

TWO STRONG PARTNERS:
ecological buildings systems
+ Thermo Natur



**THERMO
JUTE**

100



THE BIG STAR: A genius insulation from jute fibre.

ADVANTAGES:

- Best summer heat protection
- Very attractive price
- Resource-friendly



INSULATING MATERIALS FOR INNOVATORS
HEALTHY AND NATURALLY ENERGY EFFICIENT

THERMO JUTE 100

TOP ADVANTAGES:



Best summer heat protection

- > THERMO JUTE 100 prevents heat from penetrating into the living space
- > Pleasantly cool in rooms during day
- > The heat saved is given off to the outside at night

- **Top insulating performance** with a impressive lambda value
- **Conservation of finite raw materials**
- **Excellent indoor climate**



- **natureplus® certified**
- **Extremely low requirement for primary energy** during production
- **No mould growth**, Best mark "0" (as per EN ISO 846)
- **Skin-friendly installation** (no itching and scratching)
- **Contains no harmful substances**
- **Attractive price**
- **Easy disposal and recycling**
- **No odour emission**

The BIG STAR in price / performance

THERMO JUTE 100 is the BIG STAR of our product portfolio. THERMO JUTE 100 is distinguished by its benefits in terms of building biology and physics. It is ideally suited for new construction as well as energy-specific renovation of existing buildings.

Achieving thermal conductivities of 10, dry = 0.0368 W/mK is sensational – no other hemp or jute fibre insulating material on the market has thus far achieved such lambda values.

Its stability and its excellent clamping action with installation are ensured by the jute fibre which is extremely stable and tear-resistant.

Treated jute fibres (cocoa or coffee bags) used for insulation **combine durability with excellent insulating values.** We

pass on the attractive price advantage after upcycling directly to our customers. This upcycling product sets standards for a successful raw material transformation.

THERMO JUTE 100 has the European Technical Approval ETA-14/0479.

With the receipt of the **natureplus® certificate**, THERMO NATUR GmbH & Co. KG once again prove their high quality standards. We only bring out products that meet the highest requirements.



Kurt Hogh
Geschäftsführer THERMO NATUR GmbH & Co. KG

Easy to install – for healthy living

- **THERMO JUTE 100** can be installed in many ways.
The material can be **fitted easily**, without itching and scratching.
- **Even angular areas** can be insulated well. We recommend an electric saw with serrated dual blade.



Easy and tailored cut with the electric saw.



Easy installation. No pollutant emission. Harmless for processors and inhabitants.



Insulation of a converted attic as living space with dormer.



An oversize for better fitting should be respected.

Packaging units

Thickness in mm	Packaging units with width 37.5 cm	Packs / pallet	Packaging units with width 58 cm	Packs / pallet
30	20	12	20	8
40	20	9	15	8
50	16	9	12	8
60	12	9	10	8
80	10	9	5	12
100	8	9	6	8
120	10	9	5	8
140	6	9	3	12
160	4	9	4	8
180	4	9	3	8
200	4	9	3	8
220	4	9	2	12



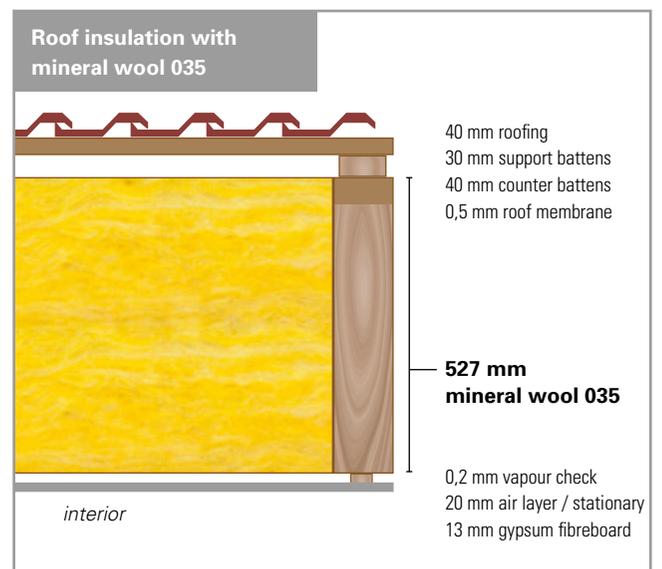
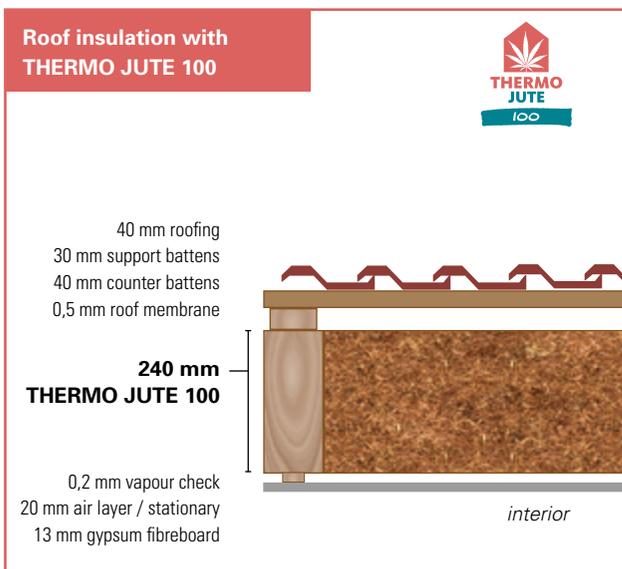
Professional installation the of air-proofing membranes is important.

Best summer heat protection!



Comparison of the thickness

An extra depth of 287mm of mineral wool would be required to gain a comparable effect of heat protection!



Technical data sheet

Version: 11/2018

THERMO JUTE 100



The insulation made of jute fibres

Description	THERMO JUTE 100											
European Technical Approval	ETA-14/0479											
Reference number	130701-044-01											
Components	85-90 % jute fibres, 8-10 % biopolymer supporting fibres on PET basis, 2-5 % soda as fire proofing											
Dimensional variations												
Length and Width <small>EN 822:2013</small>	Length: $\pm 2\%$ Width: $\pm 1.5\%$											
Thickness <small>EN 823:2013</small>	- 4 mm and + 10 mm / + 10 % <small>complies with T3 EN 13171:2012, table 1</small>											
Bulk Density <small>EN 1602:2013</small>	34 - 40 kg / m ³											
Tensile strength parallel to the mat plane <small>EN 1608:2013</small>	≥ 30 kPa											
Energy saving and heat insulation												
Nominal thermal conductivity $\lambda_{D(23,50)}$ <small>EN 12667:2001</small>	0.038 W/(m•K)											
Resistance to heat admission thickness [mm] $R_{D(23,50)}$ [m ² •K/W]	30	40	50	60	80	100	120	140	160	180	200	220
	0.79	1.05	1.32	1.58	2.11	2.63	3.16	3.68	4.21	4.74	5.26	5.79
Conversion factors for the moisture content <small>(Conversion according to DIN EN ISO 10456:2007 + AC:2009)</small>	F_{m1} (dry to 23°C/ 50%) = 1.02 F_{m2} (23°C / 50% to 23°C/ 80%) = 1.00											
Specific thermal capacity c <small>According to EN 12667:2001</small>	2350 J/(kg•K)											
Water vapour diffusion resistance coefficient μ <small>climate condition 23-50/93</small> <small>According to EN 12086:2013</small>	1 to 2											
Water absorption <small>EN 1609:2013, process A</small>	≤ 2.0 kg/m ²											
Sound insulation												
Length related flow resistance <small>EN 29053:1993</small>	3.4 kPa•s/m ²											
Sound absorption <small>(according to EN ISO 354:2003 and EN ISO 11654:1997)</small>	Nominal thickness [mm]	Practical sound absorption coefficient α_p <small>According to EN ISO 11654</small>						EN ISO 11654				
		Octave middle frequency [f/Hz]						Rated sound absorption coefficient α_w	Sound absorption class			
		125	250	500	1000	2000	4000					
		40	0.2	0.5	0.7	0.85	0.9			0.95	0.75 (H)	C
80	0.45	0.95	1.0	0.95	1.0	1.0	1.00	A				
160	0.9	1.0	1.0	1.0	1.0	1.0	1.0	A				
Fire protection												
Fire behaviour <small>EN ISO 11925-2:2010</small>	B2, Class E <small>EN 13501-1:2010</small>											
Max. processing temperature [°C]	120 °C											
Hygiene, health and environmental protection												
Resistance against mould fungus <small>EAD, Annex B</small> <small>846:2013</small>	0 <small>EN ISO</small>											
Delivery form	Mats or rolls											

1

Ecological Building Systems

For stockist information and full technical support for your project, please contact Ecological Building Systems or visit www.EcologicalBuildingSystems.com



Technical data sheet

Version: 11/2018

THERMO JUTE 100



The insulation made of jute fibres

Thickness and standard dimensions	Mat thickness 30-220 mm: 1200 x 625 mm 1200 x 580 mm (wooden construction measure) 2400 x 1000 mm	Roll thickness 30-80 mm: Length 6.0 – 10.0 m (depending on thickness) Width 625 mm or 580 mm
Customised manufacturing	We offer customised manufacturing for 40 mats of the same width (between 40 - 120 cm), without any surcharge. Between 20 - 40 mats there is a surcharge of 20 %.	

Description:

- Insulation with the European Technical Approval
- Construction biologically and ecologically certified
- Flexible, mats or rolls made of jute fibres, not resistant to compression
- Durable, robust upcycling product made of jute bags for food
- Second life cycle of natural fibres instead of thermal recycling
- Produced with thermo bonding process and 100 % eco electricity

Characteristics:

- Best thermal insulation due to a low thermal conductivity
- Best heat protection in the summer through high heat storage capacity
- Good sound insulation properties
- Simple processing with the THERMO NATUR insulating knife or common electric cutting tools with opposed serrated knives
- Suitable for DIY
- Humidity regulating due to high moisture absorption capacity
- No nutrient base for rodents and insects

Fields of application:

- Cavity insulation of external and internal walls in timber frame constructions and comparable constructions (WH, WTR, WAB)
- Interior insulation of external walls between a supporting structure (WI)
- Insulation between the rafters and wooden joists as well as in constructions with cavities (DZ)
- Cavity insulation between sleepers in the floor and comparable substructures (DZ)
- Insulation on accessible, not passable top floor ceilings
- Interior insulation of ceiling or roof, e.g. insulation under the supporting structure (e.g. rafters), suspended ceiling (DI)

General information:

- THERMO JUTE 100 is to be stored and processed in dry conditions
- Store upright
- To ensure the installation is achieved without gaps (joints), an oversize in length and width of each 10 – 30 mm shall be observed
- The clamping effect depends on the insulation thickness, the rafter spacing, the rafter surface and the roof pitch. If required, the mats can be fixed to the rafters with a stapler, also used for fixing the vapour barrier.
- After installing the insulation, the compartments of the thermal envelope must be closed immediately with a vapour barrier.

2

This Technical Data Sheet reflects the technical conditions at the time of going to press and loses its validity when a new edition is issued. It is valid in the context of other THERMO NATUR GmbH & Co. KG documentation.

Ecological Building Systems

For stockist information and full technical support for your project, please contact Ecological Building Systems or visit www.EcologicalBuildingSystems.com



Insulating quality "made in Germany"

Economical, healthy and 100% sustainable.



Jute bags that delivered cocoa to a chocolate factory are processed to high-quality fibres

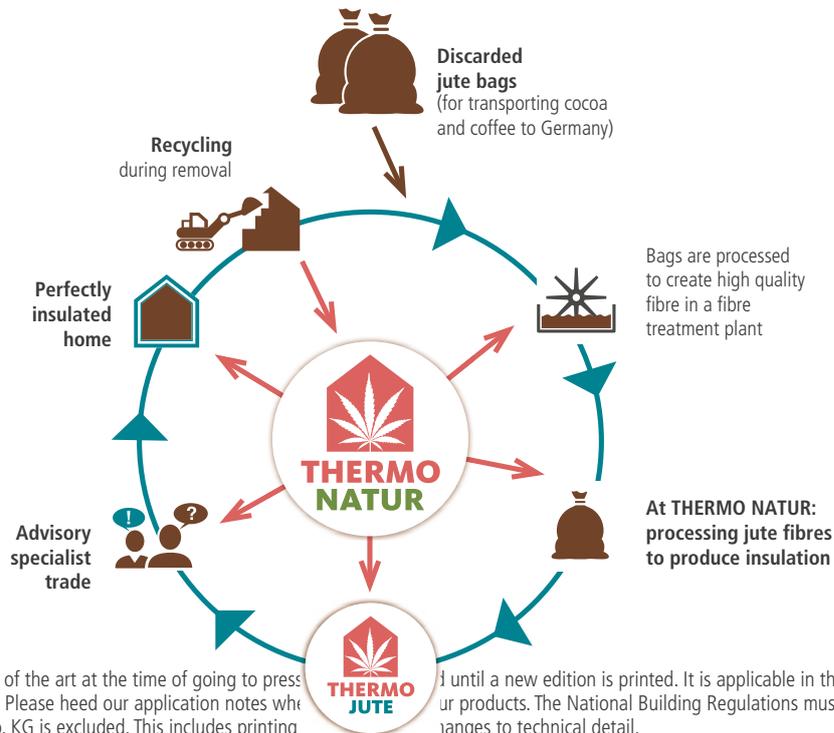


The raw fibre treated with soda as fire proofing is stored until receipt of order. Then production starts.



Jute and bi-component fibres are solidified through heating in our production line to become a high-quality insulating material.

CIRCLE OF PRODUCTION:



This brochure reflects the technical state of the art at the time of going to press. THERMO NATUR GmbH & Co. KG documentation. Please heed our application notes where Liability by THERMO NATUR GmbH & Co. KG is excluded. This includes printing

until a new edition is printed. It is applicable in the context of other THERMO products. The National Building Regulations must be complied with. Changes to technical detail.

Manufacture & Distribution
of THERMO JUTE

Ecological Building Systems

For stockist information and full technical support for your project, please contact Ecological Building Systems or visit www.EcologicalBuildingSystems.com

