Technical Data Sheet

Hemplith® Therm

Hemplith® Therm Insulation Boards

The insulation boards have very high water vapor diffusion resistance and excellent thermal and acoustic insulation properties. Thanks to these exceptional properties, they can completely replace polystyrene, glass, or rock wool insulation. Hemplith® Therm fits perfectly with the concept of sustainable building and offers builders an ecological solution without compromising on performance.

Hemplith® Therm are flexible and solid insulation boards made from technical hemp fibers, representing a new generation of sustainable building materials. These innovative insulation boards are characterized by their high density and remarkable ability to adapt to various building shapes. They are primarily used in thermal and sound insulating systems for walls and offer an environmentally friendly alternative to conventional insulating materials.

Thermal Insulation

Declared thermal conductivity λD of 0.040 W/m·K for optimal energy efficiency

Sound Absorption

Sound absorption coefficient αw of 1.00 – Class A according to EN ISO 11654

Moisture Regulation

Water vapor diffusion resistance $\mu \leq 2$ for an optimal indoor climate

Sustainability

85% hemp fibers, 15% binder fibers – ecological and future-oriented

Versatile Applications for Indoors and Outdoors

Hemplith® Therm insulation boards offer a wide range of application possibilities for both exterior and interior areas. Their flexibility and excellent technical properties make them the ideal choice for various construction projects – from facade insulation to interior insulation of floor ceilings.

Exterior

- Thermal and sound insulation of walls through exterior contact in timber or solid construction (ETICS)
- Thermal and sound insulation of cladding with exterior contact
- Insulation for flat roofs with mechanical fastening
- Insulation for flat roofs or attics

Interior

- Thermal and acoustic wall insulation on interior walls
- Insulation of floor ceilings and floors
- Insulation of suspended ceilings with mechanical anchoring

ETICS Systems

Perfect for external thermal insulation composite systems on exterior walls in timber and solid construction

Ceiling Insulation

Optimal solution for suspended ceilings and floor ceilings with mechanical anchoring

Flat Roofs

Reliable insulation for flat roofs and attics with mechanical fastening

Professional Installation – Step by Step

The correct professional installation of Hemplith® Therm insulation boards is crucial for the optimal performance of the insulation system. Follow these detailed instructions to achieve a permanently effective and standard-compliant result. From bonding to top coat plaster – each step is carefully coordinated.

01

Processing and Bonding

Use the bead-and-dab method with an approx. 6 cm wide adhesive strip along the edges and three palm-sized dabs of adhesive in the middle. Adjust the amount and height of the adhesive to the substrate's tolerances to ensure an adhesive contact area of at least 40%. Unevenness up to +/- 1 cm can be compensated in the adhesive mortar.

02

Installation of the Boards

Begin installation at the bottom and work your way up. The insulation boards should be tightly butted and firmly pressed into place. Ensure that the boards are aligned flush and plumb. Fill joints under 5 mm with hemp fiber wool and avoid joints larger than 5 mm.

03

Doweling

Always perform doweling regardless of the substrate, using suitable screw anchors. Observe the relevant standards and guidelines for doweling. Only use the "W" scheme for dowel arrangement.

04

Leveling Layer

Apply a leveling layer after doweling to create an even surface for the subsequent work steps.

05

Reinforcement

Integrate the reinforcement mesh so that it occupies one third of the total layer thickness and fully covers the reinforcement layer.

06

Priming

For textured plasters, apply a suitable primer coat beforehand. Priming is not required for non-textured plasters.

07

Top Coat Plaster

The application depends on the chosen structure of the top coat plaster. Ensure that the top coat plaster is suitable for the system used.

Important note: Adherence to all processing steps is crucial for the longevity and effectiveness of the insulation system. Always observe applicable standards and guidelines, as well as European Technical Assessment 24/0170.

Technical Specifications and Dimensions

Hemplith® Therm insulation boards are available in various thicknesses and meet the highest technical standards. The bulk density ranges between 85-115 kg/m³ and varies with the nominal thickness of the product. The composition consists of 85% hemp fibers, treated with fire-retardant soda, and 15% binder fibers (PES BiCo). With fire reaction class C-s2,d0 according to EN 13501-1:2018, the boards offer a high level of safety.

0.040

Thermal Conductivity

λD in W/m·K according to EN ISO 10456

85-115

Bulk Density

kg/m³ according to EN 1602

≥25

Compressive Stress

kPa at 10% deformation according to EN 826

≥100

Tensile Strength

kPa parallel to surfaces (longitudinal) according to EN 1608

Dimensions and Packaging

All boards typically have a length of 1,100 mm and a width of 600 mm. Thicknesses range from 30 mm to 160 mm, with boards from 100 mm thickness being supplied as composite boards (glued). The transport size of the pallets is uniformly 1,100 x 1,200 x 2,200 mm (width x length x height).

Thickness (mm)	Boards/Pallet	m² per Pallet	m³ per Pallet	Width Tolerance	Length Tolerance	Class
30	134	88.44	2.650	±1.5%	±2.0%	T3
40	106	69.96	2.798	±1.5%	±2.0%	T3
50	84	55.44	2.772	±1.5%	±2.0%	T3
60	70	46.20	2.772	±1.5%	±2.0%	T3
80	52	34.32	2.746	±1.5%	±2.0%	T3
100*	42	27.72	2.772	±1.5%	±2.0%	T3
120*	36	23.76	2.851	±1.5%	±2.0%	T3
140*	30	19.80	2.770	±1.5%	±2.0%	T3
160*	26	17.16	2.740	±1.5%	±2.0%	T3

** Composite boards (glued) | Geometric tolerances: Squareness ≤ 5 mm/m, Flatness ≤ 6 mm according to EN 824 and EN 825*

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