Deutsches Institut für Bautechnik

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Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

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European Technical Assessment

ETA-12/0181 of 17 May 2019

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General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	"GUTEX Thermofibre", "GUTEX Thermofibre FQ", "WOODYCELL SW"
Product family to which the construction product belongs	Thermal insulation material made of loose, free wood fibres
Manufacturer	GUTEX Holzfaserplattenwerk H. Henselmann GmbH + Co KG Gutenburg 5 79761 Waldshut-Tiengen DEUTSCHLAND
Manufacturing plant	GUTEX Holzplattenwerk Gutenburg 5 79761 Waldshut-Tiengen
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 040138-00-1201
This version replaces	ETA-12/0181 issued on 21 June 2017

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Specific part

1 Technical description of the product

This European Technical Assessment applies to the thermal insulation materials made of loose, free wood fibres with the designation:

"GUTEX Thermofibre" or "GUTEX Thermofibre FQ" or "WOODYCELL SW".

The wood fibres are produced from pinewood chips by mechanical crushing under addition of fire retardants.

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

The thermal insulation material can be used for the following intended uses:

- Space-filling insulation in closed cavities of external and interior walls of timber frame constructions and similar structures
- Insulation in closed cavities between rafters or timber beams as well as in cavities of corresponding structures
- Exposed insulation on horizontal or moderately pitched areas (≤ 10°), e. g. insulation of topmost storey ceilings which are not subjected to foot traffic, however, are accessible
- Cavity insulation between flooring joist battens and similar substructures

The performances given in Section 3 are only valid if the thermal insulation products are 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.

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 products 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 040138-00-1201 "In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres" 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 11925-2:2010	Class E acc. to EN 13501-1:2007+A1:2009

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Resistance to the growth of mould test acc. to EAD "In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres", Annex B	Evaluation level 0 acc. to EN ISO 846:1997

3.4 Safety and accessibility in use (BWR 4)

Not applicable

3.5 Protection against noise (BWR 5)

Not applicable

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal conductivity at mean 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, 038 W/(m · K)*
Conversion of humidity acc. to EN ISO 10456:2007+AC:2009	
mass-related moisture content at 23 °C/50 % rel. humidity:	$u_{23,50}$ = 0,85 kg/kg
mass-related moisture content at 23 °C/80 % rel. humidity:	$u_{23,80}$ = 0,105 kg/kg
mass-related moisture conversion coefficient (dry to 23 °C/50 % rel. humidity):	f_{u1} = 0,22
mass-related moisture conversion coefficient (23 °C/50 % rel. humidity to 23 °C/80 % rel. humidity):	f_{u2} = 0,68
moisture conversion factor (dry to 23 °C/50 % rel. humidity):	F_{m1} = 1,02
moisture conversion factor (23 °C/50 % rel. humidity to 23 °C/ 80 % rel. humidity):	F_{m2} = 1,02
Water vapour diffusion resistance coefficient test acc. to EN 12086:2013, climate condition C	μ = 1 to μ = 2**
Corrosion developing capacity	No performance assessed

Essential characteristic	Performance
Water absorption	No performance assessed
Settlement	
Settling under impact excitation	≤ 10 % at a minimum density of 25 kg/m³ and a maximum thickness of 330 mm
Settling under vibration in wall cavity	SC 0 acc. to EN 15101-1:2013 (≤1 %) at a minimum density of 29 kg/m³ and a maximum thickness of 230 mm
Settling under defined climatic conditions	≤ 10 % bei (40±2) °C / (90±5) r.F. at a minimum density of 25 kg/m³
Critical moisture content	No performance assessed
Airflow resistance*** Test acc. to EN 29053:1993, Procedures A	≥ 3 kPa·s/m²
Hygroskopic sorption properties	No performance assessed

* 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.

** The most unfavourable value for the construction work shall be applied each.

*** Also relevant converning BWR 5

3.7 Sustainable use of natural resources (BWR 7)

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

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

In accordance with EAD No. 040138-00-1201 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 2019 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe
Head of Department

beglaubigt:
Getzlaff

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]
Cavity insulation in walls	29 - 50
Cavity insulation in pitched roofs, cavity insulation in floors in case of subsequent blowing into closed cavities	29 - 50
Cavity insulation in floors, exposed insulation on horizontal and moderately pitched areas (≤ 10°)	25 - 50

  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
Cavity insulation in walls	clear span of the filled cavity
Cavity insulation in pitched roofs, cavity insulation in floors in case of subsequent blowing into closed cavities	clear span of the filled cavity
Cavity insulation in floors, exposed insulation on horizontal, and moderately pitched areas (≤ 10°)	installation thickness of the insulation material minus 20 %

- In case of installation on pitched or arched areas slipping of the thermal insulation products are prevented by suitable measures.
- 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 products are only processed by companies trained by the manufacturer and stated in a list of the manufacturer which have adequate experience in installing the material.