

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

**ETA-12/0573**  
**of 13 October 2017**

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 Climaprotect  
TecTem® Laibungsplatte

Product family  
to which the construction product belongs

Thermal insulation board 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

7 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

EAD 040010-00-1201

This version replaces

ETA-12/0573 issued on 15 February 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 Climaprotect" and "TecTem Laibungsplatte".

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. The surfaces of the thermal insulation boards can be coated with a single-sided or double-sided primer.

The thermal insulation boards are made with different dimensions:

"TecTem Insulation Board Indoor Climaprotect" type A:	Nominal thickness:	30 mm
	Nominal length:	625 mm
	Nominal width:	416 mm
"TecTem Insulation Board Indoor Climaprotect" type B:	Nominal thickness:	25 mm
	Nominal length:	625 mm
	Nominal width:	416 mm
"TecTem Laibungsplatte"	Nominal thickness:	25 mm
	Nominal length:	625 mm
	Nominal width:	309 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 insulation product is installed according to the manufacture's installation instructions and if it is protected from precipitation, wetting or weathering in built-in state and during transport, storage and installation.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the insulation product of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right products in relation to the 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 040010-00-1201 "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 and EN ISO 1716:2010	Class A1 acc. to EN 13501-1:2007 + A1:2009

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

Essential characteristic	Performance
Water vapour transmission test acc. to EN 12086:2013	$5 \leq \mu \leq 6$ <sup>a)</sup>
Content, emission and/or release of dangerous substances	
Substance(s) classified as EU-cat. Carc. 1A/1B (H350, H350i), in accordance with Regulation (EC) No 1272/2008.	The product does not contain these dangerous substances actively used. <sup>b)</sup>
Substance(s) classified as EU-cat. Muta. 1A/1B (H340), in accordance with Regulation (EC) No 1272/2008.	
Substance(s) classified as EU-cat. Acute Tox. 1, 2 and/or 3 (H300, H301, H310, H311, H330, H331); substance(s) classified as EU-cat. Repr. 1A/1B (H360, H360F, H360D, H360FD); substance(s) classified as EU-cat. STOT SE 1 and/or STOT RE 1 (H370, H372), in accordance with Regulation (EC) No 1272/2008.	
Release scenarios regarding BWR 3: IA 2, I A3, S/W 3 (according to EOTA TR 034)	
<sup>a)</sup> The most unfavorable value for the construction product work shall be applied each.	
<sup>b)</sup> Assessment based on a detailed manufacturer's product declaration.	

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

Not applicable.

#### 3.5 Protection against noise (BWR 5)

Essential characteristic	Performance
Sound absorption	No performance assessed.

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

Essential characteristic	Performance
<p>Thermal conductivity test acc. to EN 12667:2001, acc. to EN 13169:2013</p> <p>"TecTem Insulation Board Indoor Climaprotect", Typ A "TecTem Insulation Board Indoor Climaprotect", Typ B "TecTem Laibungsplatte"</p> <p>Conversion of humidity acc. to EN ISO 10456:2007 + AC:2009</p> <p>The mass-related moisture content at 23 °C/ 50 % rel. humidity</p> <p>The mass-related moisture content at 23 °C/ 80 % rel. humidity</p> <p>The mass-related moisture conversion coefficient</p> <p>Moisture conversion factor (dry to 23 °C/ 50 % rel. humidity)</p> <p>Moisture conversion factor (23 °C/ 50 % rel. humidity to 23 °C/ 80 % rel. humidity)</p>	<p>Declared value of thermal conductivity <sup>a)</sup></p> <p><math>\lambda_{D (23/50)} = 0.050 \text{ W/(m} \cdot \text{K)}</math> <math>\lambda_{D (23/50)} = 0.055 \text{ W/(m} \cdot \text{K)}</math> <math>\lambda_{D (23/50)} = 0.055 \text{ W/(m} \cdot \text{K)}</math></p> <p><math>u_{23/50} = 2.0 \%</math></p> <p><math>u_{23/80} = 3.0 \%</math></p> <p><math>f_u = 0.80</math></p> <p><math>F_{m (\text{dry} - 23/50)} = 1.02</math></p> <p><math>F_{m (23/50 - 23/80)} = 1.01</math></p>
<p>Nominal length test acc. to EN 822:2013 dimensional deviation</p>	<p>625 mm</p> <p><math>\pm 3 \text{ mm}</math></p>
<p>Nominal width test acc. to EN 822:2013 dimensional deviation</p>	<p>309 mm and 416 mm</p> <p><math>\pm 3 \text{ mm}</math></p>
<p>Squareness test acc. to EN 824:2013 dimensional deviation</p>	<p><math>S_b \leq 3 \text{ mm/m}</math></p>
<p>Nominal thickness test acc. to EN 823:2013 (with a load of 250 Pa <math>\pm</math> 5 Pa) dimensional deviation</p>	<p>25 mm and 30 mm</p> <p><math>\pm 1 \text{ mm}</math></p>
<p>Flatness test acc. to EN 825:2013 dimensional deviation</p>	<p>3 mm</p>
<p>Water absorption</p>	<p>No performance assessed</p>
<p>Density test acc. to EN 1602:2013</p> <p>"TecTem Insulation Board Indoor Climaprotect", Typ A "TecTem Insulation Board Indoor Climaprotect", Typ B "TecTem Laibungsplatte"</p>	<p>105 kg/m<sup>3</sup> to 120 kg/m<sup>3</sup> 130 kg/m<sup>3</sup> to 150 kg/m<sup>3</sup> 130 kg/m<sup>3</sup> to 150 kg/m<sup>3</sup></p>

Essential characteristic	Performance
Bending strength test acc. to EN 12089:2013 "TecTem Insulation Board Indoor Climaprotect", Typ A "TecTem Insulation Board Indoor Climaprotect", Typ B "TecTem Laibungsplatte"	≥ 120 kPa ≥ 200 kPa ≥ 200 kPa
Compressive strength test acc. to EN 826:2013 "TecTem Insulation Board Indoor Climaprotect", Typ A "TecTem Insulation Board Indoor Climaprotect", Typ B "TecTem Laibungsplatte"	≥ 200 kPa (CS (10\Y) 200) ≥ 300 kPa (CS (10\Y) 300) ≥ 300 kPa (CS (10\Y) 300)
Deformation under specified load and temperature test acc. to EN 1605:2013 with test condition 3 (80 kPa, 60 °C, 168 h)	$\Delta \varepsilon \leq 5.0 \%$ (DLT(3)5 acc. to EN 13169:2012+A1:2015)
Dimensional stability test acc. to EN 1604:2013 (after 48 h storage at $(23 \pm 2)^\circ\text{C}$ and $(90 \pm 5) \%$ relative humidity) maximum relative changes in length, width and thickness direction	$\pm 0.5 \%$
Dimensional stability test acc. to EN 1604:2013 (after 48 h storage at $(70 \pm 2)^\circ\text{C}$ and $(50 \pm 5) \%$ relative humidity) maximum relative changes in length, width and thickness direction	$\pm 0.5 \%$
Tensile strength perpendicular to faces test acc. to EN 1607:2013 "TecTem Insulation Board Indoor Climaprotect", Typ A "TecTem Insulation Board Indoor Climaprotect", Typ B "TecTem Laibungsplatte"	≥ 80 kPa ≥ 120 kPa ≥ 120 kPa
Compressive creep	No performance assessed
Behavior under point load	No performance assessed
a) Declared value of thermal conductivity for a moisture content of the insulation boards at 23 °C and 50 % relative humidity; representative for at least 90 % of the production with a confidence level of 90 %. For the admissible deviation of an individual value of the thermal conductivity from the declared value the method described in EN 13172:2008, Annex F applies.	

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

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

English translation prepared by DIBt

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

In accordance with the European Assessment Document No 040010-00-1201 "Insulation product made of expanded perlite (EPB)" the legal basis is:  
Commission Decision 1999/91/EC.

The system to be applied is: system 3

In addition, the European legal basis for reaction to fire for products covered by this EAD is:  
Commission Decision 2001/596/EC.

The systems to be applied is: system 1

**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 with Deutsches Institut für Bautechnik.

Issued in Berlin on 13 October 2017 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe  
Head of Department

*beglaubigt:*  
Getzlaff