

# THERMOCEM

## High Quality Cement Based Adhesive and Plaster for EIFS System

### Description:

THERMOCEM is a high performance, cement based, polymer modified mortar. It is formulated to act as an adhesive and a top plaster finish layer(s) for External insulation systems based on EPS boards or rock wool as a non-load bearing exterior system embedded with fiber mesh to allow extra mechanical strength.

### Uses:

THERMOCEM is a special product for application as a base coat and adhesive for isolation boards in the external facade insulation system EIFS to gain thermal isolation. THERMOCEM can adhere to a wide range of substrates such as concrete, block, EPS boards, rock wool boards, gypsum sheets etc. It can also be applied on metal wire lathe, fiberglass reinforced mesh.

THERMOCEM is used as an adhesive for EPS, AAC thin panels and rock wool boards on top of:

- Concrete surfaces.
- Precast concrete panels.
- Cement plaster surfaces.

### Advantages:

- Excellent weather resistance and provides seamless wall covering.
- Flexible and crack resistant.
- Aesthetic versatility with Low maintenance.
- Accept various finishes.
- Excellent adhesion to EPS products and rock wool panels.
- Reduce need for control joints.
- Excellent adhesion to concrete surfaces and block.
- High impact and water resistance.

### Instructions for Use:

#### Surface Preparation:

Substrate must be clean, fully cured, and free from grease, oil, paint, or curing compound residue and any contaminant which will limit the adhesion of THERMOCEM to the substrate. Ensure proper protection for surrounding areas using masking tape and/or plastic coverings prior to work start; as applied material cannot be cleaned off easily after they have dried.

#### Mixing:

Add THERMOCEM 25 kg bag into a container of 5.0–5.5 liters of clean water and mix until a uniform lumps free consistency mix is achieved. For mixing, use a slow speed mechanical mixer (200-300 rpm) fitted with suitable mixing paddle. Allow product to set for approximately 3 minutes then lightly re-stir before use.

#### Application:

THERMOCEM is directly applied as a base coats in external insulation façade systems over:

- EPS Board
- Rockwool Boards

EPS insulation boards are fixed to the building with THERMOCEM as a cementitious adhesive. Two approaches can be followed to achieve proper adhesion. The first approach is to apply spots of 50 mm in diameter at the back at least 5 mm thick with a minimum covering of 50% of the board. The second one is to apply strips of THERMOCEM to the back of the EPS insulation board using a (16 x 16mm) square-notched or (13 x 13mm) U-notched trowel.

THERMOCEM is typically used to adhere EPS boards or rock wool insulation boards over concrete, Portland cement plaster or cement based surfaces. Preset the insulation boards to the dry and clean surface and apply moderate pressure to ensure good contact. The applied boards should be left for 24 hours before applying subsequent layers.

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## As a base coat:

Once the EPS board surface has been leveled and all edges are treated, apply a layer of THERMOCEM, with a thickness of 2-3 mm on top of the board. Embed the fiber mesh within the layer of THERMOCEM vertically while it is still green. The mix working time will vary according to ambient temperature from 25 minutes up to 45 minutes. Apply moderate pressure to ensure a good embedment of the fiber mesh. Avoid folds in the fiber mesh into the THERMOCEM layer.

Additional protection at doors and windows is achieved by applying small strips of mesh diagonally or the use of plastic protection angles. Trowel off any excess material from the surface and ensure that the mesh is embedded properly.

After first layer is dry, apply a second layer of THERMOCEM with thickness not more than 2 mm so that no mesh color is visible. Apply touch up material if required once the applied layers are totally dry.

In moderate temperature, THERMOCEM is a self-curing product. If temperatures are higher than 35°C, apply mist curing with clean water for two days.

THERMOCEM is a cementitious based material that accepts all types of exterior finished applicable on cementitious surfaces according to the decision of the designer and client.

## Standards:

- ASTM C518, DIN 52617
- UNI EN 1015-11

TECHNICAL PROPERTIES	
Color	Cement Grey
Density	1.9 ± 0.03 kg/lit
Compressive strength @28days	24 N/mm <sup>2</sup>
Water resistance	Excellent
Moisture resistance	Excellent
Water absorption	0.16 kg/m <sup>2</sup> /hr.
Fire resistivity	Non-flammable
Toxicity	Non-toxic

Thermal conductivity	0.70 w/m/k
Impact test >2 joules	Pass
Tensile strength	
-28 days standard conditions	0.15 N/mm <sup>2</sup>
-28 days standard conditions + 2 days water	0.10 N/mm <sup>2</sup>
-28 days standard conditions + 2 days water immersion + 7 days drying	0.12 N/mm <sup>2</sup>

\*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

## Coverage:

25 Kg bag of THERMOCEM produces 5.2 square meters @ 3.0 mm thickness.

\*Coverage rate is an approximate value, and subject to actual site conditions.

## Packaging:

THERMOCEM is available in 25 kg. clean, recyclable bags.

## Storage:

Store THERMOCEM in dry and covered area away from direct sunlight. Keep material protected from rainfall and avoid excess compaction.

## Shelf Life:

THERMOCEM can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

## Cleaning:

All tools must be cleaned with water before hardening. Hardened materials can only be removed mechanically.

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## Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapour or spray mist.

## FIRST AID:

- Eyes: In the event of accidental splashes, flush with warm water and seek medical advice.
- Skin: Wash skin thoroughly with soap and water
- Inhalation: Remove to fresh air, keep patient rested
- Ingestion: Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to THERMOCEM Material Safety Data Sheet.

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