

Technical data sheet

Version: 11/2018

THERMO HEMP PREMIUM

The insulation made of hemp fibres



Description	THERMO HEMP PREMIUM												
European Technical Approval	ETA-05/0037												
Reference number	130701-040-01												
Components	85-90 % hemp fibres, 8-10 % biopolymer supporting fibres on PET basis, 2-5 % soda ash fire proofing												
Dimensional variations													
Length and Width <small>(Prüfung nach EN 822:2013)</small>	Length: ± 2 % Width: ± 1.5 %												
Thickness <small>(Prüfung nach 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>	35 - 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>	0.041 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	
Specific thermal capacity c <small>According to EN 12667:2001</small>	2300 J/(kg•K)												
Water vapour diffusion resistance coefficient μ <small>climate condition 23-50/93 According to EN 12086:2013</small>	1 to 2												
Water absorption <small>EN 1609:2013, process A</small>	≤ 4.2 kg/m ²												
Sound insulation													
Length related flow resistance <small>EN 29053:1993</small>	3.0 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>						According to 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	0.45	0.70	0.85	0.90	0.95	0.7 (H)	C				
160	0.85	1.00	1.00	1.00	1.00	1.00	1.00	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>	0 <small>According to ISO 846:1997</small>												
Delivery form													
Thickness and standard dimensions	Mat thickness 30-220 mm:						Roll thickness 30-80 mm:						
	1200 x 625 mm						Length 6.0 – 10.0 m (depending on thickness)						
	1200 x 580 mm <small>(wooden construction measure)</small> 2400 x 1000 mm						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 %.												

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

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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
- 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 HEMP PREMIUM 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.

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