Hempcrete Australia Product & Service Information

Hempcrete Australia is the only supplier of BCA CERTIFIED hempcrete products and installation methods.

What is hempcrete?
The hempcrete building material is comprised of the woody core of the industrial hemp plant, also known as hemp wood, or core and lime-based binders. The lime portion of the mix acts as a biocide, which makes hempcrete buildings naturally pest and mould resistant.

What is hemp?
Hemp, or industrial hemp is the common name used for the 0% THC varieties of Cannabis sativa. The hemp plant grows quickly and is one of the highest yielding biomass plants known. Hemp can grow without pesticide or agrochemical inputs, and sequesters large amounts of carbon dioxide (CO₂) during the growing cycle.

One ton of harvested hemp absorbs 2 ton of CO₂.

One Hectare (2.5 acres) of hemp is sufficient to build a standard house. Grows up to 4m high in 14 weeks.
60% of the plant is used for building.

Why build with hempcrete?

**Breathability:** The hempcrete structure allows the transfer of moisture through the walls, which avoids condensation build-up. This means that the humidity and air quality inside the building are controlled.

**Lower energy costs:** Hempcrete buildings have excellent insulation properties R3.6 when built to a minimum thickness of the recommended 250 mm. The solid infill (monolithic) construction of hempcrete buildings means that air leakage is reduced and buildings stay warm in cold weather or cool in warm weather without a constant input of energy to achieve this.

A year long energy saving of 50-70% can be reached.

**Cyclone Resistant:** Hempcrete is more flexible than concrete. To an extent the hempcrete wall will flex back, when concrete would crack. This makes it more suitable for earthquake or cyclone prone areas.
Commercial: Companies like Adnams Brewery and the Wine Society in the UK, both of which had their commercial premises in the UK constructed using hemp, have seen a large reduction in their energy bills. Adnams Brewery also saved money through not installing air conditioning at the start of the project, and have since gone on to save over £60,000 per year in heating and cooling costs.

Carbon sequestration: During the growing cycle hemp sequesters large amounts of CO$_2$. 1M$^3$ of hempcrete locks in 150Kg of CO$_2$. That is about 5.4T of CO$_2$ for a house. While the manufacture of the lime binder does release CO$_2$ into the atmosphere, the net result is that hempcrete removes more CO$_2$ out of the atmosphere than it puts into it making it a carbon-negative material. Hempcrete complies to the ISO standard 14001

Fire resistant: The lime in the binder makes hempcrete fire resistant. Hempcrete is non-combustible and has a fire rating of 60/60/60 which complies to all BAL ratings.

Pest, mould & mildew resistant: The lime portion of the mix acts as a biocide, which makes hempcrete buildings naturally pest, mould and mildew resistant. In addition, hempcrete buildings provide an optimum humidity range in which mould and fungi do not grow.

What is the building process?
The hempcrete building process is based on the construction of a timber frame, to provide the load-bearing structure. The hempcrete is cast around this frame-work by lightly tamping the material into place between shuttering boards. Once that stage is complete the formwork can be removed, after drying the walls rendered and painted with natural and breathable paints. Hempcrete can also be used as insulation in floor and roof cavities.

Which lime binder is best?
We work with Insulime - a lime-based binder which was developed and extensively tested by one of the oldest Lime manufacturers in France - St. Astier. This binder has been Certified to BCA standards.

About Hempcrete Australia
Hempcrete Australia will help you successfully navigate your hemp building project in the following ways:

- Providing the technical expertise to build with hempcrete, through working closely with owners, builders and designers to guarantee the hempcrete is installed professionally and applies to Australian standards
- Directing you to trained installers around you area
- Training builders, owner builders and carpenters to become approved installers who work according to the BCA with our CERTIFIED method and products
- Supplying the hemp wood - INSULCORE and INSULIME - our lime binder
- Supplying equipment and recyclable formwork for purchase or hire

This and further information is available on our website in downloads.