



**THERMOCEM®**

**Lightweight undercoat plaster based on cement and expanded perlite**

EN 998-1 EN 998-2



**Description**

A lightweight undercoat plaster (LW) based on cement and expanded perlite for interior and exterior surfaces. Suitable for application on substrates such as clay bricks, lightweight bricks, concrete-blocks, lightweight blocks (such as YTONG) and concrete (not fair-faced).

**Technical Specifications**

Density	: ≈ 1.00 Kg / L
Density of fresh mortar	: ≈ 1.50 Kg / L
Mixing ratio (water/THERMOCEM)	: 8.25 – 9.25 L / 25 Kg
Substrate temperature	: +5°C min. / +35 °C max.
Ambient temperature	: +5°C min. / +35 °C max.
Reaction to fire	: Class A1
Compressive strength	: CSIII
Flexural Strength	: ≥ 2.0 N / mm <sup>2</sup>
Adhesion strength	: 0.1 N / mm <sup>2</sup> – FP:A
Water absorption	W0
Water Vapour permeability coefficient	μ10
Thermal conductivity ( $\lambda_{dry}$ )	≤ 0.33 W/mK (table mean value, P=50%)
Pot life	At least 4 hours at 23°C
<u>Consumption:</u>	
Indicatively, 9.10 – 9.40 Kg/m <sup>2</sup> per cm of thickness	

**Instructions for Use**

**SUBSTRATE PREPARATION**

All surfaces should be clean, free of dust, oil, residues of other building materials, etc. before applying the plaster. Any cracks or holes should be repaired and let dry beforehand. The substrate must be sprayed with water and the surface must be let dry, before applying **THERMOCEM®**, so as not to inhibit adhesion of **THERMOCEM®**.

**Plastering**

Allow 3 – 4 weeks after bricklaying before applying **THERMOCEM®**, since during that period, joints are subjected to shrinkage.

For plastering as a first coat, it is advisable that a more fluid mixture is prepared, improved with PELEFIX (product of Peletico - see Technical Data Sheet) in a ratio approximately 1.0 – 1.5 L of PELEFIX per 25 Kg of **THERMOCEM®**. Keep the surface wet for 1 – 2 days before applying the next layer of plaster.

**MIXING**

All equipment and containers should be clean, free of dust, residues of previous mixtures and/or other building materials, etc. to not adversely affect the setting time and the mechanical properties of the product.

Depending on the desired consistency, mix 25 Kg (1 bag) of **THERMOCEM®** with 8.25 – 9.25 L of clean potable water.

Use a low-speed electric stirrer or a concrete mixer for the preparation of the mortar. Pour the appropriate amount of clean water, into a suitable mixing container and while stirring, add the proportional quantity of dry powder.

Mix for at least 3 minutes, until a homogeneous, free of lumps mixture is obtained and the desired consistency is achieved. The mixture can remain workable (pot life) for at least 4 hours, depending on the weather conditions. Stir the mixture regularly to remain workable but do not add any additional water. In case the mixture has started to set before it is used, then dispose immediately without using it. Do not add additional water to the mixture for any case.

### APPLICATION CONDITIONS

Use **THERMOCEM**<sup>®</sup> only at temperatures between +5°C and +35°C. During periods of low temperatures (5 – 10°C), it is advisable that warm water (approx. 30°C), is used for the mixing and if possible, the application to be performed during noontime. On the contrary, use cool water (approx. 20°C), for the mixing during high temperatures (up to 35°C) and if possible, the application to be performed in the coolest hours of the day (early in the morning or late in the afternoon hours) avoiding the direct sunlight.

### APPLICATION

**THERMOCEM**<sup>®</sup> is applied in layers of 20 mm each.

After applying the guides in the desired thickness, apply **THERMOCEM**<sup>®</sup> using the regular plastering techniques as for all conventional cement renderings. When additional layers are desired, while **THERMOCEM**<sup>®</sup> is still fresh, embed an alkaline resistant net of 110 – 120 g/m<sup>2</sup> weight and 10x10 mm mesh size, using a metal trowel. Immediately apply a thin layer of **THERMOCEM**<sup>®</sup> and comb it horizontally with a triangular notched trowel. Allow 6 – 8 hours to dry and apply the next layer of **THERMOCEM**<sup>®</sup> within 24 hours from previous layer. Level the final layer using an aluminum levelling bar and a sponge or wooden float to prepare the substrate for finishing mortars. After curing, **THERMOCEM**<sup>®</sup> is ready to be smoothed out with **THERMOCEM**<sup>®</sup> FINISH, PELELITE FINISH or PELEMURA<sup>®</sup> (interior surfaces only) or WATERPROOF FINISH, ULTRA MIX, EXTERIOR PELEMURA<sup>®</sup>, (for interior and exterior surfaces). Also, the surface can be waterproofed with cementitious waterproofing mortar, PELELASTIC PE50, or overlaid with ceramic tiles and natural stones using PELECRETE<sup>®</sup> adhesives.

For bricklaying, apply **THERMOCEM**<sup>®</sup> using the same techniques as with conventional mortars. Joints between bricks should not exceed 10 mm.

### CLEANING OF EQUIPMENT

Clean all tools and mixing equipment thoroughly with plenty of water after completion of work, while the mixture is still fresh. In case that the mixture has been set, then tools can be cleaned only by mechanical means

### REMARKS / LIMITATIONS

- Use only fresh, clean, potable water for both mixing and cleaning.
- Avoid using material which was stored in open bags for a long period of time.
- Never add water or new material to the mixture which has started to set to improve the workability.
- Do not add cement, gypsum, sand or any other materials to the supplied product, as this may negatively affect the final properties of the product.
- Avoid using the product under extreme weather conditions (strong winds, direct sunlight etc.).
- Do not use **THERMOCEM**<sup>®</sup> for concrete repairing of structural elements such as columns, beams, roof slabs etc. In such cases, use RM40.

### PACKAGING

25 Kg multiwall paper bags (one layer of which is made of PE-HDPE) and 5 Kg PE bags.

### STORAGE

**THERMOCEM**<sup>®</sup> in 25 Kg packaging can be stored for 3 months and in 5 Kg packaging for 12 months from production date, in its original, unopened packaging in dry conditions. The storage place must be covered and protect the product from direct sunlight, water, and moisture, while the product must not be in direct contact with the floor.

- The product contains cement, which reacts as alkaline with water, moisture, sweat and/or other body fluids so it is classified as irritant. Follow normal precautions as with all cementitious materials and products.
- Harmful in contact with skin.
- Harmful if inhaled.

- Harmful if swallowed.
- May cause respiratory irritation.
- Keep out of reach of children.
- Wash body and clothes thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear respiratory protection.
- Please refer to Safety data Sheet for more information and advice regarding the safe handling, storage, use and disposal of the material.

**Note 1:** All Technical Data provided on section “Technical Characteristics” are based on laboratory trials and tests, under conditions which may significantly differ from the ambient application conditions. Therefore, the actual technical characteristics may vary due to conditions or circumstances beyond company’s control.

**Note 2:** The information provided by our Technical Data Sheets or given by our employees, agents or distributors concerning the use of our products, is based upon extensive research and experience and are provided in good faith in order to help you. We guarantee the consistent high quality of our products; however, as we have no control over site conditions of the executions of work, we cannot accept any liability for any loss or damage, which may arise as a result thereof.

**Note 3:** All cement-based products, must be stored in dry sheltered places, on wooden pallets. Even under these circumstances, the products are influenced by the atmospheric moisture after a period of time. Since this period is not defined or standard, we strongly advise our customers not to use hardened products or if, generally, its quality due to storage is uncertain.