



NBS-ISO-HC-20

ProKalk Hempcrete Binder

Pre-formulated binder for hempcrete

IsoHemp ProKalk is a specially-adapted pre-formulated hempcrete binder. It is composed of a combination of hydraulic lime and aerated lime. It is a well-established binder with excellent thermal performance, which can be mixed on site and installed manually, or with a dedicated spraying machine.

Applications

| | Dry density | Dosage | | |
|----------|-----------------------|--------------|----------|-----------|
| | | ProKalk (kg) | Shiv (L) | Water (L) |
| Wall mix | 300 kg/m ³ | 40 | 200 | 50 |
| Roof mix | 200 kg/m ³ | 20 | 200 | 25 |

Summary table

| Technical Characteristics | 200mm Wall Mix | 300mm Wall Mix | 400mm Wall Mix | Unit |
|-----------------------------------|----------------|----------------|----------------|--------------------|
| Bulk density | 700 | | | Kg/m ³ |
| Dry thermal resistance | 3 | 4.48 | 5.64 | m ² K/W |
| Thermal resistance at 50% RH | 2.82 | 4.23 | 5.30 | m ² K/W |
| Thermal conductivity λ | 0.071 | | | W/mK |
| U-value | 0.35 | 0.23 | 0.17 | W/m ² K |
| Phase Shift | 13.1 | 19.7 | 30.6 | h |
| Sound reduction index* Rw | 40 (-1; -5) | 42 (-1;-5) | 44 (-1;-6)** | dB |
| Absorption coefficient α | 0.85 | | | |
| Equivalent air layer thickness Sd | 0.56 | 0.84 | 1.12 | m |
| Water vapour resistance factor μ | 2.8 | | | |
| Compressive strength | 0.22 | | | MPa |
| Reaction to fire (without render) | B, S1, d0 | | | |
| Reaction to fire (with render)* | A2 | | | |
| Resistance to fire (with render) | EI 120 | | | min |

*Pre-cast block at 340 kg/m³ density with 15mm lime plaster on one side – simulated value
 ** Data based on 36cm pre-cast block

ProKalk Hempcrete Binder

Packaging

| | Value | Unit |
|---------------------------|----------------------------|-------------|
| Dimensions of a pallet | 120 x 100 x 95 | cm |
| Weight of a pallet | 1000 | kg |
| Number of bags per pallet | 48 | bags/pallet |
| Volume of a bag | 20 | kg |
| Storage | Dry and away from moisture | |
| Storage life | 6 | months |

Advantages

- A 100% natural product
- Suitable for mixing and spraying machines
- Insulation from cold and heat
- Humidity control