NatuFlex

Black Mountain NATURAL INSULATION

TECHNICAL SHEET

For more information on NatuFlex, please contact our sales team

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Product Description

PHYSICAL PROPERTIES	
Function	Natural fibre thermal insulator
Content	Up to 95% natural plant and wood fibres ca 5% combination recycled binder
Origin	By-product of agriculture & timber industry
Structure	Semi-rigid and durable
Application	Easy to handle and quick to install

Application

NatuFlex is a high density, thermal insulation that is ideal for vertical applications in timber frame structures and an excellent solution for insulating pitched roofs making it perfectly suited to loft conversions.

The semi-rigid structure of NatuFlex also makes it an excellent product for use in SIPs panelling and suspended timber floors.

NatuFlex has a high thermal mass that makes it perfect for passive house design. In addition to reducing energy loss, NatuFlex also collects and stores solar energy during the day then releases it internally during the evening.

For the latest pack and pallet quantities, please contact Black Mountain sales@blackmountaininsulation.com.

Environment

- Black Mountain only use approximately 10% of the energy required to manufacture some competing man-made mineral fibre insulation products.
- The product will remain efficient throughout the life of a typical building.
- NatuFlex's ability to store solar gain in addition to reducing energy loss lowers the total energy used to heat a building.
- NatuFlex is manufactured in-house, using waste fibres from the timber and agricultural industry.

Technical Performance

TECHNICAL STANDARDS	
Fire	Euro Class E EN 13501-1:2002
Condensation	BS 5250:1989
Thermal conductivity (λ)	0.038 W/mK
Thermal resistance (R) (100mm)	2.63m²K/W
Specific heat capacity (c)	2300-2800 J/kg²K
Vapour resistance (r)	10 MNs/gm
Moisture absorption	20% w/w
Density	ca 40kg /m³
ODP (Ozone depletion potential)	Zero
GWP (Global warming potential)	Zero

Thermal Mass

A combination of high density and specific heat capacity enables NatuFlex to actively store thermal energy and release it when internal temperature levels decline.

Reduced energy costs

The ability to store energy enables NatuFlex to reduce the level of energy consumption by using stored energy to maintain internal temperatures. It is also effective during summer months by reducing the level of radiant heat penetrating the building and diminishing the need for air conditioning.

Humidity control

NatuFlex has an excellent ability to buffer excess moisture in internal environments; significantly improving indoor air quality and the breathability of a building.

THERMAL PERFORMANCE		
Thickness	Thermal Resistance (R)	U Value
50mm	1.32 m²k/W	0.76 W/m²K
75mm	1.97 m²k/W	0.51 W/m²K
100mm	2.63 m²k/W	0.38 W/m²K
125mm	3.29 m²k/W	0.30 W/m²K
150mm	3.95 m²k/W	0.25 W/m²K
175mm	4.61 m²k/W	0.22 W/m²K
200mm	5.26 m²k/W	0.19 W/m²K