

**Changing the World
naturally**



HEMPIRE

Solution

Carbon Negative Hemp Insulation



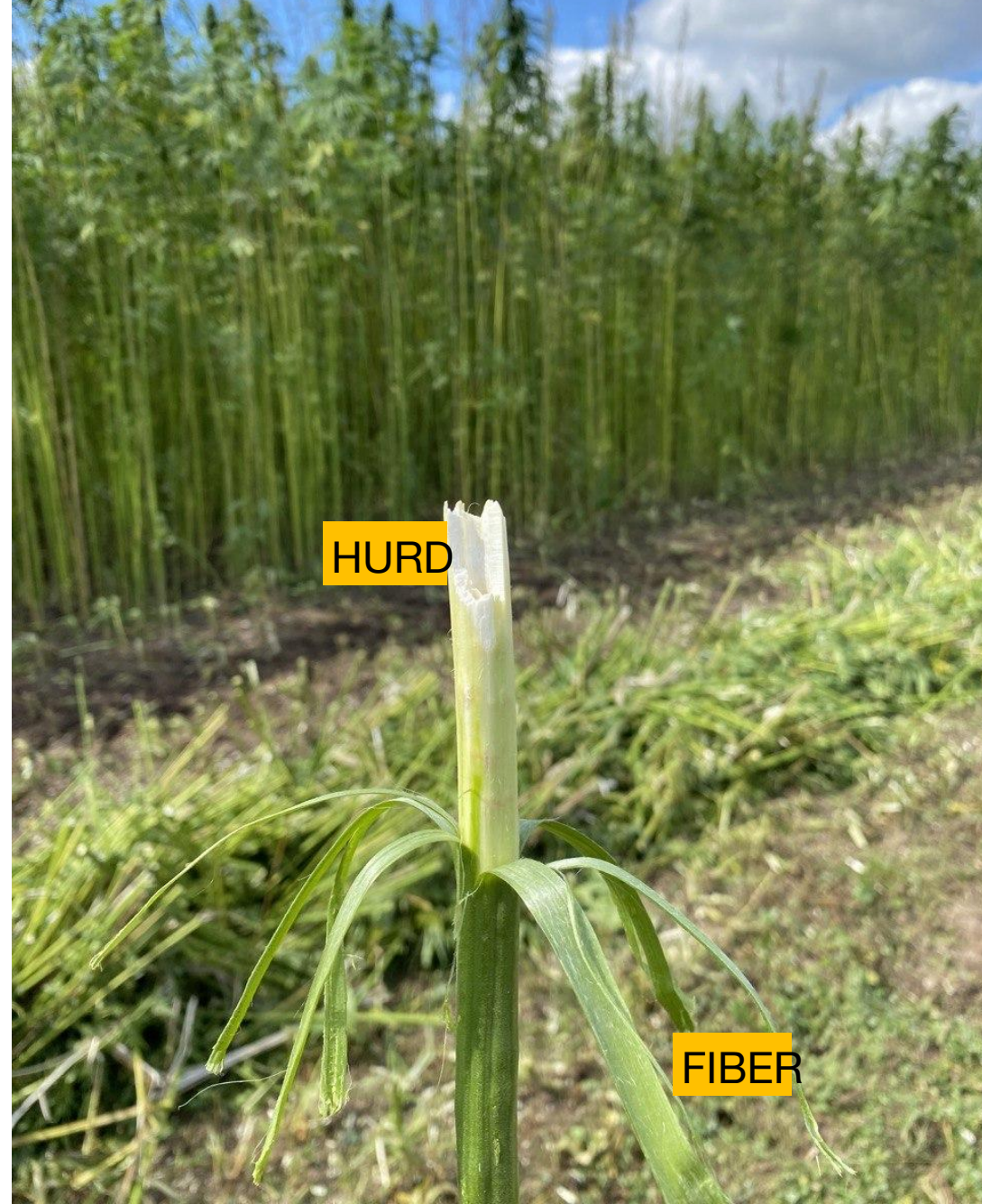




Decortication Facility









HURD



FIBER



Hemp Hurds



Lime Binder

All-natural proprietary binder developed by Hempire, allows to produce energy efficient hempcrete insulation with low density and high thermal performance.

Hemplime Production

- All components mixed straight on construction site
- Insulation material produced in specially designed mixer
- Takes 2 minutes to produce with no delays



HEMP HURDS

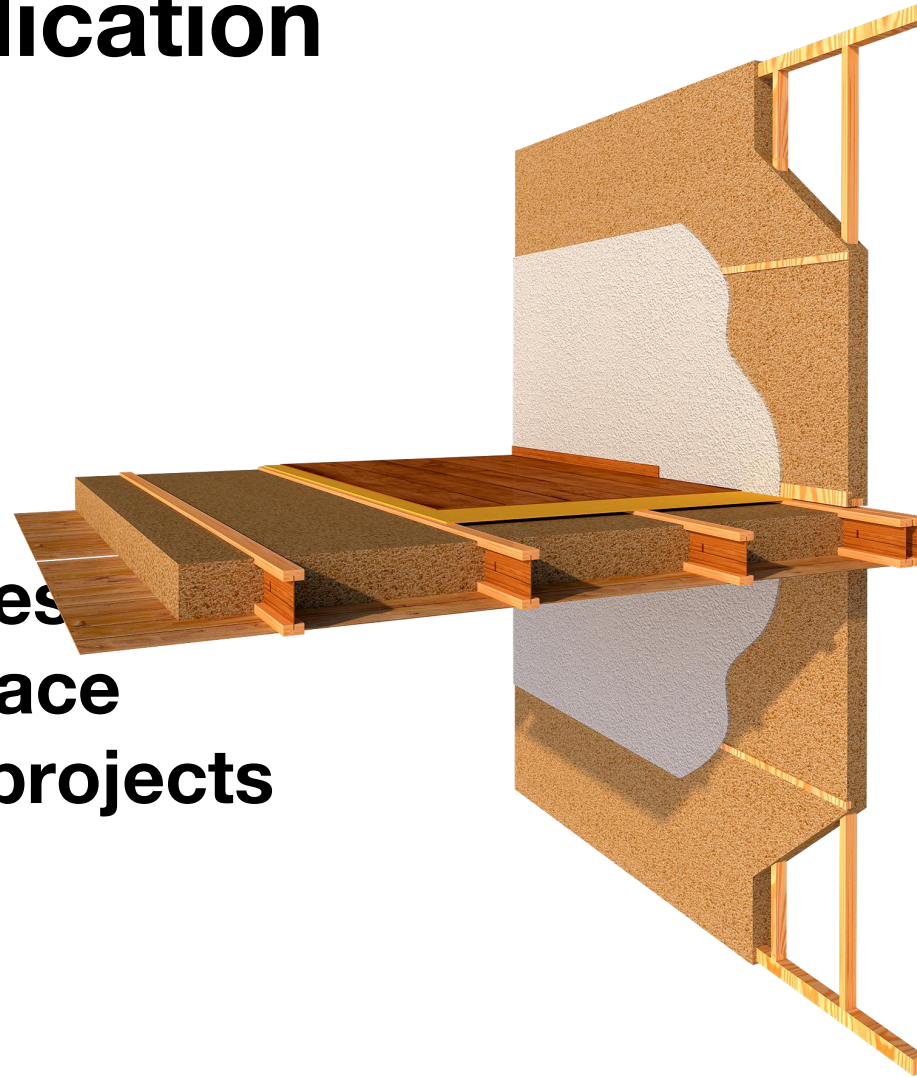
LIME BINDER

WATER

HEMPLIME MIX

Areas of application

- Walls
- Roofs
- Floors
- New homes
- Existing homes
- Interstitial space
- Commercial projects



Spraying





Load-bearing Block





Non-load bearing block





Hempcrete



Formwork

Insulated Studs













Roofs



Floors



Lviv, Ukraine



Lviv, Ukraine











Poland



Poland











Lviv, Ukraine









Bialostok, Poland



Bialostok, Poland





Parts of the wall can be left as is:

- Beautiful aesthetics
- Better acoustics
- Provides many options for creativity











Kyiv, Ukraine



Kyiv, Ukraine









Old Farm turned into residential complex for refugees and orphans



**1800 m2 building – the biggest
hempcrete structure in
Ukraine**







WWW.HEMAPIA.ORG



Kosmos Resort & SPA

Hemplime Villas

Observatory

Colorado,
USA

<https://www.kosmosresort.com/>



Kosmos Resort & SPA





Kosmos Resort & SPA





Advantages of Hemplime



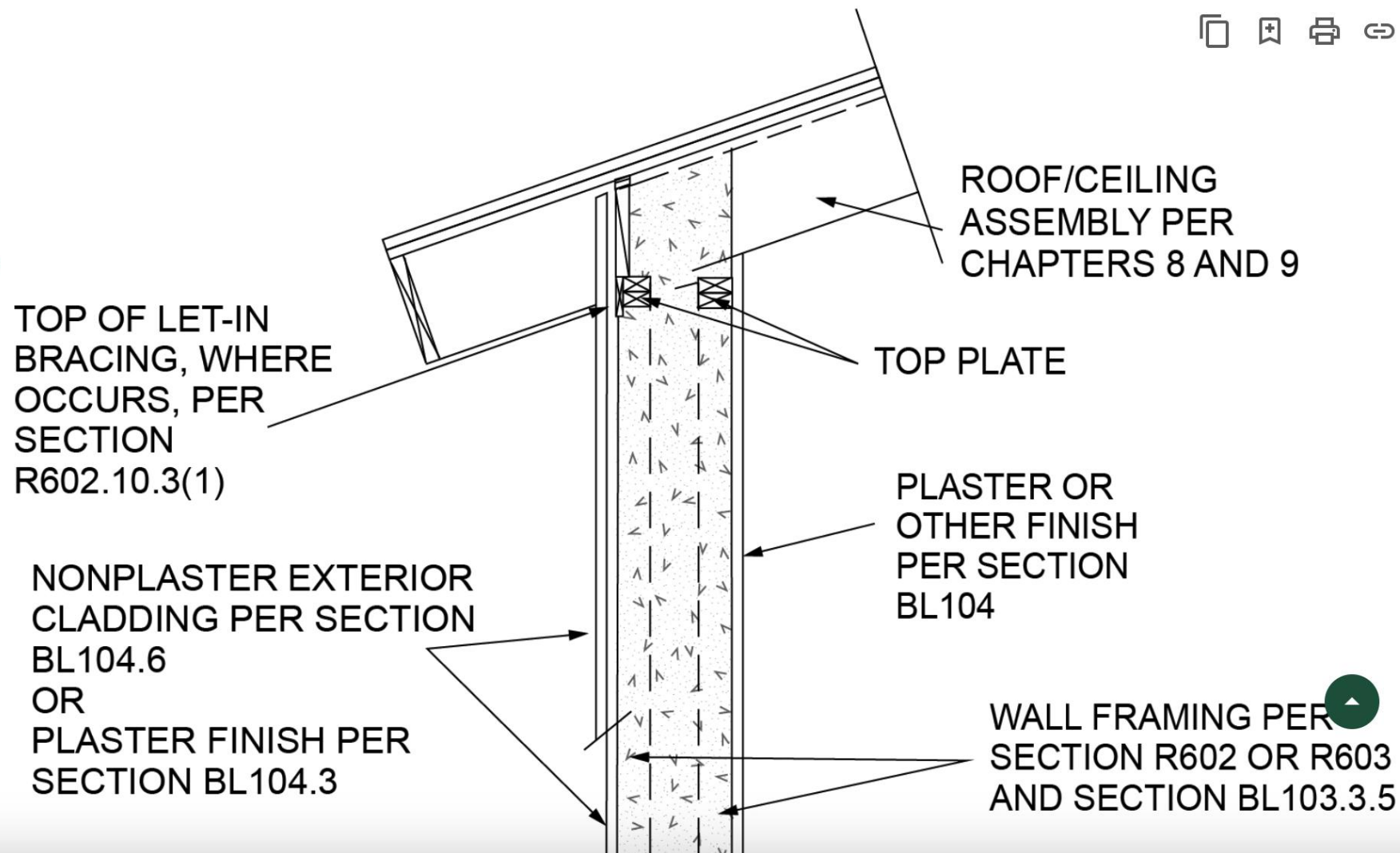
HEMPIRE

Appendix BL Hemp-Lime (Hempcrete) Construction

 BASIC READ ONLY

 Exit Fullscreen

 Legend

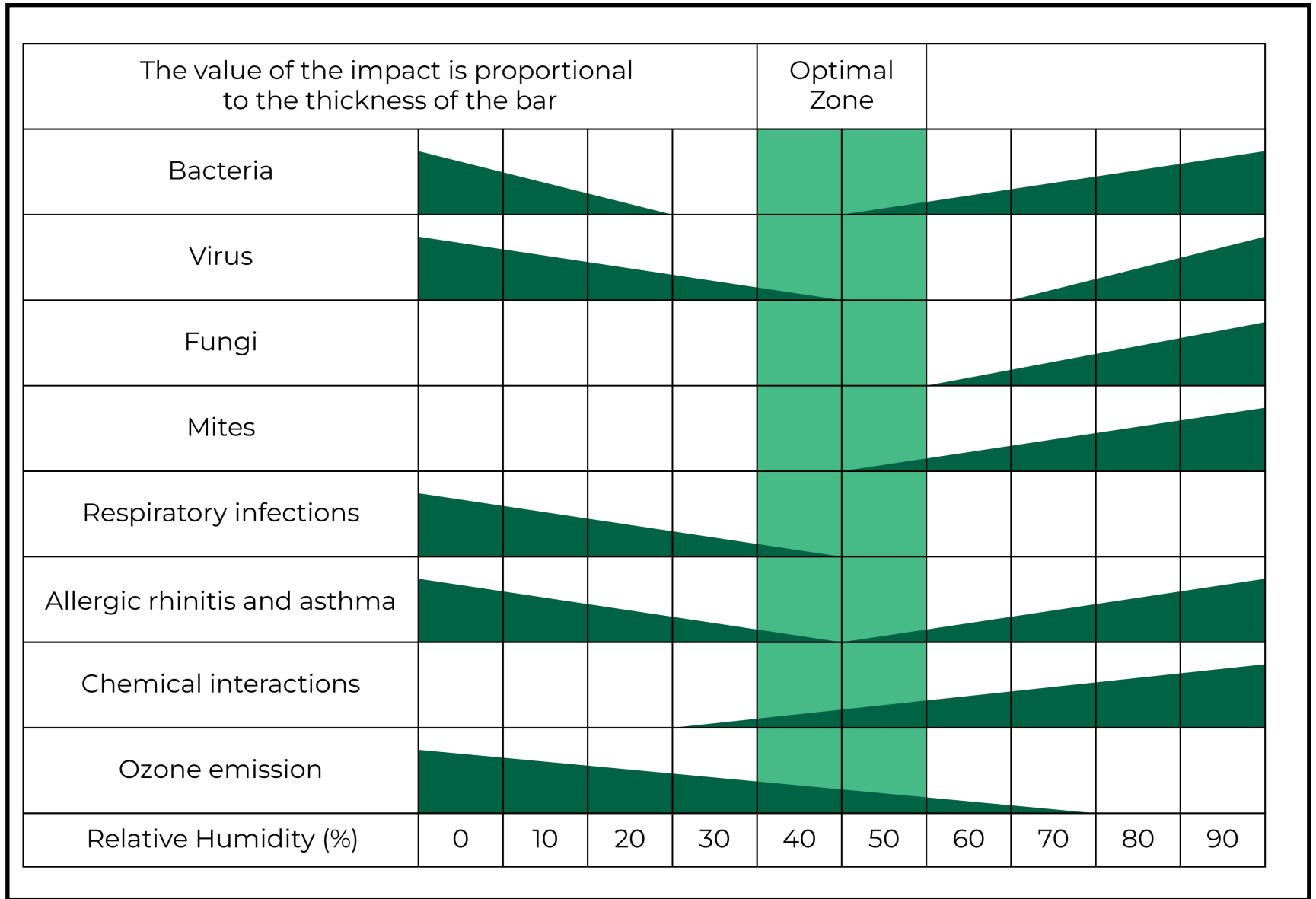


Even kids know...



Keeping relative humidity at ideal comforting conditions for human beings.



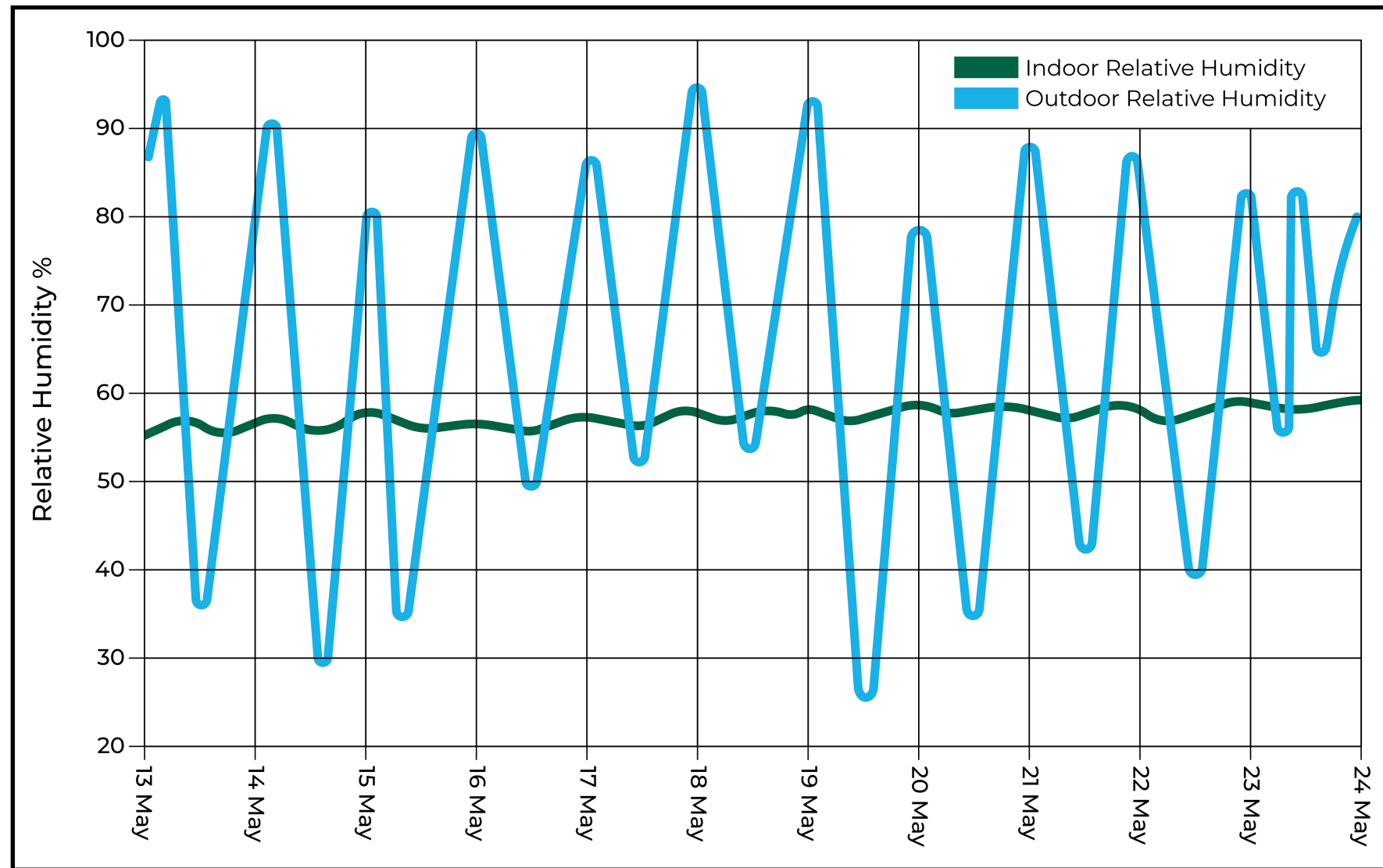


Source: Stirling, E.M., Arundel, A., Sterling, T.D., 1985. Criteria for Human Exposure to Humidity in Occupied Buildings, ASHRAE Transactions, 91 (1), 611-622



Advantages:

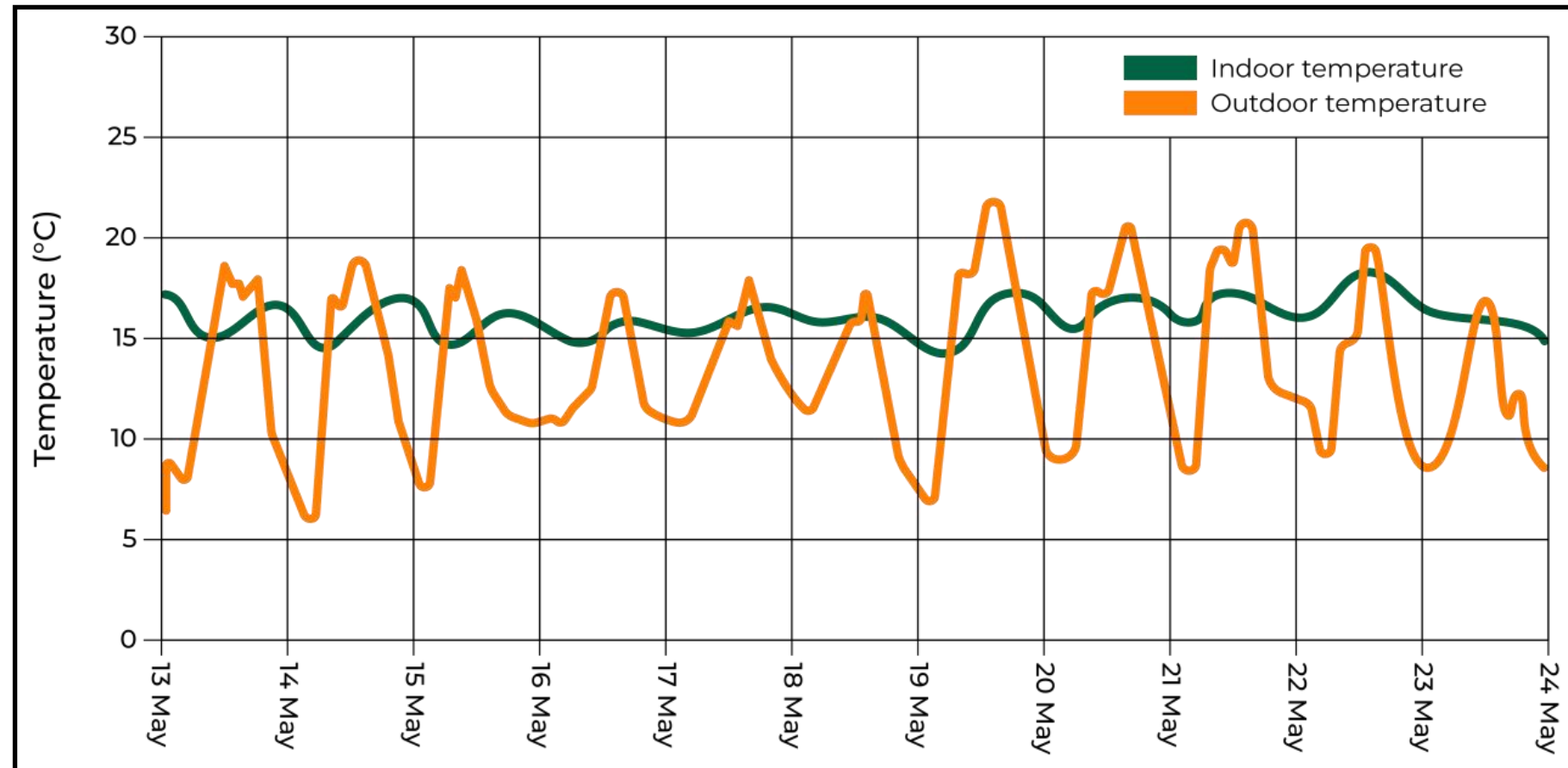
- Free humidity and temperature regulator inside a house, that helps the owner to save on heating and cooling the building.
- Blue line- relative humidity outside a home.
- Green Line- relative humidity inside a building



<http://www.slideshare.net/BlakeLaphorn/construction-green-breakfast-you-dont-have-to-be-a-hippy-to-build-with-hemp>

Advantages:

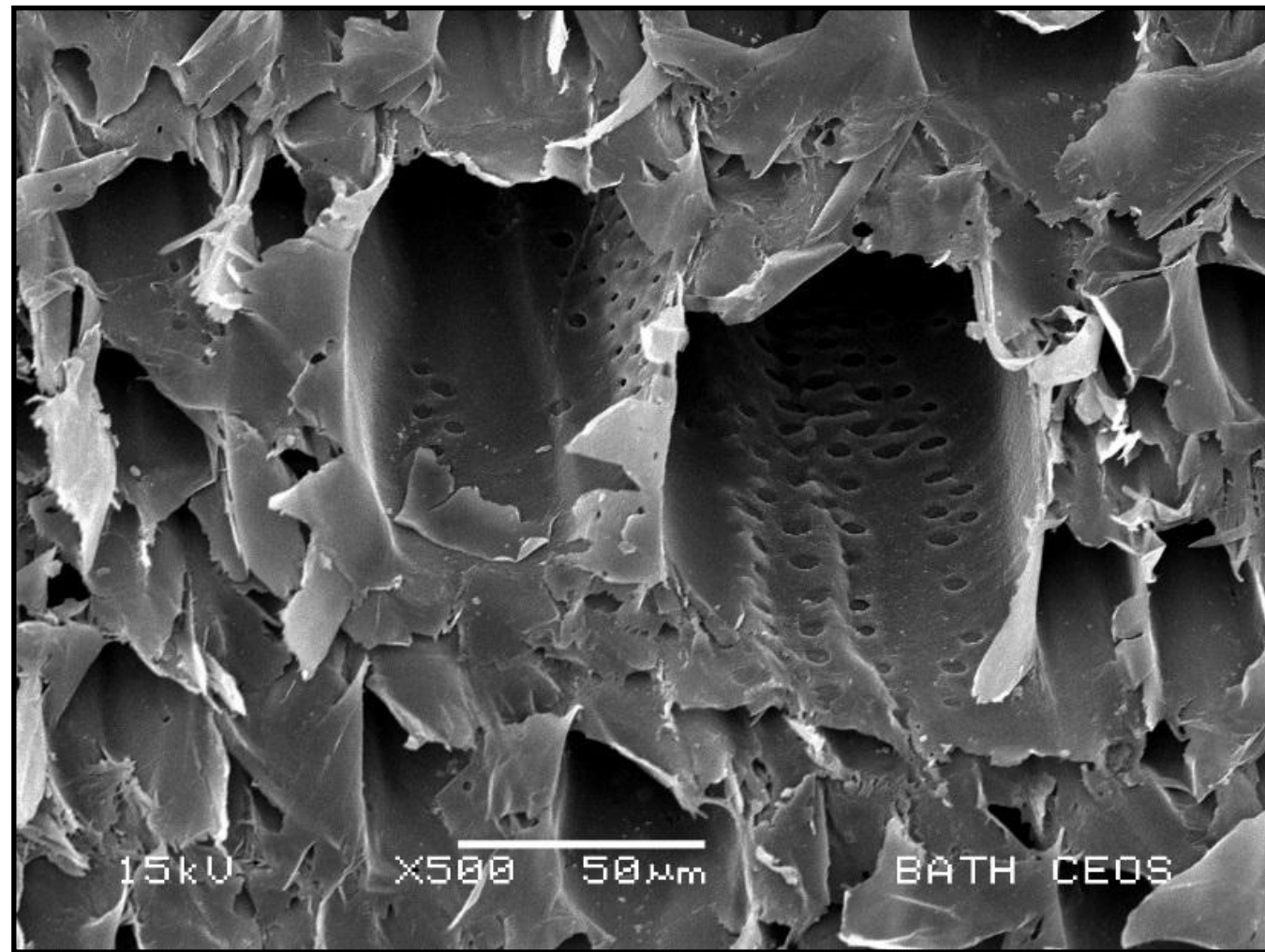
- Hemplime - is a free humidity and temperature regulator inside a house, that helps the owner to save on heating and cooling the building.
- Red line- outdoor temperature
- Orange line- indoor temperature



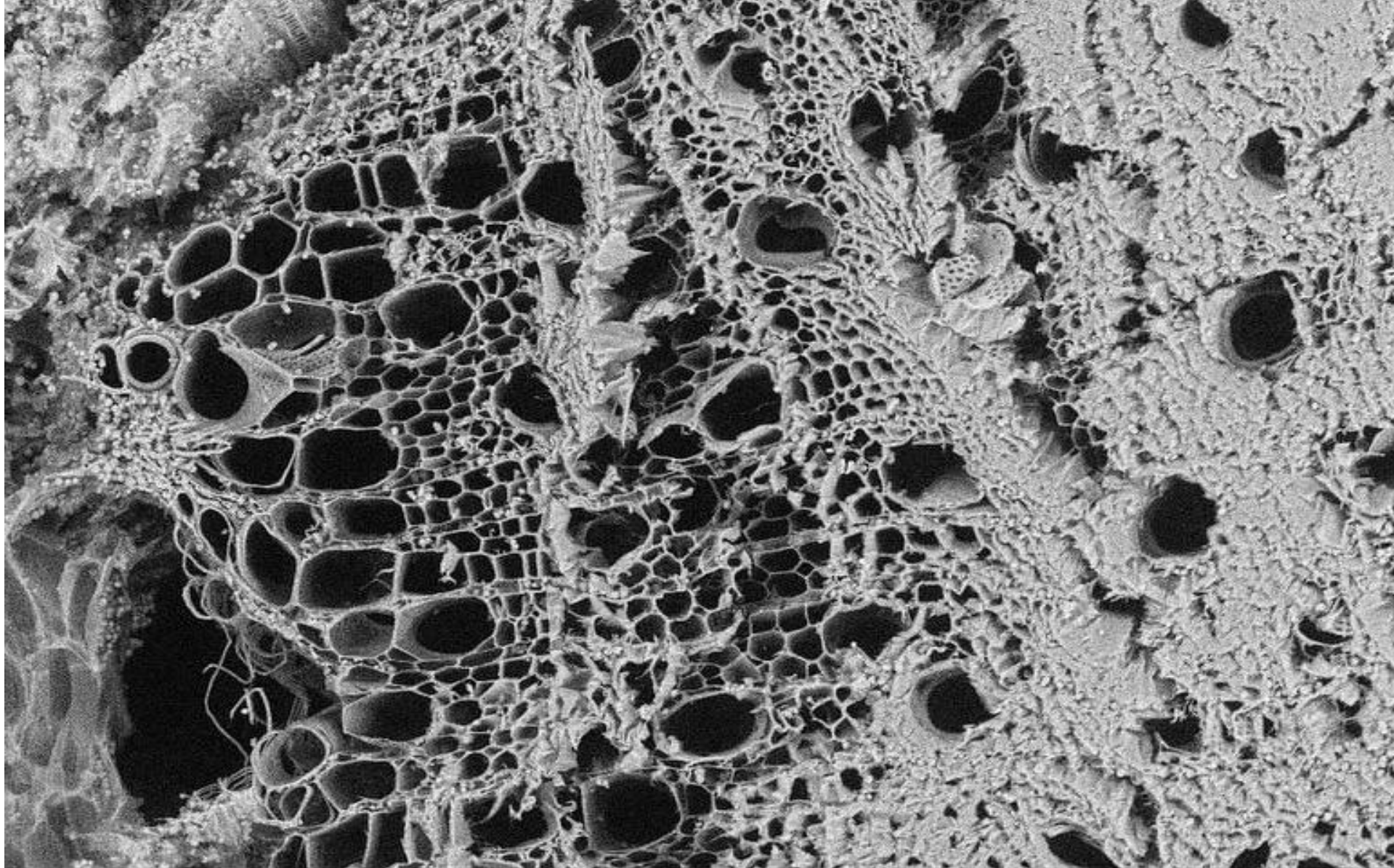
<http://www.slideshare.net/BlakeLaphorn/construction-green-breakfast-you-dont-have-to-be-a-hippy-to-build-with-hemp>

Advantages:

- Highly hygroscopic
- relative humidity around 50 - 55%
- Big savings during hot summer season
- Vapour permeable wall helps the owner save on vapor and hydro barriers



Hemp hurd under a microscope



Mag = 100 X
EHT = 20.00 kV

200µm

Detector = QBSD
Date :19 Jan 2012

06

Advantages: Frost Resistant

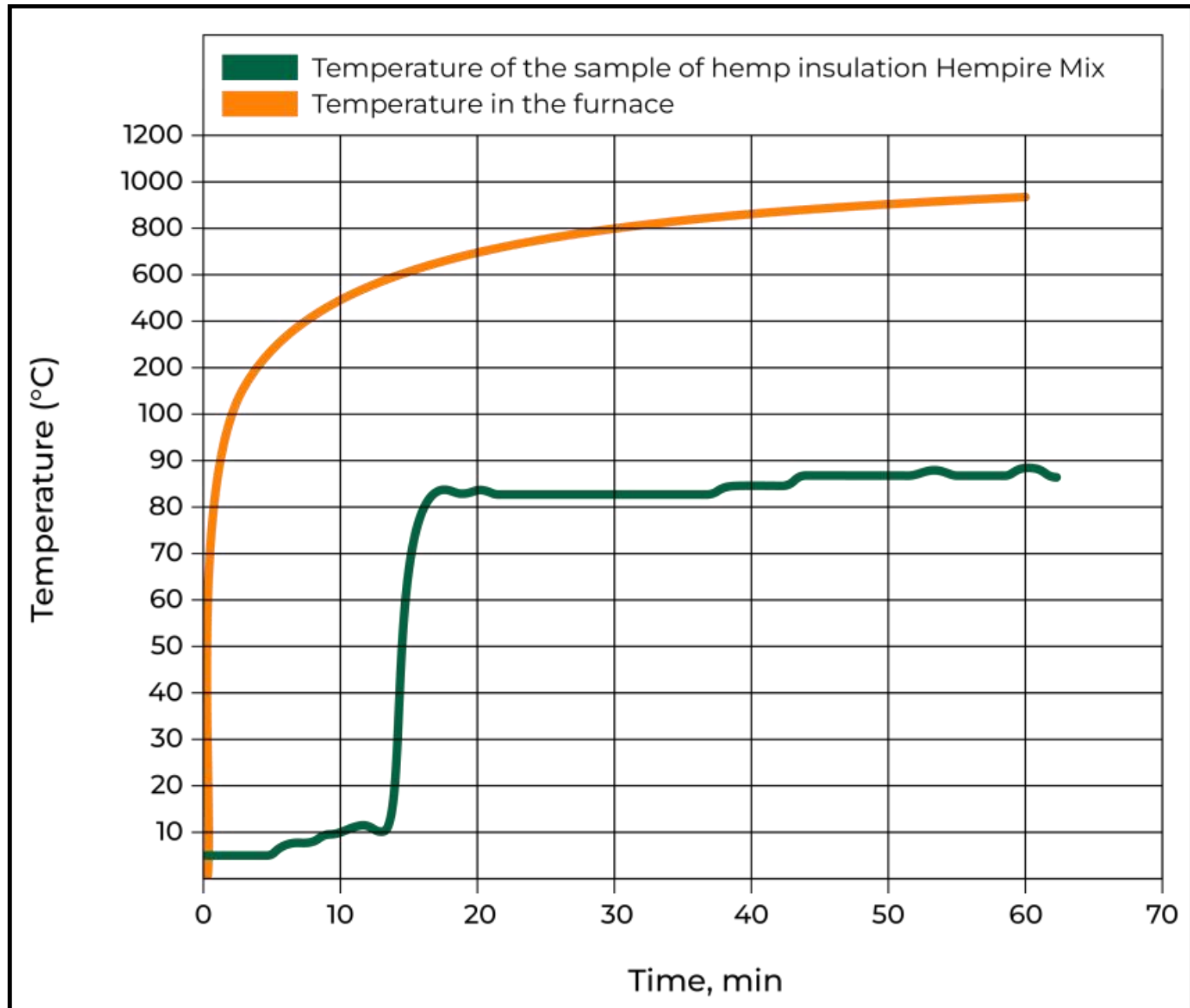
- Material is fully exposed to harsh weather conditions before exterior render application.
- Any other material would rot during constant temperature fluctuation.



Advantages:

**Fire Test
EI 60 min**

**6" (15 cm)
Sample**

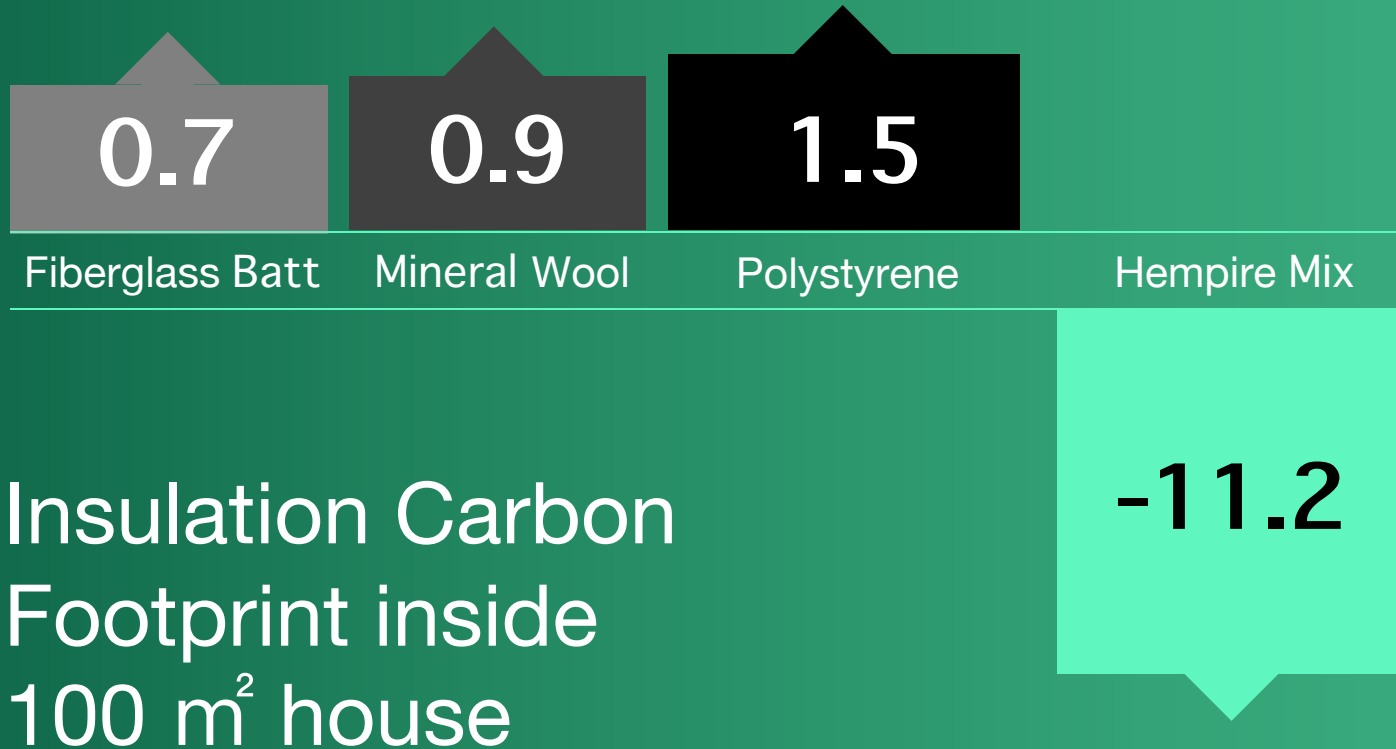


Advantages: Pest Resistant



Advantages

Carbon Negative



EMBODIED
CARBON
(tons of CO₂)



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