

deGruchy's

LIME



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Makers of



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Ecologic™ HempCrete Binder Platinum

Ecologic™ HempCrete Binder Platinum, is a 100% made in America, specially formulated lime binder that is mixed with Industrial hemp hurds to make hempcrete. Hempcrete is a non-structural insulation material. Ecologic™ HempCrete Binder Platinum is vapor permeable and contains NO Portland cement. The product combines the sustainable properties of lime with the renew-ability and thermal properties of hemp hurd to create the ultimate green building material.

Benefits

Hempcrete has an R-Value of about 2.4 per inch, depending on compaction, and has unique and beneficial thermal mass properties. A minimum wall thickness of 9 inches is recommended. Ecologic™ HempCrete Binder Platinum, can filter the air, is VOC free, is ideal for people with chemical sensitivities, self regulates humidity/condensation, is fire/mold/insect resistant and is immune to the Alkali-Silica reaction due to sulfates and salts. Hempcrete can potentially save up to 60% of your heating and cooling bill. Ecologic™ HempCrete Binder Platinum has a negative carbon footprint due to the large amount of carbon sequestered while the hemp hurd is growing. Hempcrete can pass all Passive House requirements and tests when installed properly.

Mixing

Mix Ecologic™ Hempcrete Binder with 11 gallons of water for 3-5 minutes to obtain a milky paste with no lumps. Add in 14-15 kg of Hemp hurd, loosened, and mix for 3-5 minutes to obtain the required mix adding up to 1 more gallon of water. The completed mix should be able to compact to a ball.

General Application

(Floors/ceilings can have various configurations-call for recommendations)

Timber-Framed Walls with vertical spacing of timbers over 24" apart: Attach 2x2 wooden battens horizontally at the middle of each bay with a spacing of 2' on center between battens. The first batten should be placed one foot above the base of the wall. This will create a ladder-like support structure in the interior bay of the hempcrete wall. Construct shutters no more than 3 feet high, allowing for the required thickness of the final stucco/plaster between the timbers (1/2 -7/8 inch) by keeping shuttering between where timbers will show to receive the material to a flush surface. Place the hempcrete inside the shuttering in layers of 6 inches and compact down to approximately 4 inches before adding the next layer of hempcrete. Once the first level is completed, using a sliding motion, remove the shutters exposing the newly placed hempcrete wall. Re-set the shutters to the next level up. Place the bottom of the shutter 6 inches below the previously tamped hempcrete before adding more hempcrete.

Traditionally framed studded walls 16-24" o.c.: Construct shutters no more than 3 feet high allowing for the required thickness of the final stucco/plaster (1/2 -7/8 inch) following same instructions as above. Studs should be totally encased by the hempcrete with a minimum thickness of 2.75 inches depending on size of lumber used. Place the hempcrete in layers of 6 inches and compact down to 4 inches as for Timber-Framed Walls. Pipes, plugs, electrical conduit, etc. should be positioned previously or as the work progresses. Lime Render (Stucco) should have movement joints installed every 144 sf. to meet codes.

Once a moisture content of 15%-20% is reached, the interior side of the wall can be coated with a breathable lime plaster. On the outside, a breathable lime render (stucco) can be applied directly over the hempcrete without the need for lath or weather

proofing membranes of any kind. The use of breathable materials to coat, or top, the hempcrete is imperative to the functionality of the product. It will in fact aid the wall system to self-regulate the interior humidity/condensation levels by drawing the moisture out of the air. This results in a more comfortable interior environment.

Hempcrete is not recommended for below grade applications. It must not be persistently wet and a horizontal vapor barrier is recommended on top of the structural foundation, about 18-24 inches above the exterior grade.

Environmental Requirements

Materials must be stored and handled to protect them from damage and moisture in accordance with Manufacturer's instructions. It is recommended to take precautionary measures necessary to assure that excessive temperature changes do not occur. Do not apply Ecologic™ Hempcrete Binder Platinum unless minimum ambient temperature of 40°F (4°C) and a maximum of 85°F (29°C) continues to be maintained for a minimum of 24 hours prior to the application and until Ecologic™ Hempcrete Binder Platinum has cured for 72 hours at this temperature range. No heavy rain should occur during application and curing time. During hot weather protect from an uneven and excessive evaporation during the dry, hot weather. It is suggested to provide a humidifier in the room during curing.

Technical Data

Working time:

6 hours

Cure time:

Shuttering can be removed as soon as tamped. Lime Plaster/Render should be applied after the wall reaches a moisture content of 15%-20% waiting two weeks as a minimum.

Average coverage:

4.5 cu ft per 15 kg bag of hemp and one bag of Hempcrete Binder

Shelf life:

24 months if kept sealed and away from moisture.

Safety:

Wear adequate protective clothing to avoid

prolonged contact with the mortar. To avoid dust contact with eyes and possible inhalation wear glasses and the appropriate dust mask especially in areas not properly ventilated.

Disposal:

Sweep and place bulk material in containers and properly remove for disposal. The final, cured product is not hazardous. Dispose of in a landfill in accordance with all local, state and federal regulations.

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