

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
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European Technical Assessment

ETA-19/0050
of 5 April 2019

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General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

"BACHL neoWALL-Sockel" and "BACHL PerimeterNeo"

Product family
to which the construction product belongs

Expanded polystyrene (EPS) foam boards as thermal
insulation outside the waterproofing

Manufacturer

Karl Bachl GmbH & CoKG
Deching 3
94133 Röhrnbach
DEUTSCHLAND

Manufacturing plant

Karl Bachl GmbH & Co. KG
Osterbachtal 1
94133 Röhrnbach
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

EAD 040773-00-1201

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Specific part

1 Technical description of the product

This European Technical Assessment applies to the thermal insulation boards of expanded polystyrene (EPS) with the designations:

"BACHL neoWall-Sockel" and "BACHL PerimeterNeo"

The expanded polystyrene foam boards have a moulded surface on both sides.

Depending on the product type and nominal thickness the expanded polystyrene foam boards have a special edge treatment (shiplap, depth ≥ 15 mm) according to table 1.

Table 1 Designation and specification of the EPS-foam boards

Product type	"BACHL neoWall-Sockel"	"BACHL PerimeterNeo"
Nominal thickness	50 mm to 400 mm	60 mm to 300 mm
Edge treatment shiplap, depth ≥ 15 mm	from a nominal thickness of 200 mm	all nominal thicknesses

The expanded polystyrene foam boards do not contain Hexabromocyclododecane (HBCD).

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 expanded polystyrene foam boards are intended to be used as external horizontal and vertical thermal insulation of in-ground constructions outside the waterproofing (non-structural application) not constantly exposed to groundwater or to long-term backwater.

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

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

Where the thermal insulation boards are fixed by using adhesives, only such adhesions 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 expanded polystyrene foam 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 040773-00-1201 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 11925-2:2010	Class E acc. to EN 13501-1:2007 + A1:2009

3.3 Hygiene, health and environment (BWR 3)

Not applicable

3.4 Safe and accessibility in use (BWR 4)

Not applicable

3.5 Protection against noise (BWR 5)

Not applicable

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal conductivity at a reference temperature of 10 °C test acc. to EN 12667:2001 in accordance with EN 13163:2016	Declared value: ¹ $\lambda_D = 0,031 \text{ W/(m} \cdot \text{K)}$
Moisture conversion coefficient	No performance assessed
Water absorption long term water absorption by total immersion test acc. to EN 12087:2013 (method 2A) with deviating drip-off time of max. 10 seconds long term water absorption by diffusion test acc. to EN 12088:2013	3 Vol.-% 5 Vol.-% (WD(V)5 acc. to EN 13163)
Freeze-thaw resistance test acc. to EN 12091:2013	10 Vol.-% ² (FTCD10 acc. to EN 13163)
Water vapour diffusion resistance factor	No performance assessed

¹ The declared value is representative for at least 90 % of the production with a confidence level of 90 % and applies to the density range mentioned in section 3.

² The water absorption after freeze-thaw cycling shall not be increased by more than 10 Vol.-% and the reduction in compressive stress at 10 % deformation of the re-dried specimens, when tested in accordance with EN 826, shall not exceed 10 % of the initial value.

Essential characteristic	Performance
Geometrical properties thickness test acc. to EN 823:2013 length, width test acc. to EN 822:2013 squareness on length and width test acc. to EN 824:2013 flatness test acc. to EN 825:2013 profiling and volume loss	tolerance ± 2 mm (T(2) acc. to EN 13163) ± 0,6 % or ± 3 mm ³ (L(3) or. W(3) acc. to EN 13163) 5 mm/m (S(5) acc. to EN 13163) 5 mm (P(5) acc. to EN 13163) no performance assessed
Deformation under specified compressive load and temperature conditions test acc. to EN 1605:2013 load: 40 kPa, temperature: (70 ± 1) °C time: (168 ± 1) h nominal thickness ≤ 200 mm: nominal thickness > 200 mm:	≤ 5 % (DLT(2)5 acc. to EN 13163) ≤ 3 %
Dimensional stability under constant normal laboratory conditions test acc. to EN 1603:2013	DS(N)2 acc. to EN 13163
Dimensional stability under specified conditions test acc. to EN 1604:2013	DS(70,-)3 acc. to EN 13163
Tensile strength perpendicular to faces	No performance assessed
Bending strength test acc. to EN 12089:2013 (method B)	≥ 200 kPa (BS200 acc. to EN 13163)
Density test acc. to EN 1602:2013	26 kg/m ³ to 29 kg/m ³
Compressive stress at 10 % deformation test acc. to EN 826:2013	≥ 150 kPa (CS(10)150 acc. to EN 13163)
Compressive creep	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

In accordance with EAD No. 040773-00-1201, the applicable European legal act is: 1999/91/EC.

The system to be applied is:

System 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 with Deutsches Institut für Bautechnik.

Issued in Berlin on 5 April 2019 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe
Head of Department

beglaubigt:
Meyer