## European Technical Assessment

**ETA-21/0260**  
of 17 May 2021

English translation prepared by DIBt - Original version in German language

### General Part

<table>
<thead>
<tr>
<th>Technical Assessment Body issuing the European Technical Assessment:</th>
<th>Deutsches Institut für Bautechnik</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name of the construction product</td>
<td>GRAMITHERM</td>
</tr>
<tr>
<td>Product family to which the construction product belongs</td>
<td>Insulation boards made of grass fibres for thermal- and/or sound insulation</td>
</tr>
</tbody>
</table>
| 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 |
The European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction shall be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No 305/2011.
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 manufacture'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)

<table>
<thead>
<tr>
<th>Essential characteristic</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction to fire</td>
<td>Class E</td>
</tr>
<tr>
<td>test acc. to EN ISO 11925-2:2010</td>
<td>acc. to EN 13501-1: 2018</td>
</tr>
</tbody>
</table>

3.2 Hygiene, health and the environment (BWR 3)

<table>
<thead>
<tr>
<th>Essential characteristic</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance to the growth of mould</td>
<td>Evaluation level 1 acc. to EN ISO 846:1997</td>
</tr>
<tr>
<td>test acc. to EAD &quot;Factory-made thermal and/or acoustic insulation products made of vegetable or animal fibres&quot;, annex B</td>
<td></td>
</tr>
</tbody>
</table>

3.3 Energy economy and heat retention (BWR 6)

<table>
<thead>
<tr>
<th>Essential characteristic</th>
<th>Performance</th>
</tr>
</thead>
</table>
| Thermal conductivity at a reference temperature of 10 °C | Declared value for a moisture content of the insulation material at 23 °C and 50 % relative humidity: $\lambda_{D(23,50)} = 0,041 \text{ W/(m} \cdot \text{K)}$
| test acc. to EN 12667:2001 |
| Conversion of humidity | $u_{23,50} = 0,081 \text{ kg/kg}$
| the mass-related moisture content at 23 °C/50 % rel. humidity: | $u_{23,80} = 0,131 \text{ kg/kg}$
| the mass-related moisture content at 23 °C/80 % rel. humidity: |
| the mass-related moisture conversion coefficient (dry to 23 °C/50 % rel. humidity): | $f_{u1} = 0,64$
| the mass-related moisture conversion coefficient (23 °C/50 % rel. humidity to 23 °C/80 % rel. humidity): | $f_{u2} = 1,314$
| moisture conversion factor (dry to 23 °C/ 50 % rel. humidity): | $F_{m1} = 1,05$
| moisture conversion factor (23 °C/ 50 % rel. humidity to 23 °C/ 80 % rel. humidity): | $F_{m2} = 1,07$
| Water vapour diffusion resistance coefficient | $\mu = 1 \text{ to } 4^2$

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.

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 | length: ± 2 %
widths: no performance assessed
Thickenes: test acc. to EN 823:2013 | -5 mm / +15 mm or + 15 %
relates to class T2 acc. to EN 13171:2012
Squareness: test acc. to EN 824:2013 | No performance assessed
Flatness: test acc. to EN 825:2013 | No performance assessed
Density: test acc. to EN 1602:2013 | 35 – 45 kg/m³
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 beglaubigt:
Head of Section Meyer

---

3 Whichever gives the smallest numerical tolerance.