

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-21/0260
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General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

GRAMITHERM

Product family
to which the construction product belongs

Insulation boards made of grass fibres for thermal- and/or
sound insulation

Manufacturer

GRAMITHERM EUROPE SA
AUVELAIS PLANT
rue des Glaces Nationales 87
5060 SAMBREVILLE
BELGIEN

Manufacturing plant

GRAMITHERM EUROPE SA
rue des Glaces Nationales 87
5060 SAMBREVILLE
BELGIUM

This European Technical Assessment
contains

5 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 040005-00-1201

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Specific Part

1 Technical description of the product

This European Technical Assessment applies to the thermal insulation boards with the designation "GRAMITHERM".

The thermal insulation boards are made of grass fibres and additional polyethylene fibres as support fibres. The product, produced on the basis of grass silage, is provided during the manufacturing process with a fire protection equipment which also serves for the protection against mould growth.

Thermal insulation boards are made with the following dimensions:

Nominal thickness: minimum 45 mm to 240 mm maximum

Nominal length: 1000 mm or 1200 mm

Nominal widths: 400 mm or 650 mm

The thermal insulation boards are not coated.

The European Technical Assessment has been issued for the products 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 (EAD)

The thermal insulation boards not exposed to compression loads can be used as follows:

- cavity insulation of external and internal walls of timber frame constructions and similar structures
- internal insulation of external walls between supporting construction
- insulation between rafters and timber beams as well as in cavities of corresponding structures
- insulation on topmost storey ceilings which are not subjected to foot traffic, however, are accessible
- internal insulation of ceiling or roof, e.g. insulation beneath the loadbearing construction (e.g. rafters), suspended ceiling
- cavity insulation between flooring joist battens and similar substructures.

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 in built-in state and during transport, storage and installation.

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

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

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the thermal insulation 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 040005-00-1201 "Factory-made thermal and/or acoustic insulation products made of vegetable or animal fibres" 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: 2018

3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Resistance to the growth of mould test acc. to EAD "Factory-made thermal and/or acoustic insulation products made of vegetable or animal fibres", annex B	Evaluation level 1 acc. to EN ISO 846:1997

3.3 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	Declared value for a moisture content of the insulation material at 23 °C and 50 % relative humidity: $\lambda_{D(23,50)} = 0,041 \text{ W}/(\text{m} \cdot \text{K})^1$
Conversion of humidity test acc. to EN ISO 10456:2007+AC:2009 the mass-related moisture content at 23 °C/50 % rel. humidity: the mass-related moisture content at 23 °C/80 % rel. humidity: the mass-related moisture conversion coefficient (dry to 23 °C/50 % rel. humidity): the mass-related moisture conversion coefficient (23 °C/50 % rel. humidity to 23 °C/80 % rel. humidity): moisture conversion factor (dry to 23 °C/ 50 % rel. humidity): moisture conversion factor (23 °C/ 50 % rel. humidity to 23 °C/ 80 % rel. humidity):	 $u_{23,50} = 0,081 \text{ kg/kg}$ $u_{23,80} = 0,131 \text{ kg/kg}$ $f_{u1} = 0,64$ $f_{u2} = 1,314$ $F_{m1} = 1,05$ $F_{m2} = 1,07$
Water vapour diffusion resistance coefficient	$\mu = 1 \text{ to } 4^2$

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 most unfavorable value for the construction shall be applied each.

Essential characteristic	Performance
Dimensional deviations: Length and widths: test acc. to EN 822:2013 Thickness: test acc. to EN 823:2013 Squareness: test acc. to EN 824:2013 Flatness: test acc. to EN 825:2013	length: $\pm 2 \%$ widths: no performance assessed -5 mm / +15 mm or + 15 % ³ relates to class T2 acc. to EN 13171:2012 No performance assessed No performance assessed
Density: test acc. to EN 1602:2013	35 – 45 kg/m ³
Dimensional stability under specified temperature and humidity: test acc. to EN 1604:2013 (48 h, 70 °C)	No performance assessed
Tensile strength parallel to faces: test acc. to EN 1608:2013	≥ 20 kPa

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

In accordance with EAD No. 040005-00-1201, the applicable European legal act is: 1999/91/EC.

The system to be applied is: 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 17 May 2021 by Deutsches Institut für Bautechnik

Frank Iffländer
Head of Section

beglaubigt:
Meyer

³ Whichever gives the smallest numerical tolerance.