INSTALLATION GUIDE

MEDITERRI™ HEMP L I M E

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1. Definition and Description – What is Hemp-Lime?

The future construction material is a symbiotic relationship between the oldest plant farmed by humans (hemp) and one of the oldest and most tried-and-tested building materials (natural lime).

Hemp is a plant that grows approximately 50 times quicker than wood; biomass sufficient for a modest single-family home may be grown on one hectare of land in five months.

The combination of loose hemp shives with natural limestone and minerals results in a material that is as hard as stone and resistant to external effects, implying that structures will last for many generations, saving both the environment and money.

Because of its excellent thermal qualities, additional insulation such as polystyrene is unnecessary. Hemp-lime possesses air filtration and moisture regulation capabilities comparable to clay, guaranteeing a healthy living environment and clean air.

The cycle actively saves the environment by absorbing more CO2 than it emits.

2. How to mix hemp-lime?

The information provided here is not intended as an application manual, they are only introductory information.

Innovative Buildings:

Hemp can also be used as a natural building material. You mix the hemp shives with magnesite-containing limes (hydrated lime). The mixture is tilted into formwork and solidified on the outer sides by light stomping. The formwork can be stripped after about 15 minutes or be switched to the next height. Formwork panels are used as formwork.

There are two main materials that are used to mix into hemp-lime (hemp shives and hydrated lime, besides those two main materials we also add minerals) Hemp shives are the basic material, and lime is the binder!

The application of hemp concrete on site must comply with professional regulations.

What recipe should you use?

The approach and execution on the construction site, as well as the local circumstances and regionality, should all be considered when selecting a recipe. The foundation for effective planning is detailed information.

Process:

The binder must be set or carbonized, among other things. The component is permitted to rest throughout the hardening process. It should also be mentioned that hemp-lime requires an appropriate w/c ratio, which means enough water. After hardening, this must be dried again (setting). Specifically, the required drying time is critical for the subsequent course of the construction process.

How much water?

The w/c ratio is critical. Since hemp shives absorb a lot of water, a lot of water must be added to make the water available to the lime. If there is insufficient water, the lime will burn out and fail to bind.

Mixing Ratio:

We recommend that you consult a professional when it comes to optimal mixture ratio as there are many factors that are crucial.

There are no complications and outstanding outcomes when the material is treated professionally. Consultation and a methodical approach are required.

Stomping is quite affordable if builders provide a significant amount of work time.

This is a basic inexperienced user guide value:

200 L of hemp shives, this is approximately 20 kg (1 bale) + 25 kg of hydrated lime (white hydrated lime) + 3 kg of minerals (mixture of special pozzolans and other earth clays, 100%nature) + 40 L of water. **5 mixtures like this = 1 m3 of hemp lime.**

3. Practical Examples

WALL

Hemp Shives: 100 l

Hydrated lime: 25 kg

Water: 24 l (stirrer), 30 l (concrete mixer)

Consumption: 1150 - 1300 l hemp shives
280 - 310 kg lime

Density: 450 to 550 kg /m³ depending on compression
Compressive strength: > 0,2 Mpa
Thermal conductivity: 0,07 W*m-1K-1 at 0% relative humidity

FLOOR

Hemp shives: 100 l
Hydrated lime: 30 kg
Water: 25 lt (stirrer) - 27 lt (concrete mixer)

Material requisition for 1 m³ depending on compression:
1100 to 1200 l hemp shives
330 - 350 kg lime

Walkable after 1 day
Minimum thickness: 10 cm
The room must be well ventilated
Temperatures: min. 5 ° - max. 30 ° C

Density: 500 - 600 kg / m³ - depending on compression
Compressive strength: > 0,3 Mpa
Thermal conductivity: 0,07 W*m-1J1 at 0% relative humidity.

ROOF INSULATION

Hemp shives: 200 l
Hydrated lime: 25 kg
Water: 44 l

Consumption for 1 m³ depending on compression:
1000 to 1100 l hemp shives

110 to 150 kg lime

Density: 280 to 320 kg / m³, depending on compression
Compressive strength > 0,05 Mpa
Thermal conductivity: 0,05 W*m-1K-1 at 0 % relative humidity