

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

**ETA-18/0459**  
**of 6 April 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

Hyperdämm

Product family  
to which the construction product belongs

thermal insulation product made of loose fill expanded  
perlite

Manufacturer

Knauf Performance Materials GmbH  
Kipperstraße 19  
44147 Dortmund  
DEUTSCHLAND

Manufacturing plant

KNAUF Performance Materials GmbH  
Hauptstraße 102  
39345 Bülstringen  
DEUTSCHLAND

This European Technical Assessment  
contains

4 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 040461-00-1201

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## Specific part

### 1 Technical description of the product

This European Technical Assessment applies to the thermal insulation product made of loose fill expanded perlite (EP) with the designation "Hyperdämm", hereinafter referred to as thermal insulation.

The thermal insulation material is a granular, inorganic bulk good of grain sizes 0 - 3 mm made of thermally blown perlite.

The perlite grains are provided factory-made with a hydrophobic coating.

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 product can be used as a core insulation for masonry cavity walls in accordance with EN 1996-1-1 (EC 6).

The performance according to section 3 only applies if the insulation product is installed according to the manufacturer's installation instructions dry and by machine processed filling 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 040461-00-1201 "Thermal insulation product made of loose fill expanded perlite (EP)" apply.

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

| Essential characteristic                                                                        | Performance                                                                                                 |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Reaction to fire                                                                                | Class A1<br>acc. to Decision 1996/603/EC (as amended) in connection with Delegated Regulation (EU) 2016/364 |
| Determination of the organic content test acc. to EN 13820 (determination of combustion loss) * | < 1.0 mass-%                                                                                                |
| * Deviating from EN 13820 test samples conditioned at 200 °C for 6 hours.                       |                                                                                                             |

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

| Essential characteristic                                 | Performance              |
|----------------------------------------------------------|--------------------------|
| Content, emission and/or release of dangerous substances | No performance assessed. |

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

| Wesentliches Merkmal                                                                                                                                                                                | Leistung                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Thermal conductivity (in compressed state; approx. 10% compacted)<br>test acc. to EN 12667:2001<br>acc. to EN 14316-1:2004                                                                          | Declared value of thermal conductivity<br>$\lambda_D (23/50) = 0.044 \text{ W}/(\text{m} \cdot \text{K})^*$ |
| Loose bulk density (not in compressed state)<br>test acc. to EN 1097-3:1998                                                                                                                         | 65 kg/m <sup>3</sup> (± 15 %)                                                                               |
| Particle size distribution                                                                                                                                                                          | No performance assessed.                                                                                    |
| Water repellency<br>acc. to EN 14316-1:2004 (Annex E)                                                                                                                                               | ≥ 175 ml                                                                                                    |
| Crushing resistance                                                                                                                                                                                 | No performance assessed.                                                                                    |
| Water vapour diffusion resistance factor<br>acc. to EN 14316-1:2004                                                                                                                                 | $\mu = 3$                                                                                                   |
| Settlement due to impact excitation or vibration (horizontal and slightly sloped elements)<br>acc. to a.m. EAD (clause 2.2.9.1)                                                                     | No performance assessed.                                                                                    |
| Settlement due to vibrations in wall cavities<br>test acc. to a.m. EAD (clause 2.2.9.2)                                                                                                             | ≤ 9 %<br>with density ≥ 65 kg/m <sup>3</sup>                                                                |
| Compressive stress at 10 % deformation                                                                                                                                                              | No performance assessed.                                                                                    |
| * Declared value of thermal conductivity for a moisture content of the insulation product at 23 °C/50% relative humidity, representative of at least 90% of production with a 90% confidence level. |                                                                                                             |

### 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 040461-00-1201 "Thermal insulation product made of loose fill expanded perlite (EP)" the legal basis is: Commission Decision 1999/91/EC.

The system to be applied is: system 3.

In addition, with regard to reaction to fire the applicable European legal act is: 1999/91/EC (in accordance with the decision 96/603/EC).

The system to be applied is: system 4

### 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 6. April 2020 by Deutsches Institut für Bautechnik

Maja Tiemann  
Head of Department

*beglaubigt:*  
Getzlaff