marking according to the ETICS supplier  
Class E reaction to fire shall also be demonstrated for each insulator at a product thickness of 10 mm  
Classes and levels for individual properties comply with EN 13163:2012+A1:2015



**Properties of the lining elements:**

Assessment of lining conformity according to Government order No. 163/2002 Coll., as later amended.

**Lining strips (no. 1)**

For all lining strips, the index of mass activity, if they are made of materials listed in Annex No. 28 of Decree No. 422/2016 Coll., on radioactive protection and security of radionuclide source.

**no. 1: Lining strip WILD STONE (Wild Stone)**

7) V1), V2) - see table, section 5.

Table No. 4

Monitored properties			Test procedure	Required/declared lining properties		
1.	Lining dimensions	[mm]	-	no. 1.	1	200x100x10-28 300x100x10-28 500x100x10-28
					2	200x100x20-40 300x100x20-40 500x100x20-40
					3	200x100x10-28 300x100x10-28 500x100x10-28
					4	530x150x10-45
					5	500x200x15-40
					6	170-600x40-180x15-40
					7	200-400x90-180x30-70
					8	150-350x60-350x10-30
					9	170-600x40-180x20-50
					10	150-500x100-270x20-60
					11	70-600x10-300x10-60
					12	150-500x100-300x20-60
					13	150-500x100-300x20-60
					14	150-500x100-300x20-60
					15	150-500x100-300x20-60
					16	70-600x20-300x10-60
					17	170-600x40-300x20-50
					18	210x60x10-15
					19	280-305x65x20-25
2.	Lining material	N	-	artificial stone		
3.	Shape and dimensional accuracy	[mm; %]	ČSN EN 14617-16	±15 mm		
4.	Volume weight	[kg/m <sup>3</sup> ]	ČSN EN 14617-1	1,683 kg/m <sup>3</sup> ±10%		
5.	Basic weight	[kg/m <sup>2</sup> ]	information from the manufacturer	No. 1.	1	maximum 32.2 - V2)
					2	maximum 38.0 kg/m <sup>2</sup> - V2)
					3	maximum 34.0 kg/m <sup>2</sup> - V2)
					4	maximum 46.0 kg/m <sup>2</sup> - V2)
					5	maximum 41.0 kg/m <sup>2</sup> - V2)
					6	maximum 30.0 kg/m <sup>2</sup> - V2)
					7	maximum 30.0 kg/m <sup>2</sup> - V2)
					8	maximum 33.0 kg/m <sup>2</sup> - V2)
					9	maximum 49.0 kg/m <sup>2</sup> - V2)
					10	maximum 33.0 kg/m <sup>2</sup> - V2)
					11	maximum 35.0 kg/m <sup>2</sup> - V2)
					12	maximum 35.0 kg/m <sup>2</sup> - V2)
					13	maximum 31.0 kg/m <sup>2</sup> - V2)
					14	maximum 35.0 kg/m <sup>2</sup> - V2)
					15	maximum 35.0 kg/m <sup>2</sup> - V2)
					16	maximum 35.0 kg/m <sup>2</sup> - V2)
					17	maximum 35.0 kg/m <sup>2</sup> - V2)
					18	maximum 23.0 kg/m <sup>2</sup> - V1)
					19	maximum 34.0 kg/m <sup>2</sup> - V2)
6.	Absorbency	[%]	ČSN EN 14617-1	maximum 3-4%		
7.	Frost resistance	[-]	ČSN EN 14617-5	25 cycles without failure		
8.	Diffusion resistance factor	[-]	ČSN EN ISO 7783-2	maximum 75.8 for average material ≤15.7 mm		
9.	Bending tensile strength	[MPa]	ČSN EN 14617-2	at least 4.5 MPa		



**2. Definition of monitored properties and methods of their assessment:****Table No. 5**

no.	Name of the monitored property	Test procedure	Number of samples <sup>1&gt;</sup>		Required (R)/ declared (D) level
			C	D	
1	Bearing capacity for dowel anchoring according to EAD 330196-01-0604 <sup>2)</sup> resistance against tear from the substrate	EAD 330196-01-0604	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	Resistance against tear from the substrate (D)
	resistance when pulling through the insulator	ETAG No. 004 Article 5.1.4.3.1 Article 5.1.4.3.2 (ČSN EN 13495)			The characteristic value and anchorage conditions are given in the relevant European Technical Certificate for the dowel
					Resistance when pulling through the insulator EPS 100F (TR100) (D) minimum thickness: 60 mm, anchoring through fabric
					see Table No. 6.
					System stability
System stability <sup>2)</sup>			Static calculation		
Mutual adhesion  of the bonding compound,  base layer,  surface treatment	ETAG No. 004, Article 5.1.4.1.2	ETAG No. 004, Article 5.1.4.1.3 (ČSN EN 13494)	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	Adhesion of the bonding substance to the substrate <sup>3)</sup> (D)
					at least 0.25 MPa (when dry) at least 0.08 MPa (48 h/2 h, 23°C, 50%) at least 0.25 MPa (48 h/7 d, 23°C, 50%)
					Adhesion of the bonding substance to the insulator (D)
					at least 0.08 MPa (when dry) at least 0.03 MPa (48 h/2 h, 23°C, 50%) at least 0.08 MPa (48 h/7 d, 23°C, 50%) or insulator failure
					Adhesion of the base layer to the insulator (D)
					at least 0.08 MPa (when dry) at least 0.08 MPa (on the wall) at least 0.08 MPa (after sim. method cycles) or insulator failure
					Adhesion of the surface treatment to the base layer (D)
at least 0.08 MPa (on the wall) at least 0.08 MPa (after sim. method cycles)					
2	Impact and puncture resistance	ETAG No. 004 Article 5.1.3.3.1 (ČSN EN 13497) ETAG No. 004 Article 5.1.3.3.2	Sampling according to the respective test procedure	according to the agreement of the manufacturer and AB	Impact and puncture resistance  Category I
3	Properties required for facade lining	TN 11 04 13	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	Properties required for facade lining (D)  According to Table No. 4
4	Frost resistance of the surface treatment	ETAG No. 004 Article 5.1.3.2.2	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	Adherence of the surface treatment after sim. method cycles (D)
					at least 0.08 MPa (after freezing cycles of the simulation method) or insulator failure

No.	Name of the monitored property	Test procedure	Number of samples <sup>1)</sup>		Required (R)/declared (D) level
			C	D	
5	Thermal insulator properties required for facade EPS	ČSN EN 13163+A1	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Thermal insulator properties (D)</b> According to Table No. 3 Properties of the thermal insulation material
6	Determination of base layer properties	ETAG No. 004 Article 5.5.4.1	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Maximum crack size during test (D)</b> maximum 0.20 mm when pulling 2%
7	Permeability of moisture and water vapour	ČSN EN 12086 Article 7.1.C	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Permeability of water vapour (D)</b> Declared layer group over thermal insulator equivalent diffusion thickness Sd with 10.0 m.
8	Flame spread index	ČSN 73 0863	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Flame spread index (D)</b> 0.0 mm/min
9	Reaction to fire	ČSN EN 13501-1 + A1	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Reaction to fire (D)</b> B - s1, d0
10	Release of dangerous substances	ETAG No. 004 Article 5.1.3.5 Hygiene regulations	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Release of dangerous substances (P)</b> Written declaration from the manufacturer on the existence of dangerous substances Material safety data sheets
11	Mass activity index of ETICS parts <sup>8)</sup>	SÚJB (Státní úřad pro jadernou bezpečnost - State Office for Nuclear Safety) methodology	ETICS components made of materials listed in Annex 28 of Decree No. 422/2016 Coll.		≤1
12	Dynamic stiffness of the insulation layer	ČSN ISO 9052-1	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Not assessed</b>
13	Thermal resistance of the entire layer group	ČSN EN ISO 6946	Sampling according to the respective test procedure	According to the agreement of the manufacturer and AB	<b>Thermal resistance of the entire layer group (P)</b> thermal resistance of the entire layer group at minimum thickness of the insulator is at least 1.0 m <sup>2</sup> K/W

Note: C - product certification; D - supervision of certified product.

<sup>1)</sup> The number of samples for the test set and the selection of test representatives shall be determined by the relevant test procedure

<sup>2)</sup> The stability of the ETICS shall be ensured in a particular case by designing any dowels based on the conditions and test results related to the stability of the system on the substrate according to ETAG 004 and the conditions and test results according to EAD 330196-01-0604

<sup>3)</sup> To ensure the stability of the ETICS on the substrate it is necessary to take into account the adhesion of the bonding substance to the particular substrate

<sup>4)</sup> Static calculation, taking into account only the wind suction, can be accepted only if the system anchoring is made with glass mesh with at least 6 pieces of dowels per 1m<sup>2</sup> and the basic weight of the lining is maximum 25 kg/m<sup>2</sup>. If the two above-mentioned conditions are not met at the same time, the load-bearing capacity of the external thermal insulation composite system with lining must be documented by a detailed static calculation taking into account the weight of the lining; taking into account the combination of horizontal force from the wind and vertical force from the own weight.

<sup>5)</sup> For each particular object, the project documentation must include the solution of the dilatation expansion of the lining.

<sup>6)</sup> To ensure the stability of the ETICS on the substrate it is necessary to take into account the adhesion of the bonding substance to the particular substrate.

<sup>7)</sup> Height limitation of use of the individual lining strips depending on their basic weigh:

V1) - <25 kg/m<sup>2</sup> without height limitation, no static calculation, drive and also screw dowels with steel pin





V2) - >25 kg/m<sup>2</sup> without height limitation, static calculation required, only screw dowels with steel pin

<sup>8)</sup> The determination of the mass activity index applies only to the ETICS parts made of materials listed in Annex No. 28 of Decree No. 422/2016 Coll., on radioactive protection and security of radionuclide source (e.g. cement bonding substances, final surface treatments, mineral wool, etc.). If the ETICS parts meet the requirement  $I < 1$ , the ETICS is not subject to further measurement/determination of the mass activity index.

Table No. 6 - dowels - surface mounting, anchoring through fabric

Anchor description	Business name	ejothem STR U 2G Fischer Termoz CS 8	(ETA – 04/0023) (ETA – 14/0372)
	Mounting method	Surface mounting	
	Plate diameter (mm)	60	
Insulator properties	Thickness (mm)	>60	
	Strength (kPa)	>100	
Maximum load	Dowels located in the area and in the joint (dowel pulled through the insulation material - ETAG No. 004, Article 5.1.4.3.1) (foam block test - ETAG No. 004, 61. 5.1.4.3.2)	$R_{panel}$ $R_{joint}$ when dry	minimum value: 2.84 kN average value: 3.35 kN



### 3. Requirements on the production control system (PCS)

The requirements on the PCS are set out in Annex No. 3 to Government Order No. 163/2002 Coll., as later amended.

The ETICS manufacturer is responsible for all components of the system, which must be inspected in the PCS. The manufacturer verifies the individual components according to the control plan agreed with the AB.

### 4. Documents submitted by the manufacturer

- Technical data sheets of the components
- Safety sheets of the components
- Static calculation of ETICS assessment with glued decorative stone cladding, prepared by Statically kancelář RECOG s.r.o., Ostrava in 12/2009
- Table of properties for lining strips for lining strip no.1 WILD STONE prepared by the company Wild Stone International s.r.o. on 18 March 2019
- Protocol No. 010-026090 on the water vapour permeability test of the concrete lining WILD STONE, issued by TZÚS Prague, a.s., branch Prague in Prague on 15 March 2010
- Protocol No. 010-031734 on the volume weight test and absorption of the concrete lining WILD STONE, issued by TZÚS Prague, a.s., branch Prague in Prague on 13 June 2013
- Protocol No. 010-031734 on the volume weight test and absorption of the concrete lining WILD STONE, issued by TZÚS Prague, a.s., branch Prague in Prague on 13 June 2013
- Protocol No. 060-046113 on the foam block test, issued by TZÚS Praha, a.s., branch Brno in Brno on 8 December 2017
- Protocol No. 020-025939 on the test of hygrothermal effect, adhesion and impact resistance, issued by TZÚS Praha, a.s., branch České Budějovice in České Budějovice on 9 May 2011
- Construction and technical certificate No. 010-033902 for the product - lining elements made of concrete, issued by TZÚS Praha, s.p., branch Prague on 25 September 2014
- Protocol on the verification of conformity for product type No. 010-033902 f- lining elements made of concrete, issued by TZÚS Praha, s.p., branch Prague on 2 October 2014
- ETA-04/0023 for the product STR U 2G, issued by DIBt Berlin on 17 October 2017
- ETA-14/0372 for the product fischer TERMOZ CS 8, issued by ETA-Danmark A/S, Nordhavn on 27 February 2015
- Protocol on the fire reaction classification, identification no. PK1-02-09-018-C-O for Baumacol Flex Top dry mortar mixture, issued by PAVUS, a.s. Prague, testing laboratory Veselí nad Lužnicí on 3 April 2009
- Fire reaction assessment for ETICS Baumit with Wildstone decorative stone, issued by CSI a.s. in Prague on 31 May 2018
- Protocol No. 246/2015 on the test of measurement of natural radionuclides, issued by SÚRO, v.v.i. in Prague on 14 May 2015
- Protocol No. 336/2015 on the test of measurement of natural radionuclides, issued by SÚRO, v.v.i. in Prague on 30 June 2015
- Protocol No. 221/2016 on the test of measurement of natural radionuclides, issued by SÚRO, v.v.i. in Prague on 9 May 2016
- Protocol No. 343/2017 on the test of measurement of natural radionuclides, issued by SÚRO, v.v.i. in Prague on 12 June 2017

### 5. Overview of used technical regulations, technical standards and other documents:



- Act No. 22/1997 Coll., on technical requirements for products and on amendments to certain acts, as later amended.
- Government Order No. 163/2002 Coll., setting out the technical requirements for selected construction products, as later amended.
- ČSN EN 13163+A1 Thermal insulating products for buildings - Factory made expanded polystyrene (EPS) products - Specification
- ČSN EN 13499+A1 Thermal insulating products for buildings - external thermal insulation composite systems made of foam polystyrene (EPS) - Specification
- ČSN EN 1991-1 Loading of building structures.
- ČSN 73 2901 Implementation of external thermal insulation composite systems (ETICS)
- ČSN 730540-2 Thermal protection of buildings. Part 2: Requirements
- ČSN 730540-3 Thermal protection of buildings. Part 3: Design values of quantities
- ČSN 730540-4 Thermal protection of buildings. Part 4: Calculation methods
- ČSN EN 771-1+A1 Specification for masonry units - Part 1: Clay masonry units
- ČSN EN 14411 Ed. 2 Ceramic tiles. Definitions, classification, characteristics and marking.
- ČSN EN ISO 13788 Hygrothermal performance of building elements and building structures - Internal surface temperature to avoid critical surface humidity and interstitial condensation within the structure
- ČSN EN ISO 10211-1 Thermal bridges in building structures - Heat flows and surface temperatures - Part 1: General calculation methods
- ČSN 730810 Fire safety of buildings - common provisions
- ČSN EN ISO 1716 Reaction to fire tests for products. Determination of the gross heat of combustion
- ČSN EN 13823 Reaction to fire tests for building products – Building products excluding floorings exposed to the thermal attack by a single burning item
- ČSN PCEN/TS 15117 Guidance on direct and extended application
- ČSN EN 13501-1+A1 Fire classification of construction products and building elements - Part 1: Classification according to fire test results
- ETAG No. 004 Guidance for the granting of a European Technical Approval (ETA) for external thermal insulation systems with surface treatment, Edition of June 2013
- ČSN EN ISO 11925-2 Reaction to fire tests - Ignitability of building products subjected to direct impingement of flame - Part 2: Small-flame source test
- Other used technical standards given in Tables No. 3 to 6 of this Building Technical Certificate.
- Technical instructions (TN 05.10.03a, b) for the AB activity in conformity assessment of external thermal insulation composite systems with lining for use subject to technical requirements of fire regulations.

## 6. Verification tests:

The verification tests were not performed to issue the building technical certificate.

## 7. Detailed requirements for conformity assessment:

The product is included in Annex No. 2, Group 11 05a) according to Government Order No. 163 of the later regulations, and the prescribed method of conformity assessment corresponds to § 5a of the above mentioned order.

The manufacturer shall ensure a factory production control system in accordance with the requirements of § 5(c) of that Order.

The certified product will be supervised once every 12 months.

