# Technical data sheet

Version: June 2023

## THERMO HEMP COMBI JUTE

The insulation made of hemp and jute fibres

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|---|---|
| Description | THERMO HEMP COMBI JUTE |
| **European Technical Approval** | **ETA-05/0037** |
| Reference number | 130701-041-01 |
| Components | 66 % hempfibers, 22% jutefibers, 8 % polymeric support fiber based on PET, 4 % soda |
| **Dimensional variations** | |
| Length and Width (according to EN 822:2013) | length: ± 2 %, width: ± 1,5 % |
| Thickness (according to EN 823:2013) | - 4 mm und + 10 mm / + 10 % (corresponds T3 according to EN 13171:2012, table 1) |
| Bulk Density (according EN 1602:2013) | ≥ 39kg/m³ |
| Tensile strength parallel to plate level (according to EN 1608:2013) | ≥ 30 kPa |
| **Energy saving and heat insulation** | |
| Thermal conductivity (according to EN 12667:2001) Declared thermal conductivity $\lambda_{D(23,50)}$ | 0,037 W/(m•K) |

| Thermal conductivity for calculations [W/(m•K)] | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0,038 | 0,038 | 0,037 | 0,037 | 0,037 | 0,037 | 0,037 | 0,037 | 0,037 | 0,037 | 0,037 | 0,038 |

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| Conversion factors for the moisture content (conversations by DIN EN ISO 10456:2007+AC:2009) | $F_{m1}$ (dry to 23 °C/50 %) = 1,00 |
| | $F_{m2}$ (23 °C/50 % to 23 °C/80 %) = 1,00 |
| Specific thermal capacity c (according to EN 12667:2001) | 2300 J/(kg•K) |
| Water vapor diffusion resistance number µ (according to EN 12086:2013) Climate condition 23-50/93 | 1 to 2 |
| Water absorption (according to EN 1609:1996, Verfahren A) | ≤ 4,2 kg/m² |
| **Soundproofing** | |
| Declared level of airflow resistance (according to EN 29053:1993) | 3,0 kPa•s/m2 |

| Sound absorption (according to EN ISO 354:2003 and EN ISO 11654:1997) | Nominal thickness [mm] | Practical levels of sound absorption $\alpha_P$ Evaluation after EN ISO 11654 | | | | | | Evaluation after EN ISO 11654 | |
|---|---|---|---|---|---|---|---|---|---|
| | | Octave center frequency [f/Hz] | | | | | | Rated sound absorption level $\alpha_W$ | Sound absorber 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 |

| | |
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| **Fire protection** | |
| Fire class (according to EN 13501-1) | E |
| Maximum operating temperature | 120 °C |
| **Hygiene, health and environmental protection** | |
| Resistance against mold (according to EAD, annex B) | Assessment level 0 (according to EN ISO 846:1997) |
| **Delivery form** | Mat goods |
| Thickness [mm] | 30 - 220 |

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| Standard dimensions | Timber construction:<br>Width [mm]: 580<br>Length [mm]: 1200 | Drywall construction:<br>Width [mm]: 625<br>Length [mm]: 1200 |
| Special dimensions | From 5 m³ of the same mats, we offer a custom-made width between 0,4 and 1,2 metres at no extra charge. | |

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### Description:

- Insulation with the European Technical Approval
- Construction biologically and ecologically certified
- Flexible mats, which are not resistant to compression
- made of durable, robust hemp fibres and recycled jutefibres
- Produced with thermo bonding process and 100 % eco electricity

### Characteristics:

- Best thermal insulation through 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 popular electric cutting tools with opposed serrated knives
- Suitable for DIY
- Humidity regulating due to its high moisture absorption capacity
- No nutrient base for rodents and insects

### Fields of application:

- Insulation between the rafters
- Insulation on the rafters and between supporting rafters
- Insulation under the rafters
- Insulation of wooden joists in ceilings
- Insulation of the internal and external walls in timer frame, and post and beam constructions
- Insulation of metal studded constructions or partitions
- Internal dry-lining insulation in the refurbishment of masonry / solid constructions
- Exterior insulation behind cladding

### General information:

- THERMO HEMP COMBI JUTE is to be stored and processed in dry conditions
- Store upright
- To ensure the installation is achieved without gaps (joints) please oversize the insulation with an extra 10 – 30 mm relative to the void to be insulated
- Ensure a suitable sealed vapour check is applied and that the construction is sealed air tightly immediately after the insulation is installed
- The specified properties and performance can only be assumed if the product is installed according to the processing guidelines of the manufacturer and is protected against precipitation, weathering an moisture in the installed state as well as during transport, storage and installations