

THERMO-HEMP NATURAL INSULATION

Insulation made from the world's oldest cultivated natural fibre



Thermo-Hemp is made from hemp, the world's oldest cultivated plant. For ease of installation Thermo-Hemp is available in batt form, and in a range of thicknesses from 30mm to 240mm. It is completely biodegradable and 100% pollutant free.

With a thermal conductivity of only 0.038 W/m²K, Thermo-Hemp possesses outstanding thermal insulation properties making it one of the most effective insulations available on the market. Thermo-Hemp offers an ideal combination of thermal insulation, thermal mass and high density.

Thermo-Hemp has the ability to store heat, generated by solar radiation as it penetrates the structure of a building, and then releases it at a controlled rate. This leads to a much more comfortable internal living environment keeping the building warm in winter and cool in summer.

Thermo-Hemp also features outstanding fire resistance and sound absorption properties.



...insulate and feel well...

Description:

- Hemp is a natural raw material
- No chemical protection required during growth
- Extremely high thermal resistance
- It has an ability to absorb and release moisture without effecting thermal performance
- It has a high thermal mass
- Compatible with diffusion open construction
- It has effective acoustic properties
- Every cubic metre of Thermo-Hemp product absorbs 13kg of carbon from the atmosphere
- Outstanding fire protection
- It is not affected by mould growth or insect attack as the fibre does not contain proteins
- Lightweight - easy to handle, flexible and convenient to install
- Thermo-Hemp does not slump
- Does not cause irritation
- No chemical additives
- European Technical Approval
- Thermo-Hemp creates a natural, healthy living climate
- Nature Plus Quality Seal



Thickness	Length of Batt	Width of Batt	Batts per Pack	m ² per pack
40mm	1200	375	20	9.0
60mm	1200	375	12	5.4
80mm	1200	375	12	5.4
100mm	1200	375	8	3.6
140mm	1200	375	6	2.7

580mm width and alternative thicknesses available on request.

Loose hemp stuffing is available for installing in narrow gaps between window and door frames.

Thermo-Hemp can be installed between rafters, ceiling joists, floor joists, partitions and stud walls. It can also be applied between internal and external walls of timber frame structures.

Installation of Thermo-Hemp

Thermo-Hemp is non-toxic and non-irritant to eyes and skin. A small amount of dust and hemp fibres may be released when installing natural Hemp insulation. Therefore we recommend a dust mask should be worn during the installation process. When installing Thermo-Hemp over head, protective goggles may also be required.

When laying Thermo-Hemp

In attics where the insulation is installed between joists ensure ventilation openings at the eaves of the roof are not covered. Any electrical cables running across the joists should be maintained above the Thermo-Hemp. The area under storage tanks should not be insulated. The tank itself may be insulated with Thermo-Hemp.

Cutting Thermo-Hemp

Small Quantities

Thermo-Hemp can be cut to size with simple cutting tools (e.g. a long blade with a wave-like serration provides the best results). A hemp knife is available upon request from Ecological Building Systems.

Large Quantities

For this purpose an electric-handsaw with a wave-like serration blade will give you the best results. (Bosch GFZ 16-35 AC).



Technical Data:

European Technical Approval -
ETA-05/0037

Components - 82–85% hemp fibres,
10–15% bi-component fibres, 3–5% sodium
bicarbonate

Bulk Density - Appr. 30–42 kg/m³

Thermal Conductivity - 0.038 W/(m·K)

Specific Thermal Capacity c - 2300 J/(kg·K)

Water Vapour Diffusion Resistance

Coefficient μ - 1-2

Length related Flow Resistance - 6.0 kPa·s/m²

Construction Material Class (Fire class) -
Euro Class E

Max. Processing Temperature - 120°C

Sensitivity to Mould Fungus
(according to EN ISO 846) - No mould
fungus growth identifiable

Manufactured in Germany



ecological

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