

ADDENDUM

Hemporium

Founded in 1996, Hemporium is a South African hemp company dedicated to educating people about industrial hemp's potential through the use of innovative products while creating an awareness of all that hemp has to offer.

- Duncan Parker is a founding partner and CEO
- Philippa Mohr is the Managing Director
- Tony Budden is a founding partner and Director.

Hemp's potential goes way beyond the products we are currently producing, and our retail outlet showcases many of the other uses such as paper, building materials, carpets, fabric and even plastic.

Hemporium also constructed Africa's first Hemp Home which was selected as a World Design Capital 2014 project, and featured on Top Billing, South Africa's premier lifestyle TV show.

Hemporium has been instrumental in the construction of 5 more hemp buildings since then and continues to push the potential of this revolutionary construction material.

Eco-friendly hemp

- Hemp does not require many pesticides or fertilizers when it grows.
- This means less pollution and less harsh or harmful chemicals ending up in our soil, air and water supply.
- Hemp cultivation can even detoxify soil of contaminants via its extensive root system. Compared to products made from synthetic materials like plastics, hemp products can be biodegradable.
- Rather than clogging landfills or polluting oceans, hemp products could return gently to the Earth.

At Hemporium we believe that no other resource can provide solutions to so many of our problems at so little cost to our planet.

Afrimat Hemp and the benefits of building with hempcrete

▪ **Hempcrete blocks**

The hempcrete block is a non-load bearing, insulating masonry product that consists mainly of hemp shiv and a formulated lime mix. The hemp shiv comes from the core part of the cannabis plant.

▪ **Carbon sequestration**

The hemp plant is one of the fastest-growing plants on Earth and can reach maturity in 3-4 months. This aggregate in hempcrete absorbs so much carbon during its rapid growth that, even after the energy used in the production of the lime binder, more CO₂ is locked up in a

hempcrete wall than is used to build it. In other words, hempcrete could have negative net carbon emissions.

According to studies done in Europe, up to 325 kg of CO₂ is stored in one ton of dried hemp. Studies also show that hempcrete products could sequester 110 kg of CO₂ for every cubic meter of material, including the carbon emissions from producing the lime binder.

■ **Carbon negative**

- Hempcrete is carbon negative and the obvious choice for buildings aiming to achieve a low carbon footprint and the highest sustainable building code levels.
- Hempcrete regulates the temperature and humidity of a building; in some cases, it eliminates the need for heating and cooling systems, resulting in substantial energy savings.

■ **Benefits of using a lime binder**

- Using a lime binder is an advantage of hempcrete over other plant-fibre materials and conventional insulation types.
- Lime has a high pH and is inherently antimicrobial and antifungal. The lime coating around each piece of hemp hurd in the mix creates a surface that resists mould development even when the humidity and temperature conditions cause mould to occur on other insulation materials.
- This resilience in the presence of humidity or even liquid moisture makes hempcrete unique among insulation materials and a desirable choice in both cold and hot climates and anywhere where humidity levels are high.

■ **Breathability**

- Natural breathability is another benefit of hempcrete.
- This quality is ideal for use in heritage buildings and modern buildings using raw materials.
- Breathable buildings bring benefits to the health and comfort of the occupants.
- Hempcrete is a nontoxic building material with thermal insulation qualities, breathability properties and good thermal mass above regulation standards, leading to 50% to 80% energy savings compared with conventional building materials.