



**PELECRETE® FLEX**

**High performance, deformable tile adhesive for interior and exterior surfaces**

**C2TE S1 EN 12004-1**



**Description**

**PELECRETE® FLEX** is classified as C2TE S1, cementitious (C), improved (2) with no vertical slip (T) extended open time (E) and deformable (S1), according to European Standard EN 12004-1, for interior and exterior surfaces.

After mixing with water, it provides a thixotropic mixture of excellent workability, with extended open time. It is ideal for the adhesion of absorbent or not absorbent tiles, natural and artificial stones and wall covering decorative bricks on concrete, cement-based plasters, and well-fixed gypsum-boards or cement-boards. Also, large-size tiles over existing tiles such as ceramic tiles, mosaics, marbles etc. (after chemical cleaning of the existing floor) and large-size tiles over underfloor heating. It is available in white, grey and beige colour.

**Technical Specifications**

Dry density	: ≈ 1.30 Kg / L
Density of mixture	: ≈ 1.60 Kg / L
Mixing ratio (water / PELECRETE® FLEX)	: 7.75 – 8.00 L / 25 Kg
Application temperature	: +5°C min. / +35 °C max.
In service temperature	: -30°C min. / +90 °C max.
Adhesion	: 1.70 N / mm <sup>2</sup>
Adhesion after 30 minutes (extended open time)	: 1.90 N / mm <sup>2</sup>
Adhesion after heating	: 2.20 N / mm <sup>2</sup>
Adhesion after freeze/thaw cycles	: 1.60 N / mm <sup>2</sup>
Adhesion after water immersion	: 1.20 N / mm <sup>2</sup>
Deformability	: ≥ 2.5 and < 5.0 mm
Vertical slip	: ≤ 0.5 mm
Open time	: At least 25 – 30 minutes at 23°C
Pot life	: At least 4 hours at 23°C
Time for small adjustments	: At least 30 minutes at 23°C
Wall grouting	: After 4-8 hours at 23°C
Floor grouting	: After 24 hours at 23°C
Light food traffic	: After 24 hours at 23°C
Normal use	: After 14 days at 23°C (21 days for swimming pools / water tanks)
<b>Consumption</b>	
Indicatively, for mosaics 2-2.5 Kg/m <sup>2</sup> or for ceramic tiles and natural stones 3.5-7 Kg/m <sup>2</sup> depending on the size of the notched trowel. On flat surfaces, 1.4 Kg/m <sup>2</sup> per mm of thickness.	

**Conformity/ Standards**

Conformity of **PELECRETE® FLEX** Technical specifications is verified by Notified body (0370) with Declaration of Performance (DoP) PPL15-PFX C2TE S1-CPR 01/07/2013 and bears CE marking.

### Application Examples

- Adhesion of all types of absorbent or not absorbent tiles (large side of tile must not exceed 120 cm), klinker, gres porcellanato, ceramic tiles, ceramic mosaics, marbles and natural stones on interior and exterior floors and walls, tiles and mosaics in swimming pools, on verandas and balconies.
- Adhesion of medium-size and large-size tiles (large side of tile must not exceed 120 cm) over existing floors overlaid with tiles and natural stones, provided that they are well-fixed and provided that a chemical cleaning with water and 30% of caustic soda is performed beforehand. Very glossy tiles should be sanded first.
- Adhesion of medium-size and large-size tiles (large side of tile must not exceed 120 cm) on floors with underfloor heating.
- Adhesion of tiles on floors subjected to heavy traffic.

**PELECRETE® FLEX** can be used on different substrates, such as:

- Flexible waterproofing systems (PELELASTIC PE50).
- Traditional or ready-mixed cement-based plasters and renders.
- Well-fixed cement-boards and gypsum-boards.
- Cured concrete floors.
- Existing floors overlaid with ceramic tiles, mosaic tiles, marbles, granites, natural stones provided that they are well-fixed and provided that a chemical cleaning is performed beforehand.

### Instructions for Use

#### SUBSTRATE PREPARATION

All surfaces should be clean, free of dust, oil, residues of other building materials etc. before applying **PELECRETE® FLEX**. It is recommended that substrate is sprayed with water, before applying the mixture. In such case, the surface should be allowed to dry after spraying, so as not to inhibit adhesion of **PELECRETE® FLEX**.

Ensure that cementitious substrates will not shrink after applying the tiles. Therefore, during spring or summer, make sure that renders are allowed to cure for at least one week per cm of thickness, and cementitious screeds for at least 28 days before tiling.

#### 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 **PELECRETE® FLEX** with 7.75 – 8.00 L of clean potable water. Mix using a low-speed electric stirrer until a homogeneous, free of lumps mixture is achieved and the right consistency is obtained. Allow the mixture to settle for approximately 10 minutes and then stir again.

The pot life of the mixture is at least 4 hours depending on weather conditions. In this case, stir the mixture regularly, without adding additional water.

#### APPLICATION CONDITIONS

Use **PELECRETE® FLEX** 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

Apply the adhesive using a metal notched trowel. The size of the trowel depends on the size of the tile and the desired final thickness of application. **PELECRETE® FLEX** is spread uniformly using the notched trowel and covered with the tile, before a film is formed on its surface (an indication that the mixture started to set) i.e., within 25 – 30 minutes of its application, depending on weather conditions. The tiles are placed and adjusted to the desired level with light taps to ensure the best coverage with the adhesive.

A minimum 2 mm wide joint should be left between the tiles, while the width of the joint should increase as the size of the tile increases and in general the conditions affecting its expansion. For applications on large surfaces, expansion joints should be created every 16 – 25 m<sup>2</sup> (as symmetrically as possible) and depending on the geometry of the surface. It is recommended that adhesive is applied both to the substrate and to the back of the tile or the natural stone.

## 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

- To repair cement-based substrates, use RM40, before tiling.
- Do not use direct on metal, wooden or plastic substrates.
- Use only fresh, clean water for both mixing and cleaning.
- Avoid using material which was stored in open bags for a long period of time, as it may contain lumps or be contaminated.
- 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.).
- Prime cementitious substrates with slightly weak surface using PELEBOND at a ratio of 2 parts PELEBOND : 1 part clean potable water.

## PACKAGING

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

## STORAGE

PELECRETE® FLEX, 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.

## Health and Safety Measures

- 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 or 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.