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## European Technical Assessment

**ETA-07/0316  
of 08/12/2017**

### General Part

<b>Technical Assessment Body issuing the European Technical Assessment</b>	Instytut Techniki Budowlanej
<b>Trade name of the construction product</b>	ATLAS XPS
<b>Product family to which the construction product belongs</b>	External Thermal Insulation Composite System with rendering (ETICS)
<b>Manufacturer</b>	ATLAS spółka z o.o. ul. Świętej Teresy 105 PL 91-222 Łódź, Poland
<b>Manufacturing plant</b>	ATLAS spółka z o.o. ul. Świętej Teresy 105 PL 91-222 Łódź, Poland
<b>This European Technical Assessment contains</b>	14 pages including 2 Annexes which form an integral part of this Assessment
<b>This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of</b>	Guideline for European Technical Approval ETAG 004, Edition 2013 "External Thermal Insulation Composite Systems with rendering", used as European Assessment Document (EAD)
<b>This version replaces</b>	ETA-07/0316 issued on 13/12/2012

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## Specific Part

### 1 Technical description of the product

External Thermal Insulation Composite System with rendering ATLAS XPS called ETICS in the following text is a kit comprising components which are factory-produced by the manufacturer or component suppliers. ETICS is made up on site from these components. 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 extruded polystyrene foam (XPS) to be bonded onto a wall. The method of fixing and the relevant components are specified in the table 1.

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 which are defined in clause 3.2.2.5 of ETAG 004. 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 components are delivered as a part of the kit.

**Table 1**

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Insulation material with associated methods of fixing	<b>Bonded ETICS:</b> fully bonded or partially bonded (bonded surface shall be at least 40%). National application documents shall be taken into account.		
	<ul style="list-style-type: none"> <li><b>Insulation product:</b> factory prefabricated standard extruded polystyrene foam (XPS) according to EN 13164 – see Annex 1 for product characteristics</li> </ul>	-	≤ 200
	<ul style="list-style-type: none"> <li><b>Adhesives:</b> <b>ATLAS STOPTER K-10</b> cement based powder requiring addition of 0,20 to 0,22 l/kg of water</li> </ul>	4,0 to 5,0 <sup>1</sup> (powder)	-
	<ul style="list-style-type: none"> <li><b>ATLAS STOPTER K-20</b> cement based powder requiring addition of 0,20 to 0,22 l/kg of water</li> <li><b>ATLAS HOTER S</b> cement based powder requiring addition of 0,20 to 0,22 l/kg of water</li> <li><b>ATLAS HOTER U</b> cement based powder requiring addition of 0,20 to 0,22 l/kg of water</li> </ul>	4,0 to 5,0 <sup>1</sup> (powder)	-
Base coats	<ul style="list-style-type: none"> <li><b>ATLAS STOPTER K-20</b> cement based powder requiring addition of 0,20 to 0,22 l/kg of water composition: sand, cement, mineral fillers, synthetic resin, additives</li> </ul>	3,0 to 3,5 (powder)	2,0 to 3,0
	<ul style="list-style-type: none"> <li><b>ATLAS HOTER U</b> cement based powder requiring addition of 0,20 to 0,22 l/kg of water composition: sand, cement, mineral fillers, synthetic resin, additives</li> </ul>	3,0 to 3,5 (powder)	2,0 to 3,0
Glass fibre meshes	<ul style="list-style-type: none"> <li><b>Standard glass fibre meshes</b> see Annex 2 for product characteristics</li> </ul>	-	-

<sup>1</sup> refers to fully bonded system

Table 1

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Key coats	<ul style="list-style-type: none"> <li>• <b>ATLAS CERPLAST</b> composition: water, styroacrylat binder, mineral fillers, additives ready to use liquid to be used with ATLAS CERMIT</li> </ul>	0,25 to 0,35	-
	<ul style="list-style-type: none"> <li>• <b>ATLAS SILKAT ASX</b> composition: water, styroacrylat binder, silicone resin, additives ready to use liquid to be used with ATLAS SILKAT / TYNK SILIKATOWY ATLAS</li> </ul>	0,25 to 0,35	-
	<ul style="list-style-type: none"> <li>• <b>ATLAS SILKON ANX</b> composition: water, styroacrylat binder, silicone resin, mineral fillers, additives ready to use liquid to be used with ATLAS SILKON</li> </ul>	0,25 to 0,35	-
Finishing coats	<ul style="list-style-type: none"> <li>• <b>Mineral finishing coats</b> composition: sand, cement, mineral fillers, additives</li> </ul>		
	<ul style="list-style-type: none"> <li>• <b>ATLAS CERMIT SN mineral</b> powder requiring addition of 0,18 to 0,26 l/kg of water; particle size 1,5; 2,0; 2,5; 3,0 mm; grained structure</li> </ul>	2,5 to 4,5	regulated by particle size
	<ul style="list-style-type: none"> <li>• <b>ATLAS CERMIT DR mineral</b> powder requiring addition of 0,18 to 0,26 l/kg of water; particle size 2,0; 3,0 mm; ribbed structure</li> </ul>	2,5 to 4,5	regulated by particle size
	<ul style="list-style-type: none"> <li>• <b>Acrylic finishing coats</b> composition: water, acryl-copolymer binder, sand, mineral fillers, additives</li> </ul>		
	<ul style="list-style-type: none"> <li>• <b>ATLAS CERMIT N acryl</b> ready to use paste particle size: 1,5; 2,0; 3,0 mm; grained structure</li> </ul>	2,5 to 4,5 (powder)	regulated by particle size
	<ul style="list-style-type: none"> <li>• <b>ATLAS CERMIT R acryl</b> ready to use paste particle size: 2,0; 3,0 mm; ribbed structure</li> </ul>	2,5 to 4,5 (powder)	regulated by particle size
	<ul style="list-style-type: none"> <li>• <b>Silicate finishing coats</b> composition: water, silicate binder, sand, mineral fillers, additives</li> </ul>		
	<ul style="list-style-type: none"> <li>• <b>ATLAS SILKAT N / TYNK SILIKATOWY ATLAS</b> ready to use paste particle size: 1,5; 2,0 mm; grained structure</li> </ul>	2,5 to 3,5	regulated by particle size
	<ul style="list-style-type: none"> <li>• <b>ATLAS SILKAT R</b> ready to use paste particle size: 2,0 mm; ribbed structure</li> </ul>	2,5 to 3,5	regulated by particle size
	<ul style="list-style-type: none"> <li>• <b>Silicone finishing coats</b> composition: water, silicone resin, sand, mineral fillers, additives</li> </ul>		
	<ul style="list-style-type: none"> <li>• <b>ATLAS SILKON N</b> ready to use paste particle size: 1,5; 2,0 mm; grained structure</li> </ul>	2,5 to 3,5	regulated by particle size
	<ul style="list-style-type: none"> <li>• <b>ATLAS SILKON R</b> ready to use paste particle size: 2,0 mm; ribbed structure</li> </ul>	2,5 to 3,5	regulated by particle size
Primers	<ul style="list-style-type: none"> <li>• <b>ATLAS ARKOL SX</b> composition: water, styroacrylat binder, mineral fillers, silicone emulsion, additives ready to use liquid to be used with ATLAS ARKOL S / SALTA S</li> </ul>	0,05 to 0,20	-
	<ul style="list-style-type: none"> <li>• <b>ATLAS ARKOL NX</b> composition: water, styroacrylat binder, mineral fillers, silicone emulsion, additives ready to use liquid to be used with ATLAS ARKOL N and ATLAS FASTEL / FASTEL NOVA / SALTA</li> </ul>	0,05 to 0,20	-

Table 1

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
<b>Decorative coats (paints)</b>	ready to use liquids:		
	<ul style="list-style-type: none"> <li>• <b>ATLAS ARKOL E</b> to be used optionally with all finishing coats composition: acryl-copolymer binder, pigments, additives</li> </ul>	0,125 to 0,250*	-
	<ul style="list-style-type: none"> <li>• <b>ATLAS ARKOL S / SALTA S</b> to be used optionally with all finishing coats composition: silicate binder, pigments, additives</li> </ul>	0,200 to 0,280*	-
	<ul style="list-style-type: none"> <li>• <b>ATLAS ARKOL N</b> to be used optionally with all finishing coats composition: silicone resin, pigments, additives</li> </ul>	0,125 to 0,250*	-
<b>Ancillary materials</b>	Remain under ETICS manufacturer responsibility.		
	Platic anchors as supplementary mechanical fixings covered by ETA.		

\* decorative coats coverage in dm<sup>3</sup>/m<sup>2</sup>

## 2 Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

This ETICS is intended to be used as external thermal insulation of buildings' walls made of masonry (bricks, blocks, stones, etc.) or concrete (cast on site or as prefabricated panels) with or 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 (bonding).

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 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 effects of weathering. The ETICS is not intended to ensure the airtightness of the building structure.

The provisions made in this European Technical Assessment are based on an assumed working life of the ETICS of at least 25 years, provided that the conditions for the packaging, transport, storage, installation as well as appropriate use, maintenance and repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer or the Technical Assessment Body, but should only be regarded as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

Design, installation, maintenance and repair shall take into account principles given in clause 7 of ETAG 004 and shall be done in accordance with national provisions.

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

Performances of the ETICS related to the Basic Requirements were determined in compliance with the ETAG 004.

Performances of the ETICS as described in this clause are valid provided that the components of the kit comply with Annexes 1 ÷ 2.

### 3.1 Safety in the case of fire (BWR 2)

#### 3.1.1 Reaction to fire (ETAG 004, clause 5.1.2.1)

Table 2

Configuration	Maximum declared organic content	Declared flame retardant content	Reaction to fire class according to EN 13501-1
ETICS ATLAS XPS with XPS boards (reaction to fire class E) and rendering system: <ul style="list-style-type: none"> <li>Adhesives: ATLAS STOPTER K-10, ATLAS STOPTER K-20, ATLAS HOTER S, ATLAS HOTER U</li> <li>Meshes: SSA 1363 SM(100), R 117 A 101 / AKE 145 / VERTEX 145</li> <li>Base coats: ATLAS STOPTER K-20, ATLAS HOTER U</li> <li>Finishing coats (with relevant key coats): ATLAS CERMIT mineral, ATLAS SILKAT / TYNK SILIKATOWY ATLAS</li> <li>Decorative coats (with relevant primers): ATLAS ARKOL E, ATLAS ARKOL S / SALTA S, ATLAS ARKOL N, ATLAS FASTEL / FASTEL NOVA / SALTA</li> </ul>	$\leq 3,50\%$          $\leq 4,9\%$          $\leq 13,5\%$	0% (no flame retardant)	<b>B – s2, d0</b>
ETICS ATLAS XPS with XPS boards (reaction to fire class E) and rendering system: <ul style="list-style-type: none"> <li>Adhesives: ATLAS STOPTER K-10, ATLAS STOPTER K-20, ATLAS HOTER S, ATLAS HOTER U</li> <li>Meshes: SSA 1363 SM(100), R 117 A 101 / AKE 145 / VERTEX 145</li> <li>Base coats: ATLAS STOPTER K-20, ATLAS HOTER U</li> <li>Finishing coats (with relevant key coats): ATLAS CERMIT acryl, ATLAS SILKON</li> <li>Decorative coats (with relevant primers): ATLAS ARKOL E, ATLAS ARKOL S / SALTA S, ATLAS ARKOL N, ATLAS FASTEL / FASTEL NOVA / SALTA</li> </ul>	$\leq 3,5\%$          $\leq 8,4\%$          $\leq 13,5\%$	0% (no flame retardant)	<b>C – s2, d0</b>

*Note: European reference fire scenario has not been laid down for facades. In some Member States the classification according to EN 13501-1 might not be sufficient for the use in facades. An additional tests might be required to comply with national provisions (e.g. large scale tests).*

#### Mounting and fixing

The assessment of reaction to fire is based on tests with an insulation layer (XPS) thickness of 180 mm – SBI test according to EN 13823, 60 mm – test according to EN ISO 11925-2 and a maximum insulation material (XPS) density of 32 kg/m<sup>3</sup> as well as finishing coats with maximum organic content.

For the SBI test according to EN 13823, the ETICS is mounted directly to a substrate (Class A2-s1, d0) with a thickness of 12 mm. For the test according to EN ISO 11925-2 no substrate is used.

The installation of the ETICS was carried out by the manufacturer following the manufacturer's specifications (instruction of installation) 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.

Anchors were not included in the tested ETICS as they have no influence on the test results.

### 3.2 Hygiene, health and the environment (BWR 3)

#### 3.2.1 Water absorption (ETAG 004, clause 5.1.3.1)

- Base coat ATLAS STOPTER K-20:
  - water absorption after 1 hour < 1,0 kg/m<sup>2</sup>,
  - water absorption after 24 hours < 0,5 kg/m<sup>2</sup>,
- Base coat ATLAS HOTER U:
  - water absorption after 1 hour < 1,0 kg/m<sup>2</sup>,
  - water absorption after 24 hours < 0,5 kg/m<sup>2</sup>,
- Rendering systems – according to Table 3.

Table 3

		Water absorption after 24 h	
		< 0,5 kg/m <sup>2</sup>	≥ 0,5 kg/m <sup>2</sup>
<b>Rendering system:</b> base coat ATLAS STOPTER K-20 (with the relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT SN, DR mineral	X	-
	ATLAS CERMIT N, R acryl	X	-
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, R	X	-
	ATLAS SILKON N, R	X	-
<b>Rendering system:</b> base coat ATLAS HOTER U (with the relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT SN, DR mineral	X	-
	ATLAS CERMIT N, R acryl	X	-
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, R	X	-
	ATLAS SILKON N, R	X	-

#### 3.2.2 Watertightness (ETAG 004, clause 5.1.3.2)

Heat-rain and heat-cold cycles have been performed on a rig. The ETICS is assessed as resistant to hygrothermal cycles.

The water absorption of both the base coat and the rendering system was lower than 0,5 kg/m<sup>2</sup> after 24 hours. The ETICS is therefore assessed as resistant to freeze/thaw behaviour.

#### 3.2.3 Impact resistance (ETAG 004, clause 5.1.3.3)

Table 4

		Impact resistance
		Single standard mesh layer
<b>Rendering system:</b> base coat ATLAS STOPTER K-20 (with the relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT SN, DR mineral	Category III
	ATLAS CERMIT N, R acryl	Category III
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, ATLAS SILKAT R	Category III
	ATLAS SILKON N, R	Category III

**Table 5**

		Impact resistance
		Single standard mesh layer
<b>Rendering system:</b> base coat ATLAS HOTER U (with the relevant key-coat) + finishing coat indicated hereafter:	ATLAS CERMIT SN, DR mineral	Category III
	ATLAS CERMIT N, R acryl	Category III
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, ATLAS SILKAT R	Category III
	ATLAS SILKON N, R	Category III

**3.2.4 Water vapour permeability (ETAG 004, clause 5.1.3.4)**

**Table 6**

		Equivalent air thickness $s_d$
<b>Rendering system:</b> base coat ATLAS STOPTER K-20 (with relevant key coat according to Table 1) + finishing coat indicated hereafter	ATLAS CERMIT SN, DR mineral	$\leq 1,0$ m  ATLAS CERMIT DR mineral particles size 3,0 mm: 0,25 m  ATLAS SILKAT R particles size 2,0 mm: 0,19 m  ATLAS CERMIT N acryl particles size 3,0 mm and decorative coat ATLAS ARKOL E: 0,49 m
	ATLAS CERMIT N, R acryl	
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, ATLAS SILKAT R	
	ATLAS CERMIT N acryl + ATLAS ARKOL E	

**Table 7**

		Equivalent air thickness $s_d$
<b>Rendering system:</b> base coat ATLAS HOTER U (with relevant key coat according to Table 1) + finishing coat indicated hereafter	ATLAS CERMIT SN, DR mineral	$\leq 1,0$ m  ATLAS CERMIT SN mineral particles size 3,0 mm: 0,31 m  ATLAS SILKAT N / TYNK SILIKATOWY ATLAS particles size 2,0 mm: 0,19 m  ATLAS CERMIT N acryl particles size 3,0 mm and decorative coat ATLAS ARKOL E: 0,43 m
	ATLAS CERMIT N, R acryl	
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, ATLAS SILKAT R	
	ATLAS CERMIT N acryl + ATLAS ARKOL E	

**3.2.5 Release of dangerous substances (ETAG 004 - clause 5.1.3.5, EOTA TR 034)**

The written declaration on dangerous substances was submitted by the manufacturer to the Technical Assessment Body.



Regarding dangerous substances there may be other requirements applicable to the ETICS falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Regulation (EU) No 305/2011, these requirements need also to be complied with, when and where they apply.

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

#### 3.3.1 Bond strength between base coat and insulation product (ETAG 004, clause 5.1.4.1.1)

Table 8

Bond strength between base coat and insulation product (XPS)			
Base coats	Initial state	After hygrothermal cycles (on the rig)	After freeze/thaw cycles
ATLAS STOPTER K-20	≥ 0,08 MPa	≥ 0,08 MPa	test not required because freeze/thaw cycles not necessary
ATLAS HOTER U	≥ 0,08 MPa	≥ 0,08 MPa	test not required because freeze/thaw cycles not necessary

#### 3.3.2 Bond strength between adhesive / substrate and adhesive / insulation product (ETAG 004, clause 5.1.4.1.2 and 5.1.4.1.3)

Table 9

Bond strength between: adhesive – substrate (concrete) and adhesive – insulation product (XPS)				
Adhesives		Under dry conditions	48 h immersion in water + 2 h drying at (23±2)°C and (50±5)% RH	48 h immersion in water + 7 days drying at (23±2)°C and (50±5)% RH
ATLAS STOPTER K-10	Concrete	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
	XPS	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa
ATLAS STOPTER K-20	Concrete	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
	XPS	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa
ATLAS HOTER S	Concrete	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
	XPS	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa
ATLAS HOTER U	Concrete	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
	XPS	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa

The ETICS shall be installed on the substrate with application of the adhesive on the following minimal surface:

Table 10

	Tensile strength perpendicular to the faces of XPS
	TR100 (≥ 100 kPa)
ATLAS STOPTER K-10 ATLAS STOPTER K-20 ATLAS HOTER S ATLAS HOTER U	40%

### 3.3.3 Bond strength after ageing (ETAG 004, clause 5.1.7)

Table 11

		After hygrothermal cycles
<b>Rendering system:</b> base coat ATLAS STOPTER K-20 (with relevant key coat according to Table 1) + finishing coat indicated hereafter	ATLAS CERMIT SN, DR mineral	≥ 0,08 MPa
	ATLAS CERMIT N, R acryl	≥ 0,08 MPa
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, ATLAS SILKAT R	≥ 0,08 MPa
	ATLAS SILKON N, R	≥ 0,08 MPa

Table 12

		After hygrothermal cycles
<b>Rendering system:</b> base coat ATLAS HOTER U (with relevant key coat according to Table 1) + finishing coat indicated hereafter	ATLAS CERMIT SN, DR mineral	≥ 0,08 MPa
	ATLAS CERMIT N, R acryl	≥ 0,08 MPa
	ATLAS SILKAT N / TYNK SILIKATOWY ATLAS, ATLAS SILKAT R	≥ 0,08 MPa
	ATLAS SILKON N, R	≥ 0,08 MPa

### 3.3.4 Fixing strength (ETAG 004, clause 5.1.4.2)

Test not required because the ETICS fulfills the criteria given in clause 5.1.4.2.

### 3.3.5 Render strip tensile test (ETAG 004, clause 5.5.4)

No performance assessed.

## 3.4 Protection against noise (BWR 5)

### 3.4.1 Airborne sound insulation (ETAG 004, clause 5.1.5)

No performance assessed.

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

### 3.5.1 Thermal resistance and thermal transmittance (ETAG 004, clause 5.1.6)

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

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

- where:
- $\chi_p \cdot n$  to be taken into account if it is greater than 0,04 W/(m<sup>2</sup>·K)
  - $U_c$ : corrected thermal transmittance of the wall, including thermal bridges, W/(m<sup>2</sup>·K)
  - $n$ : number of anchors per m<sup>2</sup>
  - $\chi_p$ : local influence of thermal bridge caused by an anchor; the values listed below can be taken into account if not specified in the anchor's ETA:

- = 0,002 W/K for anchors with a plastic screw, stainless steel screw with a head covered by plastic material and for anchors with an air gap at the head of the screw ( $\chi_p \cdot n$  negligible for  $n < 20$ )
- = 0,004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material ( $\chi_p \cdot n$  negligible for  $n < 10$ )
- = 0,008 W/K for all other anchors (worst case)

U: thermal transmittance of the current part of the wall including ETICS, without thermal bridges,  $W/(m^2 \cdot K)$ , determined as follows:

$$U = 1 : [R_i + R_{render} + R_{substrate} + R_{se} + R_{si}]$$

where:  $R_i$ : thermal resistance of the insulation product (according to declaration in reference to EN 13164) in  $(m^2 \cdot K)/W$

$R_{render}$ : thermal resistance of the render (about 0,02 in  $(m^2 \cdot K)/W$  or determined by test according to EN 12667 or EN 12664)

$R_{substrate}$ : thermal resistance of the substrate (e.g. concrete, brick) in  $(m^2 \cdot K)/W$

$R_{se}$ : external superficial thermal resistance in  $(m^2 \cdot K)/W$

$R_{si}$ : internal superficial thermal resistance in  $(m^2 \cdot K)/W$

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

### 3.6 Sustainable use of natural resources (BWR 7)

No performance assessed.

## 4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

According to Decision 97/556/EC of the European Commission amended by the Decision 2001/596/EC, the systems of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table apply.

**Table 12**

Product	Intended use	Level or class (Reaction to fire)	System
External thermal insulation composite systems / kits (ETICS) with rendering	in external wall subject to fire regulations	A1 <sup>(1)</sup> , A2 <sup>(1)</sup> , B <sup>(1)</sup> , C <sup>(1)</sup>	1
		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	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 <sup>(1)</sup>

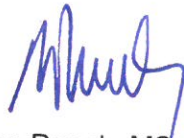
<sup>(3)</sup> Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of Class A1 according to Commission Decision 96/603/EC)

**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document (EAD)**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan which is deposited at Instytut Techniki Budowlanej.

For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

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Anna Panek, MSc  
Deputy Director of ITB

Description and characteristics		XPS panels according to EN 13164
<b>Reaction to fire</b> EN 13501-1		Class E thickness: up to 200 mm density: up to 40,0 kg/m <sup>3</sup>
<b>Thermal resistance (m<sup>2</sup>·K)/W</b>		Defined in the CE marking in reference to EN 13164
<b>Thickness</b> EN 823		T1 or T2
<b>Length</b> EN 822		± 8 mm
<b>Width</b> EN 822		± 8 mm
<b>Squareness</b> EN 824		≤ 5 mm/m
<b>Flatness</b> EN 825		≤ 6 mm
<b>Dimensional stability</b>	specified temperature and humidity EN 1604	DS(70,90)
<b>Short-term water absorption (partial immersion) (kg/m<sup>2</sup>)</b> EN 1609		≤ 1,0
<b>Water vapour diffusion resistance factor (μ)</b> EN 12086		100 to 200
<b>Tensile strength perpendicular to the faces in dry conditions</b> EN 1607		TR100
<b>Shear strength (MPa)</b> EN 12090		≥ 0,02
<b>Shear modulus (MPa)</b> EN 12090		≥ 1,0
<b>ATLAS XPS</b>		<b>Annex 1</b> of European Technical Assessment ETA-07/0316
Thermal insulation products characteristic		

Standard mesh trade name	Description	Alkalis resistance	
		Residual resistance after ageing, N/mm	Relative residual resistance, (after ageing) of the strength in the as delivered state, %
R 117 A 101 / AKE 145 / VERTEX 145	mass per unit area: 145 g/m <sup>2</sup> mesh size: 4,0 x 4,5 mm	≥ 20	≥ 50
SSA 1363 SM(100)	mass per unit area: 145 g/m <sup>2</sup> mesh size: 3,5 x 3,5 mm	≥ 20	≥ 50

**ATLAS XPS**

Glass fibre meshes characteristic

**Annex 2**  
of European  
Technical Assessment  
ETA-07/0316