

deGruchy's

LIME



WORKS.us

Makers of



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Ecologic™ HempCrete Binder Platinum

Ecologic™ HempCrete Binder Platinum is made in America. It is a specially formulated lime binder that when mixed with the appropriate industrial hemp hurds which are clean, dust and mold-free, when they are blended together makes a superior hempcrete insulation. Hempcrete is a non-structural insulation material. Ecologic™ HempCrete Binder Platinum contains NO Portland cement, mineral “clinker” or Natural Cement needed to make it work. Ecologic™ HempCrete Binder Platinum is vapor permeable and combines the sustainable properties of lime with the CO2 sequestering and thermal properties of industrial hemp to create the ultimate natural building insulation.

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. Hempcrete filters air exchanges and self regulates humidity/condensation in fully breathable wall systems where it is installed. Ecologic™ HempCrete Binder Platinum is VOC free and ideal for people with chemical sensitivities. Hempcrete made with Ecologic™ HempCrete Binder Platinum is fire/mold/insect resistant and it is immune to Alkali-Silica reactions from exposure to sulfates and salts. Hempcrete can potentially save up to 60% of your heating and cooling bill when used to create a super-insulated system as opposed to minimum insulation requirements. Hempcrete made with Ecologic™ HempCrete Binder Platinum can pass all Passive House requirements and tests when installed properly.

Mixing:

Mix one 50 lb bag of Ecologic™ Hempcrete Binder with 11 gallons of water in a 6-9 cu. ft. concrete mixer for 3-5 minutes to obtain a milky paste with no lumps. Add in 15 kg of Hemp hurds, loosened, and

mix all ingredients for an additional 3-5 minutes to obtain the required consistency. Add up to 1 more gallon of water as needed. The completed mix should be able to compact to a ball and retain its shape when observed open-handed.

General Application:

Floor and ceiling installations have suggested mix variations as well as spray-applied applications using special equipment- Inquire for Tech help.

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 external lime render (stucco) and interior lime 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 lime 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 the 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 be installed on the exterior to the current Uniform Building Code requirements regarding thickness and the incorporating of all control joints and flashing details.

Once a moisture content of 15%-20% is reached, the interior side of the wall can be coated with a breathable lime plaster or it can remain in its natural state. Sheltering the Hempcrete on the outside is recommended by using a breathable lime render (stucco) that is applied directly over the hempcrete. This can be done without the need for lath or weather proofing membranes of any kind. It is advisable to use Ecologic™ Plaster TAKCOAT Platinum as the first base coat, also known as the “pricking up coat”, for both interior and exterior applications to ensure a good bond and transition to a lime sheltering system. Follow through with one or more coats of Ecologic™ Plaster TOPCOAT Platinum for the brown “leveling” coat if a thicker lime stucco/plaster is needed and/or just as the final finish coat if a thinner result is the goal. The use of breathable materials to plaster interiors and shelter hempcrete on the exterior is imperative. The result of a fully breathable wall system is a more comfortable interior environment.

Hempcrete is not recommended for below grade applications. It must not be persistently wet. Properly set Geotextile membranes are recommended to be installed on top of a well graded matrix of compacted crushed stone for underlayment to floors set 18-24” above exterior grade which will receive tile.

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 these conditions.

Technical Data:

Working time: 6-8 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 three weeks as a minimum.

Average coverage:

4.5 cu ft per 15 kg bag of hemp and one 50 lb bag of Ecologic™ HempCrete Binder Platinum

Shelf life:

Materials must be stored and handled to protect them from damage and moisture in accordance with Manufacturer’s instructions. Shelf life is 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 dusk 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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