

# INSULATING MATERIAL



## DESCRIPTION

**Blocco Ambiente®** is a unique material that combines insulation and thermal mass properties.

It is composed of hemp shiv (certified CenC), hydrated dolomitic lime and probiotics.

Respecting the principles of social and environmental sustainability, it has all the characteristics required of a building material in line with sustainable development: high insulating capacity, low embodied energy and the ability to absorb CO2 from the atmosphere.

## CHARACTERISTICS

- Thermal, acoustic and hygrometric comfort;
- **Blocco Ambiente®** is breathable (vapour permeable)
- Resistant to fire, frost, insects and rodents;
- Low embodied energy;
- Recyclable

## APPLICATIONS

- Construction of insulating and breathable masonry walls;
- External wall insulation system for existing buildings;
- Internal wall insulation system for existing buildings;
- Solid floor insulation;
- Internal partitions with acoustic insulation.

## LAYING

- The blocks are laid in a thin bed of mortar composed of hemp and lime according to the proportions indicated in the installation manual.
- A handsaw, reciprocating saw or alligator saw can be used to cut the blocks.
- Internal surfaces and partition walls can be coated with sand and lime mortar, clay, gypsum or other breathable finishes.
- External surfaces can be left exposed or can be coated with breathable finishes.

| NB. [height] +/- 1 cm                              | BA8         | BA12        | NEW<br>BA20 | BA25        | BA30        | BA36        | NEW<br>BA40 | NEW<br>BA50 |
|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Sizes - Length, Height, Thickness - cm             | 50x20x8     | 50x20x12    | 50x40x20    | 50x20x25    | 50x20x30    | 40x20x36    | 50x20x40    | 40x20x50    |
| Density - Kg/m <sup>3</sup> dry                    | 310         | 310         | 310         | 310         | 310         | 310         | 310         | 310         |
| Conductivity - W/mk<br>LAMBDA $\lambda$            | 0,048       | 0,048       | 0,048       | 0,048       | 0,048       | 0,048       | 0,048       | 0,048       |
| Transmittance -<br>W/m <sup>2</sup> K U            | 0,54        | 0,37        | 0,23        | 0,19        | 0,16        | 0,13        | 0,12        | 0,09        |
| Total thermal resistance (Rt) - m <sup>2</sup> K/W | 1,84        | 2,67        | 4,34        | 5,38        | 6,42        | 7,67        | 8,44        | 10,59       |
| Thermal offset without plaster                     | 2h 49'      | 5h 24'      | 10h 44'     | 14h 03'     | 17h 22'     | 21h 36'     | 23h 59'     | 30h 37'     |
| Specific heat capacity - J/KgK                     | 1280        | 1280        | 1280        | 1280        | 1280        | 1280        | 1280        | 1280        |
| Vapour permeability - $\mu$                        | 4,5         | 4,5         | 4,5         | 4,5         | 4,5         | 4,5         | 4,5         | 4,5         |
| Sound absorption coefficient (aw)                  | 1 - CLASS A | 1 - CLASS A | 1 - CLASS A | 1 - CLASS A | 1 - CLASS A | 1 - CLASS A | 1 - CLASS A | 1 - CLASS A |
| Soundproofing index (Rw) - dB                      |             |             |             |             |             | 42          | 43          | 45          |
| Compressive strength - N/mm <sup>2</sup>           | 0,4         | 0,4         | 0,4         | 0,4         | 0,4         | 0,4         | 0,4         | 0,4         |
| Shear traction with rawplug - kN                   | 2,067       | 2,067       | 2,067       | 2,067       | 2,067       | 2,067       | 2,067       | 2,067       |
| Orthogonal traction with rawplug - kN              | 2,734       | 2,734       | 2,734       | 2,734       | 2,734       | 2,734       | 2,734       | 2,734       |
| Reaction to fire with plaster                      | B - s1, d0  | B - s1, d0  | B - s1, d0  | B - s1, d0  | B - s1, d0  | B - s1, d0  | B - s1, d0  | B - s1, d0  |
| Fire resistance without plaster - min              |             | EI60        |             |             | EI180       | EI180       | EI180       | EI180       |