CaNaDry® is Exie's patented biocomposite consisting of a mixture of hemp shives and lime. The product can be used as insulation for interior walls, roofs, ceilings, facades, floors, and attic floors, and can be applied in restoration, renovation, and new construction.

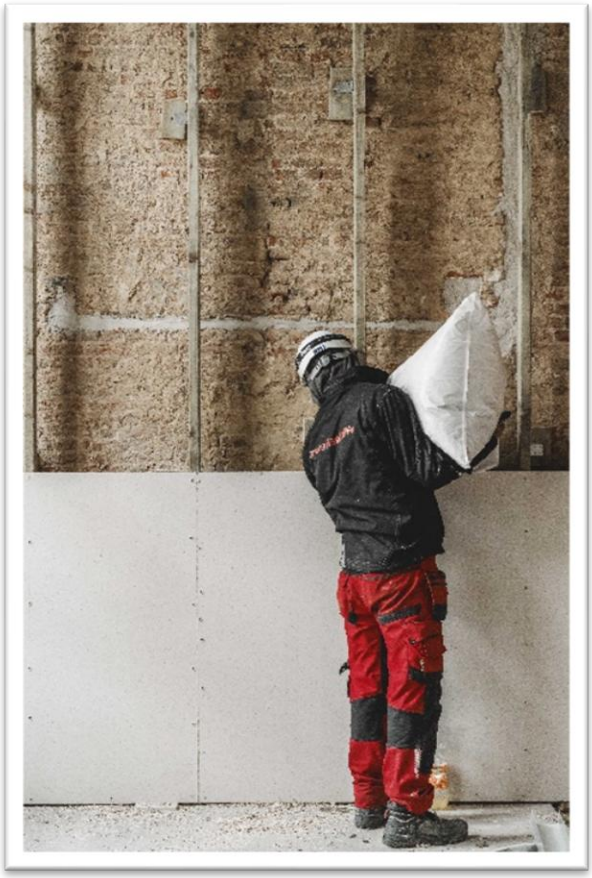
Exie developed CaNaDry® to address the labor- and time-intensive nature of traditional hemp-lime. This dry hemp-lime mix offers builders the advantage of fast and easy installation. After pouring CaNaDry into its formwork, the building can be finished immediately.

Product performance	
Density DIN EN 1602, 2013-05	175 kg/m³ ± 2,5%
Thermal conductivity: λd EN 12667:2001	0,054 W/mK
Thermal conductivity: λui EN 12667:2001	0,06 W/mK
Phase shift	16 hours (24 cm)
Vapor diffusion resistance μ DIN EN ISO 12572, 2017-05	1.6
Heat storage capacity C	2300 J/(kg.K
Reaction to fire class EN 13501-1:2018	B1,s1,do
Acoustic attenuation index Rw EN ISO 10140-2:2010 + EN ISO 717-1:2013	46 (-2;-8) dB[1]

[1] Partition wall consisting of 20 cm CaNaDry, finished with 2 x 10 mm gypsum fibreboard.

RULES OF THUMB

- CaNaDry must not be used to remediate moisture problems. If rising damp is present in walls or at the foundation below ground level, contact with CaNaDry must be avoided. Provide a waterproof membrane running vertically along the walls or foundation base.
- Avoid contact with steel, even galvanized steel. Protect metal parts with suitable mats.
- Vapor permeability of the hemp-lime wall must always be guaranteed: use insulating wood fiber boards, reed or bamboo mats, or fermacell boards (12.5mm) as permanent formwork.
- CaNaDry can be finished immediately after installation.



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WALL CONSTRUCTION – RENOVATION /INTERIOR INSULATION

Formwork

CaNaDry is poured on site into fixed formwork. A wooden frame must therefore be provided in front of the existing wall. It is useful to take into account the exact placement of windows, kitchens, and sinks already in the design phase, so the placement of the wooden studs can be adapted accordingly.

Key guidelines:

- Build the base of a hemp-lime wall so that the material remains dry, e.g., by placing the frame on foundation blocks and providing a moisture-resistant membrane at the bottom of the frame. Do not place the frame directly against the wall; leave space to prevent moisture from entering the wood structure.
- Wood type: use class 3. For base elements, class 4 is sometimes recommended due to higher risk of stagnant water at the base of a wall. Standard SLS (38x89mm) can be used if the wall is not higher than 3 m. For larger spans, heavier SLS is recommended.
- Place SLS at max. 60 cm c/c and provide at least 2 wall fixings per SLS for every 2.6 m height.
- Avoid crossbeams in the structure as much as possible: they hinder pouring of CaNaDry. If stiffening boards are used, extra reinforcement is not necessary. If finishing with reed mats or wood fiber boards, reinforce the structure with metal straps.
- The wood moisture content at the time of application and/or finishing must not exceed 17 ±2%
- Vapor permeability must always be guaranteed: use insulating wood fiber boards, ESB, fermacell boards (12.5mm), or mats of reed/bamboo (contact Exie before use with mats).
- Plastering as a finish for the boards: airtight and vapour-permeable.
- Good airtightness, generally installed on the warm side of the insulation, ensures that the transport of air through the structure as a result of temperature or pressure differences is limited. Warm air therefore remains inside and warm, humid indoor air cannot penetrate the structure to cool down and condense there. The wind barrier, on the outside of the insulation, ensures that the wind cannot blow through the insulation.

Processing

Install the techniques in the wood frame.

Attach the first row of panels to the wood frame. Pour the loose hemp-lime mixture into the space in layers of 10 to 20 cm at a time. Fill the space as you raise the panels to ensure even filling.

Pay extra attention to filling the space around pipes; otherwise, they may obstruct the flow of the loose insulation material. It is recommended to tap the panels and lightly compact the material after pouring to ensure it is distributed correctly.

In hard-to-reach areas, the CaNaDry can be lightly moistened to form a malleable mass. If necessary, hard-to-reach areas or the junction with the ceiling can be filled with vapor-permeable, flexible insulation mats. Ensure that the flexible insulation is firmly compressed during installation so that it can expand and fill all voids.

After pouring the CaNaDry into its formwork, the building can be finished immediately.

Storage

CaNaDry® must be kept dry and can be installed up to 12 months after production.

Safety and precautions

The lime content may cause respiratory irritation, skin irritation, and eye damage.

- Ensure adequate ventilation during installation.
- Always wear gloves, eye, and face protection during application.
- Wear long-sleeved clothing and trousers.
- Avoid eye contact. In case of contact, rinse immediately with plenty of water and seek medical advice.
- Keep out of reach of children.