

ecoHAB® - Panels from Hemp and Flax
A bio-based, cost-efficient building material for the future

Munich, October 2022

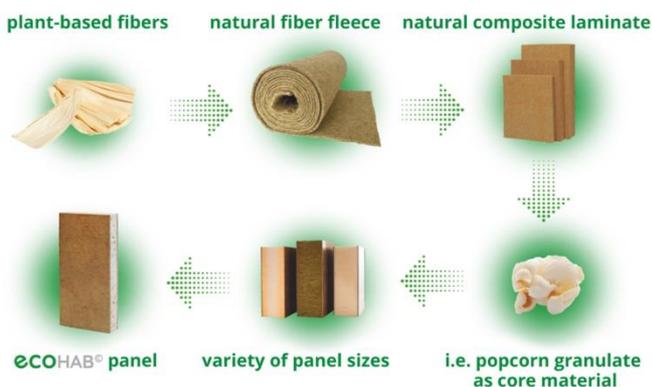
The mission of the start-up SMARTER HABITAT, founded in 2019, is clear: To bring a product onto the market that will make construction more environmentally friendly, easier and cheaper in the future, thus contributing to affordable living space all over the world. After years of research and development, ecoHAB®, a “green” lightweight panel made from plant materials and agricultural waste can be produced regionally in large quantities in a cost-effective and energy-saving manner for quick and easy installation on site. SMARTER HABITAT will license the production know-how worldwide.

Supported by a network of experts from science, technology and industry, with ecoHAB® SMARTER HABITAT has developed a building material, which, as a bio-based alternative will not only revolutionize the construction industry in the future, but will also accelerate the paradigm shift towards responsible CO₂-neutral construction.

Material technology "Made in Germany"

The sandwich panels consist of two basic components: Natural fiber laminates as outer layer and a core material made of expanded (popped) corn granules. They can be manufactured in a wide variety of dimensions and thicknesses. Natural Composite Laminates (NCL) consist of natural materials such as hemp, flax, sisal and other long-fibers -partially even agricultural waste, which are processed into a fleece felt and pressed with special resin under high pressure.

Process from Natural Fibres to ecoHAB® Panels



ecoHAB® lightweight panels – versatile, natural and easy to install

The innovative laminates were developed in cooperation with the renowned Fraunhofer IMWS, Institute for Microstructure of Materials and Systems and C3 Technologies GmbH, - forming the foundation for material- and process engineering for industrial manufacturing.

Simultaneously, the Faculty of Forest Sciences and Forest Ecology at the University of Göttingen, headed by Prof. Dr. Alireza Kharazipour has developed a popcorn granulate as a composite material for the panel cores, an ecological replacement for the PU foam previously used for panels.

SMARTER HABITAT now sees an excellent opportunity to replace energy-intensive products made of cement, gypsum or hydrocarbon-based materials, as used in the construction industry today, with a cost-efficient, almost 100% natural product. For commercial use of this unique core material in ecoHAB® panels, SMARTER HABITAT has concluded an exclusive worldwide license agreement with the University of Göttingen.

ecoHAB® Advantages at a glance



→ Universally applicable

- Load-bearing for outer walls, foundations roofs and ceilings
- Non-load-bearing applications such as partition walls and dry walls
- Decorative applications such as claddings, kitchens and sanitary applications
- Applications within shops, expositions, caravs and tiny houses
- Suitable for any kind of surface treatment.

→ Environmentally friendly

- Circular construction material from agricultural plants and surplus waste
- No water- and energy-intensive application of sand, cement and steel
- Environmentally friendly production form natural local resources
- Optimum heat insulation and noise suppressive properties
- Durable as resistant to water, fire, fungus and vermins.

→ Integrated added value

- Cheap building material
- Reduced energy costs
- Reduced costs of installation, transport and logistics
- Simple light weight construction through faster and more efficient construction methods
- Improved working conditions through reduced load from dust and noise
- High load bearing properties and outstanding stability
- Consistent quality and scalability through industrial production.

→ Affordable living space

- Promotion of a modern and environmentally friendly social-humanitarian living architecture
- Global implementation through local production
- Utilization of regional and local available raw materials
- Creating local jobs in the building industry
- Significant improvement of living conditions for millions of people threatened by housing shortage.

In contrast to conventional building materials, the innovative lightweight panels have an outstanding balance in terms of raw material, material and production efficiency. In addition to the excellent physical properties, they embody a holistic sustainability claim like hardly any other building material thanks to their reusable, recyclable and compostable properties. Overall, the ecoHAB® composite panels meet 8 of the 17 sustainability goals set by the United Nations and have the potential to fundamentally change construction as a whole in the future.



PRESS RELEASE

A win-win situation

The company creates the conditions for rapid market development through two business areas: In 2023, the foundation stone for the production and sale of the **ecoHAB**[®] panels in the German and European market will be laid in the SMARTER HABITAT pilot factory in Ramstein, Rhineland-Palatinate. At the same time, it becomes the headquarters for research and development, technical service and serves as a training center for national and international licensees and users. At the same time, the SMARTER HABITAT license company issues master licenses to strong-selling construction companies in the franchise model. These include not only the **ecoHAB**[®] technology, but also certified, highly automated, turnkey production lines, i.e. the entire know-how for the manufacture and marketing of all products. In return, the licensees contractually undertake to meet the capacity requirements for the agreed sales volume in their market on the one hand and to commit to the value-based corporate philosophy laid down in the "SMARTER HABITAT Code of Ethical Conduct" on the other.

Now, in order to move from the project planning phase to large scale production, the company is raising capital for its ongoing investments, e.g. in production facilities. Highly interesting options for impact investors are direct investments as limited partners or via subordinated loans. In addition, there is the opportunity for small investors and social-humanitarian oriented people to get involved through crowdfunding approved by the German banking regulatory authority BaFin.

Everyone is invited who wants to take part in the good cause and who, in view of the climate catastrophes that have been increasing in recent years, would like to contribute to a general change of course in the highly pollutant construction industry.

Further Information

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