



**CLIMAFIN**

Lightweight Hygrothermal Skim Coat

**DESCRIPTION**

CLIMAFIN is designed as a "skim coat-like" applicable membrane with the characteristics of a breathable skin, which interacts with the external or internal environment. It is part of the Bioclimatic Envelope System (BES) for building elements especially on the internal and external faces of wall and ceiling. The BES as *passive cooling preventative technique* is the most important building element for buildings in areas with very high humidity, like tropical climates.



**ECOLOGICAL PRODUCT**

Manufactured from recycled glass, zero VOC, the disposal results in 100% non-toxic waste



**LIGHTWEIGHT**

3 to 4 times lighter than conventional building products



**FIRE RESISTANT**

Non-combustible



**WATER REPELLENT**

Continuous hydro protection and water resistance



**BREATHABLE**

Hygro functionality allows a building to eliminate moisture from masonry, walls and slabs



**SOUND ABSORBENT**

Space acoustics and noise protection



**MAINTENANCE SAVING**

Prevention of mold and algae and common building's problems such as weather aging and appearance of cracks



**ENERGY SAVING**

Continuous thermal protection in reducing of heat load in building, lowering the need in mechanical cooling

**TECHNICAL DATA**

Material composition : • 98% natural components • 55% recycled glass • Zero VOC • 100% recyclable non-toxic waste

Appearance & Consistency	: Dry light grey powder	Water Vapour Diffusion	: $\mu = 4.2$ "highly breathable" (DIN EN 998-1)
Density Of Dry Cured Materials	: $410 \text{ kg/m}^3 \pm 10\%$	Water Vapour Transmission Rate	: $V = 850 \text{ g/m}^2 \text{ day}$ (BS EN 1015-19) @ 3mm thickness
Density Of Wet Bulk Material	: $450 \text{ kg/m}^3 \pm 10\%$ (BS EN 1015-6:1999)	Water Capillarity Absorption	: $0.233 \text{ kg/m}^2 \text{ min}^{0.5}$ (BS EN 1015-18:1999) Class W2 (DIN EN 998-1)
Thermal Conductivity	: $0.094 \text{ W/m}^\circ\text{K}$ (ASTM C 518: 10) Class T1 (DIN EN 998-1)	Adhesive Strength to Concrete	: $> 0.44 \text{ N/mm}^2$ (44 tons/m <sup>2</sup> ) (BS EN 1015-12:2000)
Fire Resistance	: Non-combustible Class A1 (DIN EN 998-1)	Sound Absorption	: Approx. 23dB at 20mm thick
Compressive Strength	: $> 1.87 \text{ N/mm}^2$ (BS EN 1015-11:1999) Class CS-I (DIN EN 998-1)	Sustainable	: inorganic - its properties don't decay in time

**GENERAL INFORMATION**

Packaging	: CLIMAFIN is supplied in 8 kg bag	Pot Life	: Approx. 45 minutes
Water Ratio	: Approx. 4.5 ~ 5.0 litres of water per bag of CLIMAFIN, depending on the weather and the desired workability	Recommended Thickness	: At approx. 3 ~ 5 mm per layer of application with no limitation in total thickness
Duration of Mix	: At a minimum duration of 8 minutes per mix	Coverage	: Approx. $6.5 \text{ m}^2$ @ 3 mm thick per 8 kg bag of CLIMAFIN
Shelf Life	: Storage life of CLIMAFIN is at a maximum 12 months from the date of manufacture, storing in a dry conditioned environment with temperature between 5 ~ 30°C and with Relative Humidity (RH) that is less than 60%		

## SURFACE PREPARATION

The application surface shall be free of grease, oil, loose materials, etc. It shall be cleaned and dampened prior to application of CLIMAFIN.

**Note:**

- Existing coating to application surface shall be removed with scouring methodology to ensure a better bonding between CLIMAFIN and the substrate.

## PREPARATION FOR APPLICATION

It is essential that the substrate / base plaster is in a flat levelled conditioned as manual application of skim coat follows the contour of the base to allow for a flat levelled finishes.

- Conduct a level check on the contour of the substrate, and rectify prior to application of CLIMAFIN should there be any misalignment.
- Installation of corner beads to all edges or any groove lines should it is required.

**Recommendation:**

- Rectification of the contour of substrate should use only with CLIMASKIN (Lightweight hygrothermal plaster).

## PRODUCT PREPARATION

- Pour half amount of required water into mixing bucket.
- Empty the bag of CLIMAFIN in a slow and steady manner into the bottom of the mixing bucket, to prevent the flying of powder due to pouring from height.
- Empty the balance amount of water into the mixing bucket.
- Begin mixing with the designated hand stirrer at a slow speed toward the bottom of the bucket to allow for the base material to absorb the water.
- Speed up the mixing thereafter material have been fully absorbed in water without visible dry material, and complete the mix thereafter the required duration and the desired consistency is achieved.
- Total mixing time required is 8 to 10 minutes. Once mixing is complete, let the product stand for a further 2 minutes before use and be sure to use the entire mixture within 1 hour of preparation.

**Note:**

- To prevent separation of ingredients, only mix with full bag where no part mix shall be carried out.
- Only designated mixing equipment is allowed in the mixing procedure to allow for ultimate performance of CLIMAFIN. These designated equipment are:
  - Heavy-duty Hand Stirrer from EIBENSTOCK with paddle @ dia. 160 / 180 mm
  - Compact Mixing and Spray from PFT- RITMO Powercoat

## APPLICATION

- Apply with slight pressure of CLIMAFIN onto the substrate using trowel.
- Should CLIMAFIN is to apply in a thickness of more than 5mm, every layers of a maximum 5mm thick per application shall be sequentially applied till the total thickness as desired is achieved.
- Ruler / leveller shall be used to flatten the surface as well as removing of excess materials whilst in the process of levelling

**Note:**

- Depending on the environmental factor, the applied layer of CLIMAFIN should be in a touch-dry conditioned prior to application of any subsequent layer.
- For placement that under direct sunlight, adequate protection shall be in place especially in the process of curing, to prevent rapid dehydration or desiccation (excessive moisture loss).

## FINISHES

Applied CLIMAFIN will be set thereafter 48 hours in a normal dry condition. Troweling for stone-like smooth finishes or complete with specialized roller brush onto the levelled CLIMAFIN for a rough textured finishes.

**Note:**

- For rough textured finishes, roller brush to create rough texture should be carried out immediately after the applied CLIMAFIN is levelled.
- For a consistent roughness, the time and pressure of applying roller brush had to be consistency.

## COATINGS AND PAINTING

Any other coating or paint can be applied onto CLIMAFIN thereafter. However, these coating / paint products shall be accordance to their requirement in the application procedure.

**Recommendation:**

- To allow for a complete full system in vapour permeability, the use of vapour sealant type of coating / paint should be avoided, where we recommend only silicate or lime based paints.

## HEALTH AND SAFETY

Use of Personal Protective Equipment such as goggle and facemask is recommended no doubt CLIMAFIN is non-hazardous. Do not inhale the powder while in the process of mixture and in the event of eye contact, rinse eyes immediately with clean water and seek medication consultation if irritation persists. Skin contact shall be wash with soap complete with clean water.

## TECHNICAL SUPPORT

Please consult our technical service for further information and any site assistance required (**especially prior to the 1<sup>st</sup> time application**)

## DISCLAIMER

The use of this product is beyond the manufacturer's control and liability is restricted to the replacement of material proven faulty. The manufacturer is not responsible for any loss or damage arising from incorrect usage. Specifications are subjected to changes without prior notice. Buyers shall be solely responsible for determining the suitability of products for their intended use. Before application, customers and users shall check to ensure that they have the latest version of Technical Data Sheets from [www.bioclimaticsolutions.com](http://www.bioclimaticsolutions.com)

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