Deutsches Institut für Bautechnik

Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Member of EOTA
www.eota.eu

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment

ETA-05/0037 of 13 April 2017

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	"THERMO HANF PREMIUM", "THERMO HANF PREMIUM PLUS", "THERMO HANF COMBI JUTE"
Product family to which the construction product belongs	Insulating material made of hemp or hemp and jute fibres and binding fibres of PET- or PLA-basic
Manufacturer	THERMO NATUR GmbH & Co. KG Industriestraße 2 86720 Nördlingen DEUTSCHLAND
Manufacturing plant	THERMO NATUR GmbH & Co. KG Industriestraße 2 86720 Nördlingen DEUTSCHLAND
This European Technical Assessment contains	7 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	European Assessment Document (EAD) 040005-00-1201
This version replaces	

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This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No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 insulation materials with the designations:

"THERMO HANF PREMIUM" (further trade names "THERMO CHANVRE PREMIUM", "THERMO HEMP PREMIUM", "Le Chanvre Français", "iSO PREMIUM", "THERMO HANF FLEX", "DÄMM HANF", "DämmHanf100", "stroba HANF PREMIUM", "NATURFASER DÄMMUNG Cannabis", "FIBRE NATURELLE ISOLATION Cannabis", "NATURAL FIBRE ISOLATION Cannabis", "UmweltHANF klassik", "DämmWohl HANF", "DauerHanfmatte", "Hanf Dämmung") made of hemp fibres and

"THERMO HANF PREMIUM PLUS" (further trade names "THERMO CHANVRE PREMIUM PLUS", "THERMO HEMP PREMIUM PLUS", "iSO PREMIUM PLUS", "THERMO HANF FLEX PLUS", "DÄMM HANF PLUS", "DämmHanf100Plus", "stroba HANF PREMIUM PLUS", "NATURFASER DÄMMUNG Cannabis Eco", "FIBRE NATURELLE ISOLATION Cannabis Eco", "NATURAL FIBRE INSULATION Cannabis Eco", "UmweltHANF Eco", "DämmWohl HANF green", "DauerHanfmatte PLUS", "Hanf Dämmung NATUR PLUS" made of hemp fibres and

"THERMO HANF COMBI JUTE" (further trade names "THERMO CHANVRE COMBI JUTE", "THERMO HEMP COMBI JUTE", "iSO COMBI", "THERMO HANF FLEX COMBI JUTE", "DÄMM HANF COMBI JUTE", "DämmHanf75", "stroba HANF COMBI JUTE", "NATURFASER DÄMMUNG Cannabis Combi", "FIBRE NATURELLE ISOLATION Cannabis Combi", "NATURAL FIBRE INSULATION Cannabis Combi", "UmweltHANF mix", "DämmWohl HANF mix", "DauerHanfmatte MIX", "Hanf Jute Dämmung") made of hemp and jute fibres.

The insulation materials contain polymeric or biopoymeric binding fibres, which are thermally hardened during manufacture.

During the manufacturing process the product is provided with a fire protection equipment.

The insulating material in form of mats is made with the following dimensions:

Nominal thickness:	minimum 30 mm to 220 mm maximum
Nominal length:	1200 mm or 2400 mm
Nominal widths:	625 mm or 580 mm

For nominal thicknesses of 30 mm to 80 mm the insulating material is also made in form of rolls.

The insulating material is 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 insulation materials 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 insulation materials 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 application of the insulation materials also the respective national regulations shall be observed.

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

When calculating the thermal resistance, the nominal thickness of the insulation materials shall be applied.

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 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 "Factory-made thermal and/or acoustic insulation products made of vegetable or animal 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 a reference temperature of 10 °C test acc. to EN 12667:2001	Declared values for a moisture content of the insulation material at 23 °C and 50 % relative humidity:
"THERMO HANF PREMIUM"	$\lambda_{D(23,50)}$ = 0,041 W/(m ·K)[1]
"THERMO HANF PREMIUM PLUS"	$\lambda_{D(23,50)}$ = 0,043 W/(m ·K)[1]
"THERMO HANF COMBI JUTE"	$\lambda_{D(23,50)}$ = 0,041 W/(m ·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:	
"THERMO HANF PREMIUM"	$u_{23,50}$ = 0,07 kg/kg
"THERMO HANF PREMIUM PLUS"	$u_{23,50}$ = 0,08 kg/kg
"THERMO HANF COMBI JUTE"	$u_{23,50}$ = 0,08 kg/kg
the mass-related moisture content at 23 °C/80 % rel. humidity:	
"THERMO HANF PREMIUM"	$u_{23,80}$ = 0,15 kg/kg
"THERMO HANF PREMIUM PLUS"	$u_{23,80}$ = 0,17 kg/kg
"THERMO HANF COMBI JUTE"	$u_{23,80}$ = 0,17 kg/kg
the mass-related moisture conversion coefficient (dry to 23 °C/50 % rel. humidity):	
"THERMO HANF PREMIUM"	f_{u1} = 0,07
"THERMO HANF PREMIUM PLUS"	f_{u1} = 0,13
"THERMO HANF COMBI JUTE"	f_{u1} = 0,19
the mass-related moisture conversion coefficient (23 °C/50 % rel. humidity to 23 °C/80 % rel. humidity):	
"THERMO HANF PREMIUM"	f_{u2} = 0,24
"THERMO HANF PREMIUM PLUS"	f_{u2} = 0,34
"THERMO HANF COMBI JUTE"	f_{u2} = 0,40
moisture conversion factor (dry to 23 °C/ 50 % rel. humidity):	
"THERMO HANF PREMIUM"	F_{m1} = 1,01
"THERMO HANF PREMIUM PLUS"	F_{m1} = 1,01
"THERMO HANF COMBI JUTE"	F_{m1} = 1,02
moisture conversion factor (23 °C/ 50 % rel. humidity to 23 °C/ 80 % rel. humidity):	
"THERMO HANF PREMIUM"	F_{m2} = 1,02
"THERMO HANF PREMIUM PLUS"	F_{m2} = 1,03
"THERMO HANF COMBI JUTE"	F_{m2} = 1,04

[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. 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.

Essential characteristic	Performance
Water vapour diffusion resistance coefficient	μ = 1 to 2[2]
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: ± 2 % width: ± 1,5 % -4 mm / +10 mm or + 10 %[3] Relates to class T3 acc. to EN 13171:2012 $S_b \leq 5$ mm/m $S_{max} \leq 6$ mm
Density: test acc. to EN 1602:2013	35 – 48 kg/m^3
Dimensionsstabilität bei definierten Temperatur- und Feuchtebedingungen: test acc. to EN 1604:2013 (48 h, 70 °C) "THERMO HANF PREMIUM PLUS" Deviation from length and width: Deviation from thickness: "THERMO HANF PREMIUM" "THERMO HANF COMBI JUTE"	 DS(70,-)3 acc. EN 13171:2012 max. ± 3 % max. ± 3 % No performance assessed No performance assessed
Tensile strength parallel to faces: test acc. to EN 1608:2013	≥ 30 kPa

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. 040005-00-1201, the applicable European legal act is: 1999/91/EC.

The system to be applied is: 3

[2] The most unfavorable value for the construction shall be applied each.
[3] Whichever gives the smallest numerical tolerance.

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 13 April 2017 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe
Head of Department

beglaubigt:
Viola Stopp