

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

ETA-18/0706  
of 26 July 2019

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

"ProtectFill"

Product family  
to which the construction product belongs

Thermal insulation made of loose mineral wool

Manufacturer

Knauf Insulation GmbH  
Heraklithstraße 8  
84359 Simbach am Inn  
DEUTSCHLAND

Manufacturing plant

Knauf Insulation d.o.o.  
Trata 32  
SI-4220 Skofja Loka  
Slovenia

This European Technical Assessment  
contains

6 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 040729-00-1201

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## Specific Part

### 1 Technical description of the product

The European Technical Assessment applies to the thermal insulation product made of loose mineral wool with the designation:

"ProtectFill"

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 the product corresponding to this agreed data/information.

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

The thermal insulation material serves for the production of insulation layers, not exposed to compression loads, by means of machine processing at the place of use. The machine processing is carried out in dry conditions.

The thermal insulation product "ProtectFill" can be used for the following intended uses:

- Space-filling insulation in closed cavities of walls of timber frame constructions and similar structures (for example in installation shafts)
- Insulation in closed cavities between rafters and timber beams as well as in cavities of corresponding structures

The performances given in Section 3 only apply if the thermal insulation product is installed according to the manufacture's installation instructions, used in compliance with the specifications and conditions given in Annex A and if it is protected from precipitation, wetting or weathering in built-in state and during transport, storage and installation.

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

### 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. 040729-00-1201 "Thermal insulation made of loose mineral wool" 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 acc. to EN ISO 1716:2010 Organic content test acc. to EN 13820:2003	Class A1 acc. to EN 13501-1:2007+A1:2009  ≤ 4.30 M.-%
Propensity to undergo continuous smouldering test acc. to EN 16733:2016	Test passed – The product shows no propensity to undergo continuous smouldering

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

Not applicable

**3.4 Safety and accessibility in use (BWR 4)**

Not applicable

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

Not applicable

**3.6 Energieeinsparung und Wärmeschutz (BWR 6)**

Essential characteristic	Performance
Thermal conductivity at mean reference temperature of 10 °C test acc. to EN 12667:2001 in accordance with EN 14064-1:2010	Declared value for a moisture content of the insulation material at 23 °C and 50 % relative humidity: <sup>1</sup> $\lambda_{D(23,50)} = 0.039 \text{ W/(m} \cdot \text{K)}^2$
Conversion of humidity acc. to EN ISO 10456:2007+AC:2009 moisture conversion factor (23 °C/50 % rel. humidity to 23 °C/ 80 % rel. humidity):	$F_m = 1.00$
Short term water absorption	$W_p \leq 1.0 \text{ kg/m}^2$ (WS acc. to EN 14064-1)
Long term water absorption	No performance assessed
Bulk density	
in case of use in closed cavities (space-filling)	60 kg/m <sup>3</sup> to 140 kg/m <sup>3</sup>
Water repellency	No performance assessed
Water vapour diffusion resistance coefficient	$\mu = 1$
Settlement	
Settling under impact excitation in the case of free placing (e. g. on the ceiling or between beams)	No performance assessed
Settling under vibration in wall cavity and between beams	SC 0 acc. to EN 15101-1:2013 ( $\leq 1 \%$ ) at a minimum bulk density of 60 kg/m <sup>3</sup> and a maximum thickness of 240 mm
Settling under defined climatic conditions	No performance assessed
Airflow resistance <sup>3</sup> test acc. to EN 29053:1993, Method A	$\geq 9.0 \text{ kPa} \cdot \text{s/m}^2$ at a minimum bulk density of 70 kg/m <sup>3</sup>

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

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

<sup>1</sup> The declared value is representative for at least 90 % of the production with a confidence level of 90 % and applies to the above-named density range. 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.

<sup>2</sup> Density range: 60 kg/m<sup>3</sup> to 140 kg/m<sup>3</sup>

<sup>3</sup> Also relevant in terms of BWR 5

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

In accordance with the European Assessment Document EAD No. 040729-00-1201, the applicable European legal act is: 1999/91/EC.

The system to be applied is: 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: 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 26 July 2019 by Deutschen Institut für Bautechnik

Maja Tiemann  
Head of Department

*beglaubigt:*  
Meyer

## "ProtectFill"

### ANNEX A

The performances of the thermal insulation products given in Section 3 are valid if the following will be considered concerning installation and use:

- Densities at built-in stage:

Area of application	Density [kg/m³]
Space-filling insulation in closed cavities of walls of timber frame constructions and similar structures	60 – 140
Insulation in closed cavities between rafters and timber beams as well as in cavities of corresponding	60 – 140

- The density is determined by calculation as a quotient from the mass of the material brought in and the full volume.
- The thermal insulation layer has a constant installation thickness taking account of the nominal thickness. For that purpose suitable height marks are be arranged by the executing company in sufficient distances before the processing. The executing company check the installation thickness and the density.
- When calculating the thermal resistance of the construction elements, the nominal thickness of the thermal insulation layer is applied as follows:

Processing of the insulation material	Nominal thickness
Space-filling insulation in closed cavities of walls of timber frame constructions and similar structures	clear span of the filled cavity
Insulation in closed cavities between rafters and timber beams as well as in cavities of corresponding structures	clear span of the filled cavity

- The requirements concerning ventilation openings and the ventilation section above the thermal insulation layer are considered.
- In case of use as space-filling thermal insulation in closed cavities it is made sure by appropriate measures (e. g. control drillings) that the cavity is completely filled with the thermal insulation product.
- The thermal insulation product is only processed by companies stated in a list of the manufacturer which have adequate experience in installing the material. Concerning this matter the manufacturer has trained these companies.
- The executing company issue a certificate which contains the following information with reference to this European Technical Assessment for each application place:
  - Thermal insulation product made of loose mineral wool
  - trade name
  - executing company
  - building project and building component
  - date of installation
  - installation thickness