

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

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European Technical Assessment

ETA-19/0092
of 13 January 2020

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

"HIRSCH Therm Perimeter 5 in 1 PER 150", "HIRSCH
Therm Perimeter 5 in 1 PER Plus 150", "HIRSCH Therm
Sockeldämmplatte 150", "W-PER DRV 150" and
"ThermoDrain WSD 035 AW3 150"

Product family
to which the construction product belongs

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

Manufacturer

HIRSCH Porozell GmbH
Augsburger Straße 8-10
33378 Rheda-Wiedenbrück
DEUTSCHLAND

Manufacturing plant

see Annex A

This European Technical Assessment
contains

7 pages including 1 annex 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

This version replaces

ETA-19/0092 issued on 17 April 2019

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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:

"HIRSCH Therm Perimeter 5 in 1 PER 150", "HIRSCH Therm Perimeter 5 in 1 PER Plus 150", "HIRSCH Therm Sockeldämmplatte 150", "W-PER DRV 150" and "ThermoDrain WSD 035 AW3 150"

Depending on the product type the expanded polystyrene foam boards have the surface specifications according to table 1.

Table 1 Designation and surface specifications of the EPS-foam boards

| Product type | Surface |
|--|---|
| "HIRSCH Therm Sockeldämmplatte 150" | moulded (embossed) surface on both sides |
| "ThermoDrain WSD 035 AW3 150" | one moulded (embossed) side and one grooved side (grooved side is coated with a filter fleece; grooved profile: depth = 8 mm) |
| "W-PER DRV 150" | one moulded (embossed) side and one grooved side (grooved side is coated with a filter fleece; grooved profile: nub structure, depth = 10 mm) |
| "HIRSCH Therm Perimeter 5 in 1 PER 150" and "HIRSCH Therm Perimeter 5 in 1 PER Plus 150" | one moulded (embossed) side and one grooved side (grooved profile: square structure) |

This European Technical Assessment applies to thermal insulation boards with a nominal thickness from 60 mm to 300 mm.

From a nominal thickness of > 200 mm the expanded polystyrene foam boards have a special edge treatment (shiplap, depth ≥ 15 mm).

By a nominal thickness ≤ 200 mm the expanded polystyrene foam boards can have a special edge treatment (shiplap, depth ≥ 15 mm).

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 manufacture'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 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 |

3.2 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 13163:2012+A1:2015 | Declared value: ¹ $\lambda_D = 0,034 \text{ W/(m} \cdot \text{K)}$ |
| 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 | $\leq 3 \text{ Vol.-%}$ $\leq 5 \text{ Vol.-% (WD(V)5 acc. to EN 13163)}$ |
| Freeze-thaw resistance test acc. to EN 12091:2013 | $\leq 10 \text{ Vol.-%}^2 \text{ (FTCD10 acc. to EN 13163)}$ |
| 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 | tolerance ± 2 mm (T(2) acc. to EN 13163) |
| 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 | ± 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 and ≤ 280 mm: nominal thickness > 280 mm and ≤ 300 mm: | ≤ 5 % (DLT(2)5 acc. to EN 13163) ≤ 4 % ≤ 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 | 27 kg/m ³ to 35 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 |

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 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 13 January 2020 by Deutsches Institut für Bautechnik

Rudolf Kersten
p. p. Head of Department

beglaubigt:
Meyer

"HIRSCH Therm Perimeter 5 in 1 PER 150", "HIRSCH Therm Perimeter 5 in 1 PER Plus 150", "HIRSCH Therm Sockeldämmplatte 150", "W-PER DRV 150" and "ThermoDrain WSD 035 AW3 150"

Annex A

Manufacturing plants

1. Isobouw GmbH
Etrastraße 1
74232 Abstatt
Germany
2. Hirsch Porozell GmbH
Seewiesenweg 25B
74906 Bad Rappenau-Grombach
Germany
3. Isobouw GmbH
Steinenberger Straße 43
88339 Bad Waldsee
Germany
4. Hirsch Porozell GmbH
Frigolittstraße 1
96157 Ebrach
Germany
5. Isobouw GmbH
Wulfener Landstraße 2
06386 Osternienburger Land
Germany
6. Hirsch Porozell GmbH
Augsburger Straße 8 – 10
33378 Rheda- Wiedenbrück
Germany