INSULATING MATERIAL

BIOMATTONE®

DESCRIPTION

Biomattone® is a masonry block 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;
- **Biomattone®** is breathable (vapour permeable)
- Resistant to fire, frost, insects and rodents;
- Low energy consumption during manufacturing;
- 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 BA20	BA25	BA30	BA36	NEW BA40	NEW BA50
Sizes - Length, Height, Thickness - cm	50x20x8	50x20x12	50x40x20	50x20x25	50x20x30	40x20x36	50x20x40	40x20x50
Density - Kg/m³ dry	310	310	310	310	310	310	310	310
Conductivity - W/mk LAMBDA λ	0,044	0,044	0,044	0,044	0,044	0,044	0,044	0,044
Transmittance - W/m²K U	0,5	0,34	0,21	0,17	0,14	0,12	0,11	0,09
Total thermal resistance (Rt) - m²K/W	1,99	2,9	4,71	5,85	6,99	8,35	9,01	11,53
Thermal offset without plaster	3h 00'	5h 44'	11h 19'	14h 46'	18h 14'	22h 23'	25h 08'	32h 04'
Specific heat capacity - J/KgK	1280	1280	1280	1280	1280	1280	1280	1280
Vapour permeability - μ	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					40	42	43	45
Compressive strength - N/mm2	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
Shear traction with rawlplug - 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	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