THERMO NATUR

HIGH PERFORMANCE INSULATING MATERIALS.

- THERMO HEMP Premium Plus
- THERMO HEMP Premium
- THERMO HEMP Combi Jute
- THERMO FAÇADE
- THERMO JUTE DUO
- THERMO FAÇADE
- Accessories and Service

INSULATING MATERIALS FOR INNOVATORS.
HEALTHY AND NATURALLY ENERGY EFFICIENT.

THERMO NATUR

ENVIRON-MENT

YOUR AMBASSADORS FOR HEALTHY LIVING

- **Yearning for healthy, sustainable and energy-saving insulation?**
- **Wishing to increase the value of your property?**

› **We have the perfect product for you.**

This brochure covers the complete range of natural insulating materials from **THERMO NATUR**. In addition to the tried and tested **THERMO HEMP** products made of re-growing hemp plants, we can also offer you the attractively priced up-cycling product **THERMO JUTE**. Boasting a top lamda values and durability, this insulating material is also a trendsetter.

As **the market leader for natural insulating materials** in Europe, we preserve what is good whilst continuously developing the new. Manufacturing highly functional, resource-preserving and healthy insulating materials is our passion.

Kurt Hogh, THERMO NATUR GmbH & Co. KG
and all our members of staff

ENVIRONMENTAL PROTECTION:
At the core of our work
and our philosophy.

PRODUCTS WITH NO HARMFUL SUBSTANCES:
Man, animal, plant,
soil, water, air and climate
are all actively protected.

IN-HOUSE ENVIRONMENTAL PROTECTION:
Use of natural energy,
optimised delivery routes,
waste prevention.

CLOSED MATERIALS AND ECONOMIC CYCLE:
From natural fibres to processing
up to recycling for the
next generation of products.

CONTENT

THERMO HEMP

THERMO JUTE

HEALTH

FUNDAMENTAL RIGHT TO HEALTHY LIVING:
Our products contain no borac acid, no formaldehyde and no isocyanate.

OUR PRODUCTS ARE NOT CARCINOGENIC.

EMPLOYEE HEALTH:
The materials we process are all harmless.
Production dust is extracted.

THERMO HEMP IS natureplus® CERTIFIED:
The European seal of quality for climate protection, healthy living and sustainability.

ECO-NOMY

COMBINING NATURE + SUCCESS:
Highly functional products, offering only benefits to man and the environment.

IDEAS PREVENT WASTE:
By recycling and up-cycling we save material costs and feed used materials back into the cycle.

NATURAL INSULATING AND BUILDING MATERIALS AS A STANDARD INTO THE FUTURE:
We aim at making our products indispensable during construction.

TOP PRICE/PERFORMANCE RATIO:
All our products offer **only advantages** at attractive prices.

MADE IN GERMANY

HEALTHY AND NATURALLY ENERGY EFFICIENT

ADDED VALUE GUARANTEE

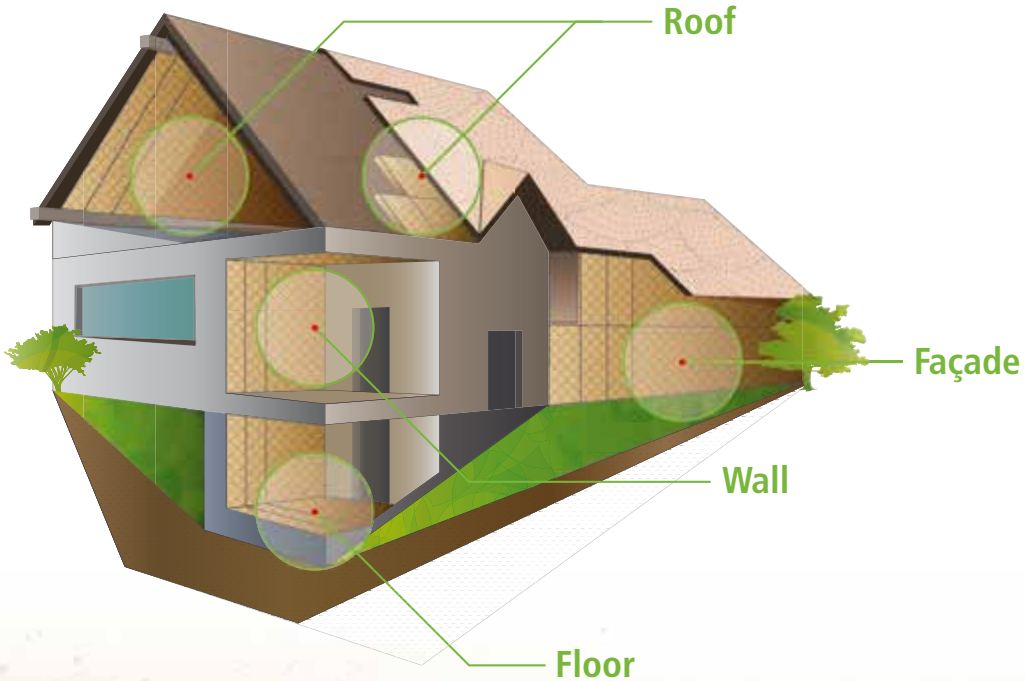
Natural fibre insulating materials from **THERMO NATUR** - the **perfect solution to insulating** any type of building. **They will save energy, are healthy** and create **no waste**.

VALUE ADDED

It is only a matter of time before this sustainable method of insulating will be the standard. **Insulate intelligently already now and improve the value of your property.**

ENVIRONMENT + CLIMATE

Fully degradable (PREMIUM PLUS) **or recyclable**, natural insulating materials have infinite applications in the economic cycle. Should they nevertheless be disposed of in future, it will be as landfill or for thermal exploitation.



THIS APPLIES TO ALL OUR INSULATING MATERIALS

FIRE PROTECTION

GOOD FIRE PRO-TECTION

Fire behaviour: **B2, Class E** (in acc. with EN 13501-1:2007)
(tested according to EN ISO 11925-2:2002)

Max. application temperature [°C]: **120°C**

HEALTH

NO MOULD

Resistance against mould growth: **Assessment level 0** (in acc. with EN ISO 846:1997)
(tested in acc. with EAD, Annex B)

FORM OF DELIVERY

AS MATS

Board thicknesses:
30 – 220 mm

Standard dimensions of mats:
1200 x 625 mm, 1200 x 580 mm
(wooden construction dimension)
2400 x 1000 mm

Customisation at no extra cost:
40 or more equal width mats
(between 400 and 1200 mm)

AS ROLLS

Widths:
625 mm and 580 mm

Thicknesses:
from 30 mm to 60 mm, 80 mm
(in increments of 10 mm)

THERMO HEMP PREMUIM PLUS
is supplied only as mats.

Description:

- Insulating material with European approval
- certified ecologically and under building biology
- flexible mats made of durable, robust hemp and/or jute fibres, not resistant to compression
- compostable (PREMIUM PLUS)
- vegetable based binding fibre (PREMIUM PLUS)
- manufactured using thermobonding and 100% natural energy

Applications:

- Insulation between rafters
- Insulation on rafters between supporting rafters
- Insulation under rafters
- Insulation of wooden joists in ceilings,
- Insulation of external and internal walls in wooden frame and wooden stud constructions
- Insulation of metal stud walls
- Insulation of facings
- Exterior insulation behind cladding

Characteristics:

- top thermal protection due to low thermal conductivity
- top heat protection in summer due to excellent heat storage capacity
- good acoustic damping properties
- simple application using conventional electric cutting tools with counter-travelling wave-cut knives or the THERMO NATUR insulation knife
- suitable for DIY
- humidity regulating due to high sorption capacity
- no nutrients for rodents and insects

General information:

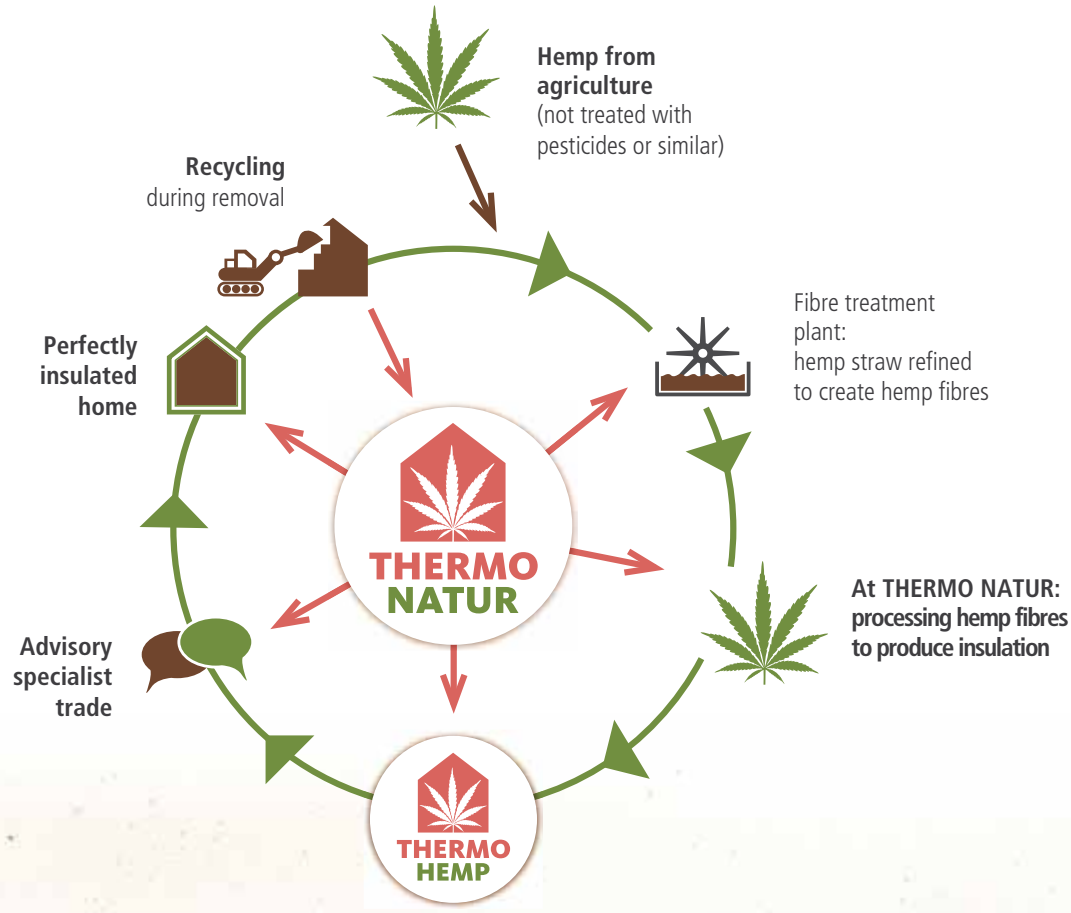
- THERMO NATUR insulating materials must be stored and applied in dry conditions
- store upright on the long side
- install without gaps and allow 10 – 30 mm oversize for tight fit
- immediately seal the thermal shell spaces with a vapour barrier after installation

HEMP

We offer our high-performance insulation pioneer THERMO HEMP in different types.

Hemp plants grow fast, shade the soil and in this way prevent weeds from growing. No chemical pest management is thus required in the field.

Due to its large biomass, hemp binds more CO_2 during the growth phase than any other agriculturally cultivated plant in our latitudes. So-called industrial hemp offers a highly tear-resistant, stable and durable natural fibre. It needs **no chemical treatment** against mould growth or pest infestation.



THERMO HEMP

THERMO HEMP PREMIUM PLUS
THERMO HEMP PREMIUM
THERMO HEMP COMBI JUTE
Insulating Materials

THERMO FAÇADE HEMP
Insulation system

THERMO STEP HEMP
Footfall sound insulation

TOP ADVANTAGES:

- ENERGY-SAVING
- HEALTHY + NO HARMFUL SUBSTANCES
- VERY GOOD PROTECTION FROM HEAT
- GOOD PROTECTION FROM COLD
- GOOD ACOUSTIC DAMPING

More advantages:

- **Extremely durable high-performance insulating materials**
- **Top insulating characteristics: Protection from cold and heat**
  Thermal conductivity up to λ 10,dry = 0.0396 W/mK
- **Excellent diffusion properties**
- **Fast, straightforward installation**
  in roofs, walls and floors
- **Straightforward installation in old and new buildings**
- **Complete declaration of all ingredients**
- **Soda based fire protection**
- **Clean, low-dust processing**
- **Contains no harmful substances**
- **Contains no substances harmful to the environment**
- **Healthy processing**
  Skin-friendly (no itching and scratching), harmless to the respiratory tract
- **No mould growth,** Best mark "0" (as per EN ISO 846)
- **Does not attract vermin** (contains no proteins or starch)
- **Re-growing raw materials offer active environmental protection:**
  Jute and hemp store CO_2 in their growing phase.
- **Easy disposal and recycling**
- **Available in rolls and as mats**
  Customisation at no extra cost: min. order of 40 mats of equal width.

ENERGIE EFFIZIENZ
natureplus.org natürlich nachhaltig bauen
wohn-medizinisch empfohlen von Wohnmedizinern & Baubiologen
KEIN SCHIMMELPILZ bei THERMO HANF + THERMO JUTE

THERMO HEMP PREMIUM PLUS

THE 100-PERCENT ONE

Produced exclusively from natural fibres, THERMO HEMP PREMIUM PLUS is the 100% consistently sustainable product in the THERMO HEMP range. Supplied in mat form only.

European Technical Approval		**ETA-05/0037**
Reference number		130701-042-01
Components		85–90% hemp fibres, 8–10% bi-component fibres made of cornstarch, 2–5% soda as fire proofing
Dimensional variations		
Length and Width	EN 822:1994	Length= ± 2 % Width: ± 1.5 %
Thickness	EN 823:1994	- 5 % / - 5 mm and + 20 mm / + 20 % complies with EN13162:2008, table 1
Bulk Density	EN 1602:1996	28 – 46 kg/m³
Dimensional stability (48h, 70°C, 50 rel. humidity)	EN 1604:1996	Length and width max. ± 1 % Thickness max. - 5 / + 10 %
Tensile strength parallel to the mat plane	EN 1608:1996	> 2 x net weight
Energy saving and heat insulation		
Thermal conductivity	EN 12667:2001	
Metered Value of thermal conductivity $\lambda_{10, dry}$		0.0396 W/(m•K) category II
Nominal thermal conductivity $\lambda_{D\ (23,50)}$		0.04 W/(m•K) category II
Resistance to heat admission R [m²•K/W] with thickness [mm]		0.75 / 30 · 1.00 / 40 · 1.25 / 50 · 1.50 / 60 · 2.00 / 80 · 2.50 / 100 · 3.00 / 120 · 3.50 / 140 · 4.00 / 160 · 4.50 / 180 · 5.00 / 200 · 5.50 / 220
Specific thermal capacity c		2300 J/(kg•K)
Water vapour diffusion resistance coefficient μ	EN 12086 :1997	1 to 2
Water absorption	EN 1609:1996, process A	≤ 4.2 kg/m²
Sound insulation		
Length related flow resistance	EN 29053:1993	3.0 kPa•s/m²

Sound absorption	Nominal thickness [mm]	Practical sound absorption coefficient α_p calculated by EN ISO 11654						EN ISO 11654	
		Octave middle frequency						Rated sound absorption coefficient α_w	Sound absorption class
		125	250	500	1000	2000	4000		
EN ISO 354:2003 and EN ISO 11654:1997	40	0.20	0.45	0.70	0.85	0.90	0.95	0.70 (H)	C
	160	0.85	1.00	1.00	1.00	1.00	1.00	1.00	A

Refer to Page 5 for details on form of delivery, fire protection values, health and hygiene

THE CLASSIC ONE

The THERMO HEMP pioneer product has been demonstrating the strengths of hemp fibres for decades. You cannot go wrong when using THERMO HEMP PREMIUM.

European Technical Approval		**ETA-05/0037**
Reference number		130701-040-01
Components		85–90% hemp fibres, 8–10% bi-component fibres PE-based, 2–5% soda as fire proofing
Dimensional variations		
Length and Width	EN 822:1994	Length= ± 2 % Width: ± 1.5 %
Thickness	EN 823:1994	- 5 % / - 5 mm and + 20 mm / + 20 % complies with EN13162:2008, table 1
Bulk Density	EN 1602:1996	28 – 46 kg/m³
Dimensional stability (48h, 70°C, 50 rel. humidity)	EN 1604:1996	Length and width max. ± 1 % Thickness max. - 5 / +10 %
Tensile strength parallel to the mat plane	EN 1608:1996	> 2 x net weight
Energy saving and heat insulation		
Thermal conductivity	EN 12667:2001	
Metered Value of thermal conductivity $\lambda_{10, dry}$		0.0396 W/(m•K) category II
Nominal thermal conductivity $\lambda_{D\ (23,50)}$		0.04 W/(m•K) category II
Resistance to heat admission R [m²•K/W] with thickness [mm]		0.75 / 30 · 1.00 / 40 · 1.25 / 50 · 1.50 / 60 · 2.00 / 80 · 2.50 / 100 · 3.00 / 120 · 3.50 / 140 · 4.00 / 160 · 4.50 / 180 · 5.00 / 200 · 5.50 / 220
Specific thermal capacity c		2300 J/(kg•K)
Water vapour diffusion resistance coefficient μ	EN 12086:1997	1 to 2
Water absorption	EN 1609:1996, process A	≤ 4.2 kg/m²
Sound insulation		
Length related flow resistance	EN 29053 :1993	3.0 kPa•s/m²

Sound absorption	Nominal thickness [mm]	Practical sound absorption coefficient α_p calculated by EN ISO 11654						EN ISO 11654	
		Octave middle frequency						Rated sound absorption coefficient α_w	Sound absorption class
		125	250	500	1000	2000	4000		
EN ISO 354:2003 and EN ISO 11654:1997	40	0.20	0.45	0.70	0.85	0.90	0.95	0.70 (H)	C
	160	0.85	1.00	1.00	1.00	1.00	1.00	1.00	A

Refer to Page 5 for details on form of delivery, fire protection values, health and hygiene

THERMO HEMP COMBI JUTE

THE COMBINER

Optimal mixture of only the best. Comprising of mainly hemp with ca. 20-25% jute, THERMO HEMP COMBI JUTE is an attractively priced solution for hemp fans.

European Technical Approval		**ETA-05/0037**
Reference number		130701-041-01
Components		60 – 70 hemp fibres, 20 – 25 % jute fibres, 8 – 10 % bi-component fibres PE-based, 2 – 5 % soda as fire proofing
Dimensional variations		
Length and Width	EN 822:1994	Length= ± 2 % Width: ± 1.5 %
Thickness	EN 823:1994	- 5 % / - 5 mm and + 20 mm / + 20 % complies with EN13162:2008, table 1
Bulk Density	EN 1602:1996	28 – 46 kg/m³
Dimensional stability (48h, 70°C, 50 rel. humidity)	EN 1604:1996	Length and width max. ± 1 % Thickness max. - 5 / +10 %
Tensile strength parallel to the mat plane	EN 1608:1996	> 2 x net weight

Energy saving and heat insulation													
Thermal conductivity	EN 12667:2001												
Metered Value of thermal conductivity $\lambda_{10, dry}$	0.0396 W/(m•K) category II												
Nominal thermal conductivity $\lambda_{D\ (23,50)}$	0.04 W/(m•K) category II												
Resistance to heat admission R [m²•K/W] with thickness [mm]	0.75 30	1.00 40	1.25 50	1.50 60	2.00 80	2.50 100	3.00 120	3.50 140	4.00 160	4.50 180	5.00 200	5.50 220	
Specific thermal capacity c	2300 J/(kg•K)												
Water vapour diffusion resistance coefficient μ	EN 12086 :1997	1 to 2											
Water absorption	EN 1609:1996, process A	≤ 4.2 kg/m²											

Sound insulation		
Length related flow resistance	EN 29053:1993	3.0 kPa•s/m²

Sound absorption	Nominal thickness [mm]	Practical sound absorption coefficient α_p calculated by EN ISO 11654						EN ISO 11654	
		Octave middle frequency						Rated sound absorption coefficient α_w	Sound absorption class
		125	250	500	1000	2000	4000		
EN ISO 354:2003 and EN ISO 11654:1997	40	0.20	0.45	0.70	0.85	0.90	0.95	0.70 (H)	C
	160	0.85	1.00	1.00	1.00	1.00	1.00	1.00	A

Refer to Page 5 for details on form of delivery, fire protection values, health and hygiene

THERMO STEP HEMP

FOR QUIET FLOORS

Used as an underlay for floating parquet and laminate floors. Felt strips as decoupling and partitioning strips in light partition wall construction, with wood-on-wood laying and with wooden floors.

Description	THERMO STEP HEMP
European Technical Approval	**Z-158.10-117**
Components	100 % hemp fibres , no binding material
Thickness	3, 5, 10 mm ± 10 %
Total mass per unit area	630 g/m² to 1550 g/m² ± 10 %
Bulk density	155 to 210 kg/m³
Specific thermal capacity c	2300 J/(kg•K)
Water vapour diffusion resistance coefficient μ EN 12086	1 bis 2
Fire behaviour EN ISO 11925-2	B2, Class E EN ISO 13501-1
Max. processing temperature [°C]	160 °C
Thickness reduction with a static load of 1600 N/m² (1,6 kg/dm²)	3 mm material thickness: 8 % to 20 % 5 mm material thickness: 6 % to 18 % 10 mm material thickness: 5 % to 15 %
Delivery form	Rolls
Measures	Hemp Felt Strips: 3 mm x 100 mm x 25 m 5 mm x 100 mm x 25 m 10 mm x 100 mm x 15 m

THERMO WOOL HEMP

THE GAP FILLER

Seal small gaps with high quality and sustainably. Exploit the positive natural effect of hemp fibres on surrounding components and materials.

Description	THERMO WOOL HEMP
European Technical Approval	**No requirement, regulated according to BR list C**
Components	95 – 98 % loose hemp fibres, 2 – 5 soda as fire proofing
Length of fibre	approx. 50 mm < L < 160 mm
Shive content	< 5 %
Water content	approx. 10 – 12 % with 65 % rel. humidity
Roasting Class	1 to 10
Specific thermal capacity c	2300 J/(kg•K)
Water vapour diffusion resistance coefficient μ	1 to 2
Fire behaviour	B2, class E
Max. processing temperature [°C]	160 °C
Delivery form	Cardboard [58 cm x 58 cm x 65 cm]
Content per Cardboard	10 kg
Bulk density depending on processing	approx. 30 to 50 kg/m³
Render depending on processing	approx. 0.2 to 0.35 m³

THERMO BLOCK HEMP

FOR LOG HOUSES

Natural sealing strips especially for insulating log houses. Particularly easy and good application quality and safe handling. Form of delivery: Rolls: thickness 40 - 80 mm, length 6 - 8 m, width 110 mm (details in Data sheet www.thermo-natur.de)

THE FAÇADE. One system - two natural fibres.

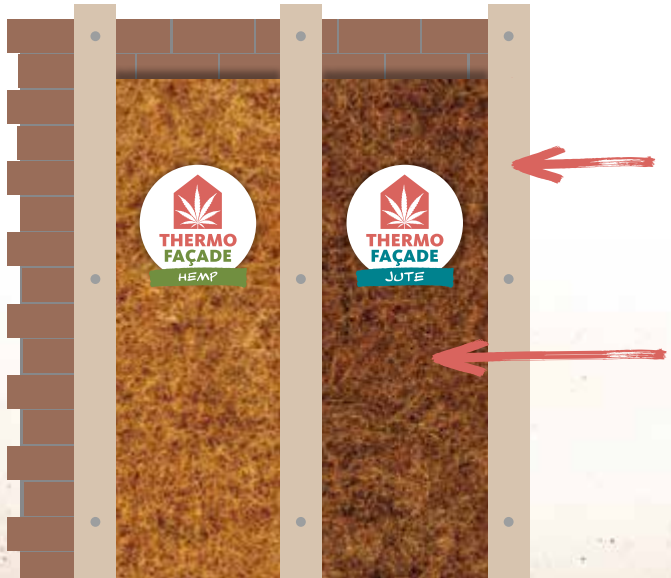
The high quality solution for sustainable thermal protection. Perfect for new construction and restoration. The supports are pre-drilled in the factory and fastened directly to the outside wall using wall plugs. The infill using our insulation is straightforward. Personally select the suitable insulation for your system: either a **THERMO HEMP** product or **THERMO JUTE DUO**.

TOP BENEFITS:

- ENERGY-SAVING
- INSTALLATION WITHOUT GLUING
- HEALTHY + NO HARMFUL SUBSTANCES

More benefits:

- **Increasing your property value:**
  Permeability assures long-term preservation of the building structure.
- **No gluing:**
  The thermal protection cladding is suspended from the external wall.
- **Prevents growth of mildew:**
  By reducing thermal bridges.
- **Easy to remove:**
  Quick to remove - no residues left behind.
- **Fully recyclable:**
  Insulation and support system, in timber façades the façade components are also individually recyclable.
- **Limitless façade designs:**
  The insulation ensures thermal protection and the support system adapts to the desired façade cladding.
- **Conveniently square cross-section:**
  Ideal supports for insulating with **THERMO NATUR INSULATING MATERIALS**. Load support through filigree softwood ladder supports.
- **Active thermal protection ex factory:**
  Spaces in the ladder supports are insulated with wood fibre board strips in the factory. Significantly lower thermal conductivity than conventional scantling cross-sections.
- **Mats with customised dimensions**
  at no extra charge (40 and more mats of the same width and thickness)

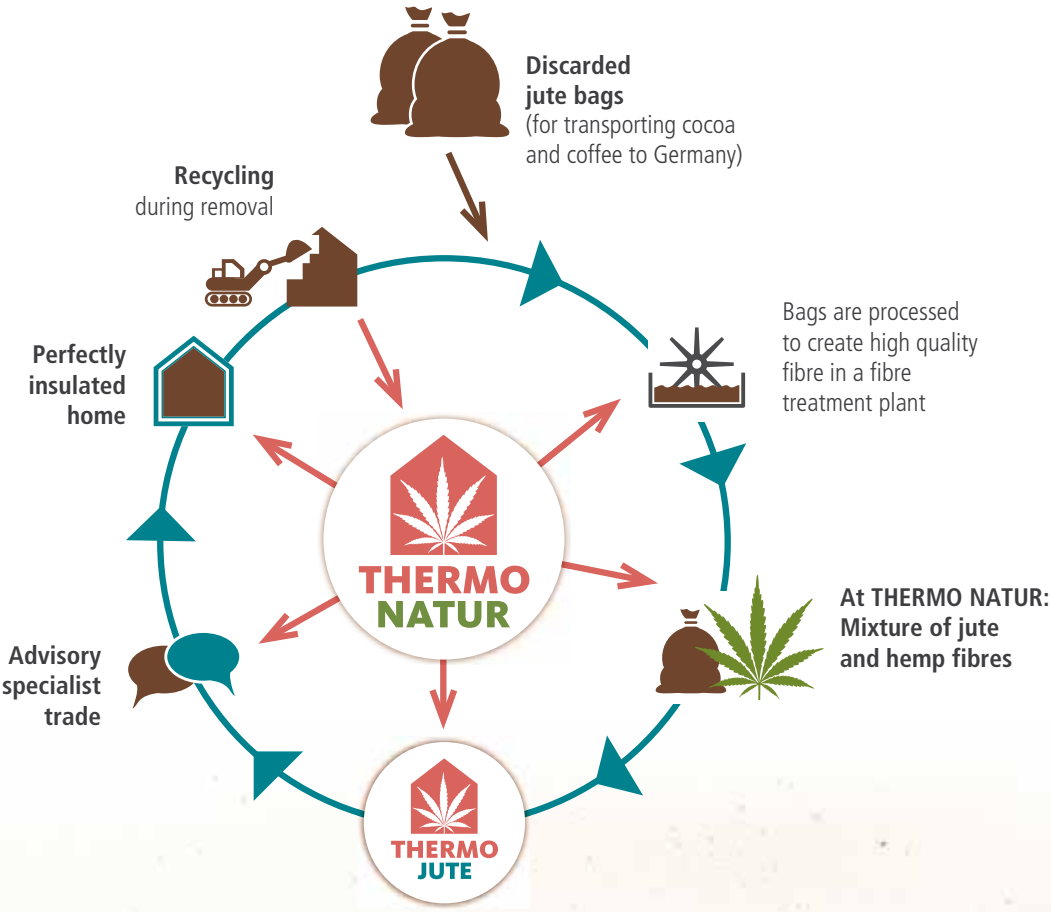


JUTE

The jute bag is making a name for itself here – as a high-performance insulating material with astonishing capabilities – thanks to upcycling.

Treated jute fibres (cocoa or coffee bags) used for insulation **combines durability with excellent insulating figures**. We pass on the **attractive price advantage** after upcycling directly to our customers.

The fibres contain **no harmful substances** and are **odourless**.
Main jute producing regions: India, Bangladesh and other South Asian countries.



Manufacture & Distribution of THERMO JUTE DUO

THERMO JUTE

THERMO JUTE DUO
Insulating Materials.

THERMO FAÇADE JUTE
Insulation system

THERMO STEP JUTE
Footfall sound insulation

TOP ADVANTAGES:

- ENERGY-SAVING
- HEALTHY + NO HARMFUL SUBSTANCES
- VERY GOOD PROTECTION FROM HEAT
- GOOD PROTECTION FROM COLD
- GOOD ACOUSTIC DAMPING

More benefits:

- **Attractive price**
- **Top insulating characteristics: Protection from cold and heat**
  Thermal conductivity up to λ 10,dry = 0.0368 W/mK
  Specific heat storage capacity C= 2325 J/kgK
- Excellent **indoor climate** due to **moisture compensating properties**
- **Fast, straightforward installation**
  on façades, roofs, walls and floors
- **Contains no harmful substances**
- **Contains no substances harmful to the environment**
- Extremely **low requirement for primary energy**
  since manufactured from recycled jute fibres
- **Healthy processing**
  Skin-friendly (no itching and scratching), harmless to the respiratory tract
- **No mould growth,** Best mark "0" (as per EN ISO 846)
- **Does not attract vermin** (contains no proteins or starch)
- **Re-growing raw materials offer active environmental protection:** Jute sequesters CO_2 in its growing phase.
- **Easy disposal and recycling**
- **No odour emission**
- **Available as mats**
  Customisation at no extra cost: for orders of 40 and up mats of equal width.

KEIN SCHIMMELPILZ
bei THERMO HANF + THERMO JUTE
laut Baustellenzeugnis

THERMO JUTE DUO

THE RECYCLE STAR

Our objective in terms of successful raw material cycling is the infinite re-use of as many raw materials as possible.
With THERMO JUTE DUO, we have indeed succeeded in creating this 100% closed production cycle!

THERMO JUTE DUO utterly convinces with benefits in terms of building biology and physics. It is ideally suited for new construction as well as energy-centred renovation of existing buildings. Achieving **thermal conductivities of $\lambda_{10,dry} = 0.0368$ W/mK** is sensational – no other hemp or jute fibre insulating material on the market has thus far achieved such lambda values.

European Technical Approval	**ETA-14/0479**											
Reference number	130701-043-01											
Components	70 – 80 % jute fibres, 10 – 15 % hemp fibres, 8 – 10 % bi-component fibres PE-based, 2 – 5 % soda as fire proofing											
Dimensional variations												
Length and Width EN 822:2013	Length= ± 2 % Width: ± 1.5 %											
Thickness EN 823:2013	- 4 mm and + 10 mm / + 10 % complies with EN13171:2012, table 1											
Bulk Density EN 1602:2013	30 – 35 kg/m³											
Dimensional stability (48h, 70°C) EN 1604:2013	DS (70,-) 3 Length and width max. ± 1.5% Thickness max. 3%											
Tensile strength parallel to the mat plane EN 1608:2013	≥ 30 kPa											
Energy saving and heat insulation												
Thermal conductivity EN 12667:2001												
Measured Value $\lambda_{10, dry}$	0.0368 W/(m•K)											
Metered Value of thermal conductivity $\lambda_{10, dry}$	0.0379 W/(m•K) category II											
Nominal thermal conductivity $\lambda_{D\ (23,50)}$	0.0391 W/(m•K), rounded 0.04 W/(m•K) category II DIN EN ISO 10456											
Resistance to heat admission R [m²•K/W] with thickness [mm]	0.75 30	1.00 40	1.25 50	1.50 60	2.00 80	2.50 100	3.00 120	3.50 140	4.00 160	4.50 180	5.00 200	5.50 220
Specific thermal capacity c	2325 J/(kg•K)											
Water vapour diffusion resistance coefficient μ EN 12086:2013 climate condition 23-50/93	1 to 2											
Water absorption EN 1609:2013, process A	≤ 2.0 kg/m²											
Sound insulation												
Length related flow resistance EN 29053:1993	3.2 kPa•s/m²											

Refer to Page 5 for details on form of delivery, fire protection values, health and hygiene

THERMO JUTE 100

THE BIG STAR

A very good lambda value as well as the specific thermal conductivity make **THERMO JUTE 100** an ideal and extremely durable high-performance insulating material - both in winter and summer. **THERMO JUTE 100** represents the well-priced version of our insulation materials. **As a one hundred percent upcycling product THERMO JUTE 100 can only convince.**

European Technical Approval		**ETA-14/0479**
Reference number		130701-044-01
Components		85 – 90 % jute fibres, 8 – 10 % bi-component fibres PE-based, 2 – 5 % soda as fire proofing
Dimensional variations		
Length and Width	EN 822:2013	Length= ± 2 % Width: ± 1.5 %
Thickness	EN 823:2013	- 4 mm and + 10 mm / + 10 % complies with EN13171:2012, table 1
Bulk Density	EN 1602:2013	ca. 34 – 40 kg/m³
Tensile strength parallel to the mat plane	EN 1608:2013	≥ 30 kPa
Energy saving and heat insulation		
Thermal conductivity	EN 12667:2001	
Measured Value $\lambda_{10, dry}$		0.0359 W/(m•K)
Metered Value of thermal conductivity $\lambda_{10, dry}$		0.0368 W/(m•K) category II
Nominal thermal conductivity $\lambda_{D\ (23,50)}$		0.038 W/(m•K) category II
Resistance to heat admission R [m²•K/W] with thickness [mm]		0.79 / 30 · 1.05 / 40 · 1.32 / 50 · 1.58 / 60 · 2.11 / 80 · 2.63 / 100 · 3.16 / 120 · 3.68 / 140 · 4.21 / 160 · 4.74 / 180 · 5.26 / 200 · 5.79 / 220
Specific thermal capacity c		2350 J/(kg•K)
Water vapour diffusion resistance coefficient μ	EN 12086:2013 climate condition 23-50/93	1 to 2
Water absorption	EN 1609 :2013, process A	≤ 2.0 kg/m²
Sound insulation		
Length related flow resistance	EN 29053:1993	3.4 kPa•s/m²
Hygiene, health and environmental protection		
Resistance against mold fungus	AD, annex B	0 EN ISO 846:2013

Refer to Page 5 for details on form of delivery, fire protection values, health and hygiene

THERMO STEP JUTE

FOR QUIET FLOORS

Used as an underlay for floating parquet and laminate floors. Felt strips for decoupling and partition strips in light partition wall construction, with wood-on-wood laying and for wooden floors.

The product is in the development phase.

THERMO WOOL JUTE

THE GAP FILLER

Seal small gaps with high quality and sustainably. Utilise the positive natural effect of jute fibres on surrounding components and materials.

European Technical Approval	**No requirement, regulated according to BR list C**
Components	95 – 98 % loose jute fibres, 2 – 5 soda as fire proofing
Length of fibre	approx. 20mm < L < 90 mm
Shive content	< 0 %
Water content	approx. 12.5 – 14 % with 65 % rel. humidity
Specific thermal capacity c	2350 J/(kg·K)
Water vapour diffusion resistance coefficient μ	1 to 2
Fire behaviour	B2, class E
Max. processing temperature [°C]	160 °C
Delivery form	Cardboard (58 cm x 58 cm x 65 cm)
Content per Cardboard	10 kg
Bulk density depending on processing	approx. 30 to 50 kg/m³
Render depending on processing	approx. 0.2 to 0.35 m³

Refer to Page 5 for details on form of delivery, fire protection values, health and hygiene

TRAINING + SEMINARS

Boost your sales! With specialised know-how on technology, application and current trends. Our instructors are selected practitioners. As application technicians and construction biologists, they will offer you very high direct benefits to your daily business.

You will receive:

- **valuable tips for reliable application of the products**
- **arguments towards successful advice and sales**
- **accurate quality statements covering the entire range**

Information and registration at info@thermo-natur.de

ACCESSORIES

Do you need accessories such as air- and wind-seals, under-decking, tools or our **AGATON LEHM** building materials?

Simply include in your order and save freight charges!

MAT CUTTING

- Free of charge from 40 and more equal width mats or rolls
- **TIP! Measure correctly:** Measure the clear joist or rafter spacing and add ca. 20 – 30 mm (the oversize prevents thermal bridges and allows a tight fit of the mats). For insulation thicknesses < 100 mm or large rafter spaces: tack mats in addition.

SHORT DELIVERY TIMES

- Drop shipping directly to site
- combined shipments for lower freight charges





OUR INSULATION MATERIALS RANGE:

THERMO HEMP PREMIUM PLUS

THERMO HEMP PREMIUM

THERMO HEMP COMBI JUTE

THERMO FAÇADE HEMP

THERMO STEP HEMP

THERMO JUTE DUO

THERMO FAÇADE JUTE

Offered by:

OzHemp

For further information visit our website
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