

## CLIMASCREEED

### Lightweight Hygrothermal Screed

#### DESCRIPTION

CLIMASCREEED is a floor-leveling hygrothermal screed. It is part of the Bioclimatic Floor System (BFS) designed to reduce the heat transfer and to prevent floor or ceiling condensation between storeys with different temperature conditions. Been lighter than normal cement based screed helps to reduce the overall load on the foundation and structure of the building complying with BCA's new code for seismic design: EUROCODE 8



#### ECOLOGICAL PRODUCT

Manufactured from natural components, zero VOC, the disposal results in 100% non-toxic waste



#### LIGHTWEIGHT

3 to 4 times lighter than conventional building products



#### FIRE RESISTANT

Non-combustible



#### SOUND ABSORBENT

Space acoustics and noise protection



#### BREATHABLE

Hygro functionality allows a building to eliminate moisture from slabs



#### WATER SAVING

it does not require water curing after application



#### MAINTENANCE SAVING

Prevention of mold and algae due to condensation



#### 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 • Zero VOC • 100% recyclable non-toxic waste

Appearance & Consistency	: Dry light grey powder Designed as bonded screed	Water Vapour Diffusion	: $\mu = 3.1$ "highly breathable" (DIN EN 998-1)
Density Of Dry Cured Materials	: $680 \text{ kg/m}^3 \pm 10\%$	Water Capillarity Absorption	: $\cdot 0.1 \text{ kg/m}^2 \text{ min}^{0.5}$ (BS EN 1015-18: 1999) Class W2 (DIN EN 998-1)
Density Of Wet Bulk Material	: $965 \text{ kg/m}^3 \pm 10\%$ (BS EN 1015-6: 1999)	Adhesive Strength to Concrete	: $0.38 \text{ N/mm}^2$ (39 tons/m <sup>2</sup> ) (BS EN 1015-12: 2000)
Thermal Conductivity	: $\cdot 0.11 \text{ W/m}^2\text{K}$ (ASTM C 518: 10) Class T2 (DIN EN 998-1)	Sound Absorption	: Approx. 24dB at 40mm thick
Fire Resistance	: Non-combustible Class A1 (DIN EN 998-1)	Shrinking Value	: 0.16 mm/m
Compressive Strength	: $\cdot 3.6 \text{ N/mm}^2$ (BS EN 1015-11: 1999) Class CS-III (DIN EN 998-1)	Expansion Value	: 0.18 mm/m
Bending Strength	: $\cdot 1.6 \text{ N/mm}^2$ (BS EN 1015-11: 1999) Class CS-III (DIN EN 998-1)	Sustainable	: inorganic - its properties don't decay in time

## GENERAL INFORMATION

Packaging	: CLIMASCREEED is supplied in 14 kg bag	Pot Life	: Approx. 45 minutes
Water Ratio	: Approx. 7.0 litres of water per bag of CLIMASCREEED, depending on the weather and the desired workability	Recommended Thickness	: At minimum thickness of an approx. 30 mm with no limitation in total thickness
Duration of Mix	: At a minimum duration of 8 minutes per mix	Coverage	: Approx. $1 \text{ m}^2$ @ 20 mm thick per 14 kg bag of CLIMASCREEED
Shelf Life	: Storage life of CLIMASCREEED is at a maximum 12 months from the date of manufacture, storing in a dry conditioned environment with temperature between 5 ~ 30°C and Relative Humidity (RH) 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 CLIMASCREED.

### Note:

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

## PREPARATION FOR APPLICATION

It is essential to use our clip system with PVC depth and / or corner profiles to prevent material movement due to the lightweight and sticky nature of CLIMASCREED, and to ensure that the required thickness of application is obtained, as well as to achieve a flat levelled finishes.

- Setting up by marking on the substrate of the designated locations of clip system and depth profiles.
- Installation of plug on slab by drilling and complete with inserting of screw for clip system.
- Adjust and align all of the inserted screws according to the desire thickness of application, and install the clip system complete with depth profiles.

### Recommendation:

- The distance between each and every profiles shall not be more than the length of the ruler/leveller.
- The first / last profile at the edges shall be installed at a distance of not more than 100 mm away from the edges.
- The clip system shall be installed at an interval of not more than 500 mm.

## PRODUCT PREPARATION

- Pour half amount of required water into mixing bucket.
- Empty the bag of CLIMASCREED 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 CLIMASCREED. These designated equipment are:
  - Heavy-duty Hand Stirrer from EIBENSTOCK with paddle @ dia. 160 / 180 mm
  - Automatic Mixer with 3 arm and turbo technique mixing

## APPLICATION

- Apply with slight pressure of CLIMASCREED onto the substrate using trowel.
- Fill the area of application till reaching the installed depth profiles.
- Ruler / leveller shall be used to flatten the surface and remove excess materials according to the desired depth, with ruler / leveller moving along the installed depth profiles (as a rail) from one direction to the end.

### Note:

- For placement that under direct sunlight, adequate protection such as application of curing compound or covering with clear plastic sheet shall be in place especially in the process of curing, to prevent rapid dehydration or desiccation (excessive moisture loss).

### Recommendation:

- In consideration of the accessibility to the applied CLIMASCREED for finishes touch-up, It should be applied in rows/columns alternately with the period of application carrying out at a minimum of 2 days to complete.

## FINISHES

Applied CLIMASCREED will be set thereafter 48 hours in a normal dry condition. Minimum troweling is needed for a smooth finishes which finishes should be carried out while in the process of levelling.

### Note:

- There should not be any traffics onto the applied CLIMASCREED whilst in the process of curing to avoid possible damages to the finishes.

## COATINGS AND FINISHING MATERIALS

Any other coatings or solid material such as tile or stone can be applied onto CLIMASCREED thereafter. However, these coating products shall be accordance to their requirement in the application procedure, and that the application of solid materials can only be carried out after the applied CLIMASCREED has fully cured.

## HEALTH AND SAFETY

Use of Personal Protective Equipment such as goggle and facemask is recommended no doubt CLIMASCREED 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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