Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

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European Technical Assessment

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General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	"THERMO JUTE DUO", "THERMO JUTE 100", "THERMO JUTE 100 PLUS"
Product family to which the construction product belongs	Insulation mats made of jute and/or hemp fibres
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
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Specific Part

1 Technical definition of the construction product

This European Technical Assessment applies to the insulation materials with the designations:

"THERMO JUTE DUO" (further trade names "iSO DUO", "THERMO JUTE FLEX DUO", "DÄMM JUTE DUO", "DämmJute75", "stroba JUTE DOU", "NATURFASER DÄMMUNG Corchorus DUO", "FIBRE NATURELLE ISOLATION Corchorus Duo", "NATURAL FIBRE INSULATION Corchorus Duo", "UmweltJUTE mix", "DämmWohl JUTE mix", "Jute Duo Premium") made of jute and hemp fibres, as well as

"THERMO-JUTE 100" (further trade names "Le Jute Francais", "iSO JUTE", "THERMO JUTE FLEX", "DÄMM JUTE", "DÄMMJute100", "stroba JUTE 100", "NATURFASER DÄMMUNG Corchorus", "FIBRE NATURELLE ISOLATION Corchorus", "NATURAL FIBRE INSULATION Corchorus", "UmweltJUTE klassik", "DämmWohl JUTE", "Jute Premium", "Jute Dämmung")

and

"THERMO JUTE 100 PLUS" (further trade names "iSO JUTE PLUS", "THERMO JUTE FLEX PLUS", "DÄMM JUTE PLUS", "DÄMMJute100Plus", "stroba JUTE 100 PLUS", "NATURFASER DÄMMUNG Corchorus Eco", "FIBRE NATURELLE ISOLATION Corchorus Eco", "NATURAL FIBRE INSULATION Corchorus Eco", "UmweltJUTE eco", "DämmWohl JUTE green", "Jute Premium Plus", "Natur Jute Dämmung", "Jute NATUR PLUS") made of jute fibres.

For distinction of the insulation materials in the following only the designations "THERMO JUTE DUO", "THERMO JUTE 100" and "THERMO JUTE 100 PLUS" will be used.

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

During the manufacturing process the products are provided with fire protection equipment.

The insulation materials are made in form of mats with the following dimensions:

Nominal thickness:	minimum 30 mm to 220 mm maximum
Nominal length:	1200 mm or 2400 mm
Nominal widths:	580 mm, 625 mm or 1000 mm

For nominal thicknesses of 30 mm to 80 mm the insulation materials are also made in form of rolls.

The insulation materials 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 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 13501-1:2010

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 846:2013

3.4 Safety and accessibility (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 JUTE DUO"	$\lambda_{D(23,50)}$ = 0.040 W/(m ·K)*
"THERMO JUTE 100"	$\lambda_{D(23,50)}$ = 0.038 W/(m ·K)*
"THERMO JUTE 100 PLUS"	$\lambda_{D(23,50)}$ = 0.038 W/(m ·K)*
Conversion of humidity test acc. to EN ISO 10456:2007+AC:2009	
the mass-related moisture content at 23 °C/50 % rel. humidity:	
"THERMO JUTE DUO"	$u_{23,50}$ = 0.10 kg/kg
"THERMO JUTE 100"	$u_{23,50}$ = 0.10 kg/kg
"THERMO JUTE 100 PLUS"	$u_{23,50}$ = 0.08 kg/kg
the mass-related moisture content at 23 °C/80 % rel. humidity:	
"THERMO JUTE DUO"	$u_{23,80}$ = 0.21 kg/kg
"THERMO JUTE 100"	$u_{23,80}$ = 0.22 kg/kg
"THERMO JUTE 100 PLUS"	$u_{23,80}$ = 0.20 kg/kg
the mass-related moisture conversion coefficient (dry to 23 °C/50 % rel. humidity):	
"THERMO JUTE DUO"	f_{u1} = 0.32
"THERMO JUTE 100"	f_{u1} = 0.20
"THERMO JUTE 100 PLUS"	f_{u1} = 0.34
the mass-related moisture conversion coefficient (23 °C/50 % rel. humidity to 23 °C/80 % rel. humidity):	
"THERMO JUTE DUO"	f_{u2} = 0.07
"THERMO JUTE 100"	f_{u2} = 0.02
"THERMO JUTE 100 PLUS"	f_{u2} = 0.64
moisture conversion factor (dry to 23 °C/ 50 % rel. humidity):	
"THERMO JUTE DUO"	F_{m1} = 1.03
"THERMO JUTE 100"	F_{m1} = 1.02
"THERMO JUTE 100 PLUS"	F_{m1} = 1.03

Essential characteristic	Performance
moisture conversion factor (23 °C/ 50 % rel. humidity to 23 °C/ 80 % rel. humidity) :	
"THERMO JUTE DUO"	F_{m2} = 1.01
"THERMO JUTE 100"	F_{m2} = 1.00
"THERMO JUTE 100 PLUS"	F_{m2} = 1.08
Water vapour diffusion resistance coefficient test acc. to EN 12086:2013, climate condition 23−50/93	μ = 1 to 2**
Short term water absorption by partial immersion test acc. to EN 1609:2013, Verfahren A	≤ 2.0 kg/m²
Dimensional deviations:	
Length and widths: test acc. to EN 822:2013	length: ± 2 % widths: ± 1.5 %
Thickness: test acc. to EN 823:2013	-4 mm und +10 mm / +10 %[a] relates to class T3 acc. to EN 13171:2012
Squareness: test acc. to EN 824:2013	S_b ≤ 5 mm/m
Flatness: test acc. to EN 825:2013	S_{max} ≤ 6 mm
Density: test acc. to EN 1602:2013	
"THERMO JUTE DUO"	30 – 35 kg/m³
"THERMO JUTE 100"	34 – 40 kg/m³
"THERMO JUTE 100 PLUS"	34 – 40 kg/m³
Dimensional stability under specified temperature and humidity conditions: test acc. to EN 1604:2013 (48 h, 70 °C)	
"THERMO JUTE DUO"	DS(70,-)3 acc. to EN 13171:2012
Deviation from length and width:	max. ± 1.5 %
Deviation from thickness:	max. ± 3.0 %
"THERMO JUTE 100"	No performance assessed.
"THERMO JUTE 100 PLUS"	No performance assessed
Tensile strength parallel to faces: test acc. to EN 1608:2013	≥ 30 kPa

* 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 unfavorable value for the construction shall be applied each.

a Whichever gives the smallest numerical tolerance.

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

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 at Deutsches Institut für Bautechnik.

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