

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-18/0452
of 11 January 2021

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General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Estroperl

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

plant 1 (see Annex 1)

plant 2 (see Annex 1)

plant 3 (see Annex 1)

This European Technical Assessment
contains

5 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 040461-00-1201

This version replaces

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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 "Estroperl", hereinafter referred to as thermal insulation.

The thermal insulation material is a granular, inorganic bulk good of grain sizes 0 - 6 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 material can be used in the compressed state as interior insulation of ceilings or floor slabs (on the top) under screed without requirements for protection against noise.

The performance according to section 3 only applies if the insulation product is installed according to the manufacturer's installation instructions dry and in a compressed state with a compression at least 20% by volume in accordance with the bulk density given in the ETA 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 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) test acc. to EN 12667:2001 in accordance with EN 14316-1:2004	Declared value of thermal conductivity $\lambda_D (23/50) = 0.050 \text{ W/(m}\cdot\text{K)}$ *
Loose bulk density (not in compressed state) test acc. to EN 1097-3:1998	90 kg/m ³ ($\pm 15 \%$)
Particle size distribution	No performance assessed.
Water repellency test acc. to EN 14316-1:2004 (Annex E)	$\geq 175 \text{ ml}$
Crushing resistance	No performance assessed.
Water vapour diffusion resistance factor acc. to EN 14316-1:2004	$\mu = 3$
Settlement	No performance assessed.
Compressive stress at 10 % deformation test acc. to EN 826:2013	$\geq 130 \text{ kPa}^{**}$
* 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.	
** Test samples compressed before testing approx. 20 % by volume, compressed sample height approx. 50 mm.	

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 11 January 2021 by Deutsches Institut für Bautechnik

Frank Iffländer
Head of Section

beglaubigt:
Getzlaff

Estroperl

Annex 1

Manufacturing plant

plant 1 Knauf Performance Materials GmbH
Kipperstraße 19
44147 Dortmund
DEUTSCHLAND

plant 2 Knauf Performance Materials GmbH
Ruhrstraße 8
86633 Neuburg/Donau
DEUTSCHLAND

plant 3 Knauf Performance Materials GmbH
Hauptstraße 102
39345 Bülstringen
DEUTSCHLAND