



## BASEFORTE® PLANOMIX CAM



Lightweight and thermally insulating premixed screed underlayment based on fine expanded polystyrene beads. Certified recycled content: 15%.

### Product description

Premixed lightweight screed based on selected hydraulic binders and closed-cell expanded polystyrene beads, perfectly spherical in shape with a maximum particle size of 2 mm and high thermal insulation performance.

The EPS beads are treated with a specific additive system that ensures a homogeneous mix and prevents flotation of the expanded polystyrene during mixing and application.

Suitable as a lightweight underlayment for embedding pipes and service installations, and for the construction of single-layer screeds suitable for the direct installation of ceramic floor coverings using cementitious adhesives (see application specifications below).

Certified recycled content: 15%.

### Area of use

indoor- outdoor

### Intended use

Residential and commercial construction

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## Applications

Lightweight underlayment fills for embedding pipes, conduits and building service installations.

Substrate for the installation of ceramic floor coverings using cementitious adhesives in residential buildings (please consult the Technical Department of Fornaci Calce Grigolin S.p.A. before application).

Lightweight underlayment for the preparation of substrates incorporating underfloor heating systems in residential buildings.

Lightweight and thermally insulating screeds, with or without slope for drainage.

Thermal insulation layers for pitched and flat roofs, suitable for the direct application of waterproofing systems, including:

Hot-applied bituminous membranes

Cold-applied bituminous membranes

Cold-applied synthetic waterproofing membranes

Solvent-free liquid waterproofing membranes

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## Compatible Substrates

Concrete substrates

Cement-based subfloors and screeds

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## Substrates Requiring Special Attention

Do not apply on:

- substrates affected by rising damp (capillary moisture).
- cracked substrates.
- mechanically weak or friable substrates.
- unstable substrates.
- substrates that are insufficiently cured.

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## Requirements for the Direct Installation of Ceramic Floor Coverings

Suitable for interior applications only and exclusively for residential buildings.

The screed must be fully bonded to the underlying cement-based substrate.

Minimum screed thickness: 50 mm.

Ensure maximum compaction during screed installation.

Remove any expanded polystyrene beads present on the screed surface before installing the floor covering.

Ceramic tiles shall be installed using C2-class cementitious adhesives in accordance with the applicable standards.

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## Compatible Floor Coverings

Ceramic floor coverings: Single-fired ceramic tiles, Double-fired ceramic tiles, Majolica tiles, Terracotta tiles, Stoneware tiles, Porcelain stoneware, Marble-effect porcelain stoneware

## Screed Types

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BONDED SCREED</b><br>(Minimum thickness $\geq 50$ mm) | Bonded screed installed in direct contact with the underlying cement-based substrate.<br>To ensure perfect adhesion between the screed and the substrate, thoroughly clean the surface, removing all dust, debris and loose particles.<br>Immediately before placing the screed, lightly dampen the substrate and apply a bonding slurry prepared by mixing 2 kg of PRG 10, 3 kg of cement and 1 litre of water.<br>The screed must be placed onto the fresh bonding slurry using the “fresh-on-fresh” application technique. |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Application Conditions

from  $+5^{\circ}\text{C}$  to  $+35^{\circ}\text{C}$

## Mixing Equipment

- Continuous screw mixer
- Automatic pressure pump
- Rendering machine suitably equipped for lightweight screeds
- Drum mixer (tilting mixer)

## Consumption

Approx. 10 litres/m<sup>2</sup> per cm of thickness

## Specification

Supply and installation of a lightweight premixed screed based on fine expanded polystyrene beads, featuring high thermal insulation performance ( $\lambda = 0.08 \text{ W/m}\cdot\text{K}$ ) and a certified recycled content of 15%, such as PLANOMIX CAM manufactured by Fornaci Calce Grigolin S.p.A. The material shall be installed in accordance with good construction practice to produce a perfectly level screed surface. Mixing may be carried out using a drum mixer, continuous screw mixer, automatic pressure pump, or a suitably equipped rendering machine. The screed shall be applied at thicknesses ranging from 50 mm to 120 mm. Greater thicknesses may be achieved after 4 days, subject to evaluation of the need for suitable reinforcement mesh; however, the overall screed thickness shall not exceed 200 mm. The screed shall be isolated from all vertical building elements, including walls, columns and pillars, by installing a suitable compressible perimeter strip around the entire perimeter before casting. The material shall be compacted and levelled using a metal straightedge and subsequently finished with a float or metal disc to obtain a closed, compact and mechanically resistant surface. Consumption is approximately 10 L/m<sup>2</sup> per cm of thickness, depending on the degree of compaction achieved during installation.

## Warnings

Apply only on substrates that are clean, sound, compact, fully cured, crack-free, stable and free from rising damp (capillary moisture). Do not install on substrates exposed to direct sunlight, with standing water, or in the presence of ice or frost.

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Strictly comply with the specified mixing water dosage. Excess water may result in extended drying times and reduced mechanical performance of the screed.

When mixing with a drum mixer, introduce approximately 50% of the required water first, then gradually add the premixed product. During mixing, add the remaining water and continue mixing until complete hydration and a homogeneous consistency are achieved.

Do not use as an underlayment for applications subject to exceptionally heavy loads or severe mechanical stresses.

Provide a suitable reinforcing mesh for load distribution:

- In areas containing embedded pipes, conduits or service installations within the screed.
- Where screed sections of varying thickness are constructed.

Protect the screed for at least 48 hours after installation from rain, frost, rapid evaporation, direct sunlight and strong air currents.

Climatic conditions and screed thickness may significantly affect the final mechanical performance as well as the setting, curing and drying times.

Always consult the Safety Data Sheet (SDS) before use to ensure safe and correct handling and application of the product.

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## Packaging

40-litre paper bags

44 bags per pallet

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## Storage

Shelf life: 6 months. Store in a cool, dry and well-protected area. Keep the packaging unopened and undamaged. Use the product before the expiry date indicated on the bag.

The reported data refers to Quality Control tests in standard environmental conditions. Practical applications in the construction sites may detect significantly changed data, depending on operating conditions, so the information on the Card is only indicative because the user must always check its suitability for intended use of the product by taking responsibility for the use. Fornaci Calce Grigolin S.p.A. reserves the right to make technical changes of any kind without prior notice.

## TECHNICAL DATA

### PREMIXED POWDER

|                            |                       |
|----------------------------|-----------------------|
| Appearance                 | Grey premixed powder  |
| Solid content              | 100%                  |
| Particle Size Distribution | 0 – 2.0 mm            |
| Bulk Density of the Powder | 300 kg/m <sup>3</sup> |

### FRESH MORTAR

|                            |                          |
|----------------------------|--------------------------|
| Mixing water               | 5,8 – 6,3 litres per bag |
| pH mix                     | 12                       |
| Fresh Mortar Properties    | 330 kg/m <sup>3</sup>    |
| Mixing Time (Drum Mixer)   | 5 - 8 minutes            |
| Maturing Time (Slake Time) | 0 minutes                |
| Pot life                   | 40 minutes               |

## PERFORMANCE REQUIREMENTS

| Hardened mortar density  | 315 kg/m <sup>3</sup> |                         |
|--------------------------|-----------------------|-------------------------|
| Characteristic           | Test Method           | Performance             |
| Flexural strength        | EN 1015-11            | ≥ 0,9 N/mm <sup>2</sup> |
| Compressive strength     | EN 1015-11            | ≥ 1,6 N/mm <sup>2</sup> |
| Thermal conductivity “λ” | UNI EN 12667          | 0,08 W/mK               |
| Reaction to fire class   | EN 13501-1            | Class A2-s1, d0         |

## INSTALLATION REQUIREMENTS

|                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                             |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Structural Joints (UNI 11493-1)                                                                                                                                                                                                                                                                                       | Structural joints must be strictly respected and therefore maintained unchanged through both the underlayment/screed and the subsequent floor covering.<br>Where appropriate, the use of prefabricated movement joint profiles is recommended to ensure the continuity and functionality of the joint throughout the flooring system.                                                                       |        |
| Perimeter Joint (UNI 11493-1)                                                                                                                                                                                                                                                                                         | A perimeter joint with a minimum width of 8 mm shall always be provided by installing a suitable compressible material of adequate height and thickness.<br>The perimeter joint shall ensure that the screed remains completely independent from vertical building elements such as walls, columns, pillars and thresholds, allowing for dimensional movements and preventing the transmission of stresses. |        |
| Walkability                                                                                                                                                                                                                                                                                                           | 24 – 48 hours                                                                                                                                                                                                                                                                                                                                                                                               |        |
| Waiting Time Before Installation                                                                                                                                                                                                                                                                                      | Self-levelling compounds or cementitious smoothing layers                                                                                                                                                                                                                                                                                                                                                   | 4 days |
|                                                                                                                                                                                                                                                                                                                       | Ceramic tiles                                                                                                                                                                                                                                                                                                                                                                                               | 4 days |
| The stated waiting times refer to a 50 mm thick layer applied over an absorbent substrate and cured at +20°C and 50% relative humidity. Actual drying and curing times may vary significantly depending on the thickness of the screed as well as the climatic and environmental conditions prevailing during curing. |                                                                                                                                                                                                                                                                                                                                                                                                             |        |
| Service Temperature                                                                                                                                                                                                                                                                                                   | from -20°C to +70°C                                                                                                                                                                                                                                                                                                                                                                                         |        |