Deutsches Institut für Bautechnik

Approval body for construction products and types of construction

Bautechnisches Prüfamt

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European Technical Assessment

ETA-10/0193 of 26 August 2015

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	"TecTem® Insulation Board Indoor Historic"
Product family to which the construction product belongs	Thermal insulation boards made of expanded perlite, deviating from EN 13169
Manufacturer	KNAUF AQUAPANEL GmbH Kipperstraße 19 44147 Dortmund DEUTSCHLAND
Manufacturing plant	KNAUF AQUAPANEL GmbH Kipperstraße 19 44147 Dortmund DEUTSCHLAND
This European Technical Assessment contains	6 pages which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	European Assessment Document (EAD) 040010-00-1201 "INSULATION PRODUCT MADE OF EXPANDED PERLITE (EPB)"
This version replaces	ETA-10/0193 issued on 24 May 2013

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Specific part

1 Technical description of the product

This European Technical Assessment applies to the factory-made thermal insulation boards made of expanded perlite (EPB) with the designation:

"TecTem® Insulation Board Indoor Historic"

The thermal insulation boards deviate from the standard EN 13169 as they do not contain reinforcing fibres.

The thermal insulation boards are manufactured of expanded perlite by adding a binding agent and other additives and they are not coated.

The thermal insulation boards are made with the following dimensions:

Nominal thicknesses:	60 mm to 150 mm
Nominal length:	500 mm to 1250 mm
Nominal widths:	400 mm to 1250 mm

The European Technical Assessment has been issued for the product on the basis of agreed data/ information, deposited with Deutsches Institut für Bautechnik, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

2 Specification of the intended use in accordance with the applicable European assessment Document

The thermal insulation boards can be used for the following intended uses:

- Internal insulation of walls
- Internal insulation of ceilings

The performance according to section 3 only applies if the thermal insulation boards are installed according to the manufacture's installation instructions and if they are protected from precipitation, wetting or weathering in built-in state and during transport, storage and installation.

Concerning the application of the thermal insulation boards, also the respective national regulations shall be observed.

The design value of the thermal conductivity shall be laid down according to relevant national provisions.

When calculating the thermal resistance, the nominal thickness of the insulation materials shall be applied.

Where the thermal insulation boards are fixed by using adhesives and/or anchors, only such adhesions or anchors shall be used, which are suitable for this purpose. The assessment of these fixings is not subject of this European Technical Assessment.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the thermal insulation boards of at least 50 years. 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 products in relation to the expected economically reasonable working life of the works.

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

For sampling, conditioning and testing the provisions of the EAD No 040010-00-12.01, "Insulation product made of expanded perlite (EPB)" apply.

3.1 Mechanical resistance and stability (BWR 1)

Not applicable

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire: Test acc. to EN ISO 1182:2010 und EN ISO 1716:2010	Class A1 accordance to EN 13501-1: 2007+A1:2010

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content and/or release of dangerous substances:	The construction product does not contain or release dangerous substances according to EOTA TR 034 (version October 2014).
Water vapour diffusion resistance coefficient: Test acc. to EN 12086:2013	μ = 5 - 6[1]

3.4 Safety and accessibility (BWR 4)

Not applicable

3.5 Protection against noise (BWR 5)

Essential characteristic	Performance
Sound absorbtion:	No performance assessed

[1] The most unfavorable value for the construction product work shall be applied each.

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	**Performance**
Thermal conductivity: at a reference temperature of 10 °C Test acc. EN 12667:2001, in accordance EN 13169:2012+A1:2015	Declared value of thermal conductivity, for a moisture content of the insulating boards at 23 °C / 50 % relative humidity
	$\lambda_{D23/50}$ = 0.055 W/(m ·K) *
Conversion of humidity accordance to EN ISO 10456: 2007 + AC:2009	
The mass-related moisture content at 23 °C / 50 % rel. humidity	$u_{23/50}$ = 0.02 kg/kg
The mass-related moisture content at 23 °C / 80 % rel. humidity	$u_{23/80}$ = 0.03 kg/kg
The mass-related moisture conversion coefficient:	f_u = 0.8
Moisture conversion factor (dry to 23 °C / 50 % rel. humidity):	F_{m1} = 1.02
Moisture conversion factor (23 °C / 50 % rel. humidity to 23 °C / 80 % rel. humidity):	F_{m2} = 1.01
Dimensional deviations (individual values):	maximum deviation:
Length and width: Test acc. EN 822:2013	± 3 mm
Thickness: Test acc. EN 823:2013 (with a load of 250 Pa)	+ 4 / - 2 mm
Squareness in direction of length and width: Test acc. EN 824:2013	S_b ≤ 3 mm/m
Water absorbtion	No performance assessed
Density: Test acc. to EN 1602:2013	Density range (each individual value): 130 kg/m³ - 150 kg/m³
Bending strength (individual value): Test acc. to EN 12089:2013	≥ 200 kPa
Compressive strength (individual value): Test acc. to EN 826:2013	≥ 300 kPa CS(10\Y)300 acc. to EN 13169: 2012+A1:2015
Deformation under specified compressive load and temperature: Test acc. To EN 1605:2013 Test conditions: 80 kPa, 60 °C, 168 h	Relative thickness reduction: ≤ 5 % DLT(3)5 acc. to EN 13169: 2012+A1:2015

* The declared value is representative for at least 90 % of the production with a confidence level of 90 % and applies to the density range given in section 3.6. For the admissible deviation of an individual value of the thermal conductivity from the declared value the method described in EN 13172:2012, annex F, applies.

Dimensional stability at specified temperature and humidity: Test acc. to EN 1604:2013	Relative changes in length, width and thickness:
Conditioning: 48 h, (23 ± 2) °C, (90 ± 5) % relative humidity	max ± 0.5%
Conditioning: 48 h, (70 ± 2) °C, (50 ± 5) % relative humidity	max ± 0.5%
Tensile strength perpendicular to faces (individual value): Test acc. to EN 1607:2013 in accordance EN 13169: 2012+A1:2015	≥ 120 kPa
Compressive creep:	No performance assessed
Point load:	No performance assessed

3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

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

According to Decision of the Commission 1999/91/EC as amended by Decision of the Commission 2001/596/EC, the systems of assessment and verification of constancy of performance (see Annex V and Article 65 Paragraph 2 to Regulation (EU) No 305/2011) shall be applied according to the following table:

Product	Intended use	System
"TecTem® Insulation Board Indoor Historic"	For uses subject to regulations on reaction to fire	1
	Any	3

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

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

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beglaubigt:
Stopp