



INTERNATIONAL HEMP BUILDING ASSOCIATION



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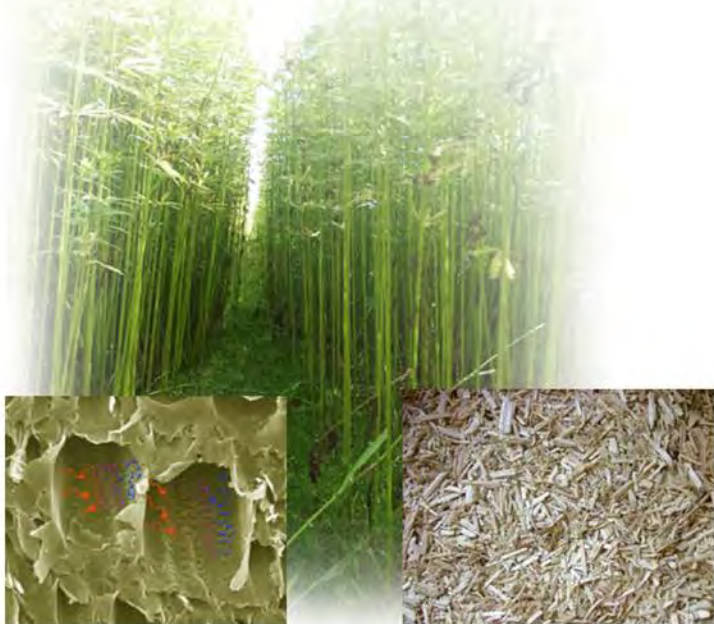
Hemp Materials

Picture credits: hempbuilding.com

CORE PARTICLES

Hurds/Shivs

The lightweight cellulose core of the Hemp stalk is broken into small particles called hurds, during the mechanical separation from the fibres. These particles are very absorbent and transfer water vapour quickly.



FIBRES

The fibres from the skin of the Hemp stalk are long, strong and hollow making them suitable for insulation materials, reinforcement and sealing compression joints.



Hemp Building Materials

HEMPCRETE



Hempcrete is made by mixing Hemp hurds with a binder made with Lime, Clay and other materials depending on the performance required and local availability.



Natural Lime Binder
by Equilibrium Italy

The resulting material can be incorporated into structural envelops.



Sprayed Hempcrete
by hempbuilding.com

HEMP FIBRE INSULATION



Hemp fibres are ideal as a replacement for mineral fibres as they handle moisture more efficiently and do not compress over time. They also do not cause dangerous fibres to enter the atmosphere during installation or during the life time of the building.



Hemp Fibre insulation
by Technichanvre



Loose Hemp Fibre insulation
Hampvaruhuset Sweden



Hemp Building Systems

Hempcrete Applications

Casting

Hempcrete can be cast manually around a timber framework providing insulation, and heat storage qualities to the resulting living space. This 'low tech' approach can be utilised in every region of the world with minimal training and simple tools.



Cast external cladding Arbio Switzerland



Sprayed

The sprayed application of Hempcrete reduces installation times and lowers water content making it more acceptable to the modern construction industry.



Sprayed Hempcrete system Equilibrium Italy

Blocks

Hempcrete blocks can be laid in the same manner as masonry blocks or bricks currently used in building but also provide insulation and moisture management to the structure.



Cannabric, Spain



Equilibrium, Italy

Panels

Prefabricated panels combining Hempcrete and Hemp fibre insulation produce a quick system fabricated off site which provides a fast system of creating a building envelope to the domestic and industrial sectors.



Hemp panels Ian Pritchett UK



Hempcrete panel house Arbio Switzerland



Hemp Building Systems Structural Examples

Timber Frame Structures

When applied surrounding a timber framework, Hempcrete provides added strength to the structure and can even be used in earthquake prone regions where the flexibility gives resistance to the damaging movement preventing collapse. Bamboo can also be used as a structural frame making it suitable for deforested regions.



Maison d'Adam France © Hempbuilding.com



Earthquake proof frame Oliver Zachatti Italy



Bamboo frame Wolf Jordan & Co, Belgium

Steel & Concrete Frame Structures

Large-scale buildings using concrete or steel as the main structural support can be made comfortable with Hempcrete walls, floors and roofs. Internal and external walls can be installed to create units with excellent thermal and acoustic properties.



Steel frame Equilibrium Italy



M&S Shopping Centre Cheshire Oaks UK



Case di Luca, Pedone Working Biscegli Italy



Hemp Building Impacts

Energy

The use of hempcrete provides a very low carbon footprint for the building as it is carbon negative as a material and reduces the energy needed to either heat or cool the interior.



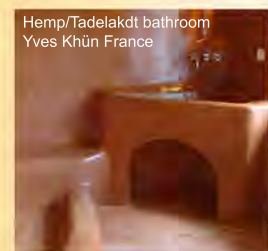
Fire

Hempcrete becomes more fire resistant as it ages and will not produce flames or emit noxious gases if burnt



Health

The manner in which hempcrete manages moisture vapour avoids any problems with 'sick building syndrome' caused by fungus spores, whilst maintaining a healthy level of humidity in the building.



CO₂

Hemp absorbs up to 2 tonnes of CO₂ per tonne of dry material harvested, making it a good sequester of carbon. When this figure is combined with the savings of energy when occupying the building it makes hempcrete an obvious choice for the future.



IHBA Membership Benefits

Membership of the IHBA provides access to our database which includes presentations from previous Symposiums and our *Best Practice Guide*.



Open source Ecology ?

- P
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Business membership provides links and promotion for your business via our website.





IHBA

Support our work promoting the use of Hemp
in Construction around the world

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