

# FLEX 2000

EN 12004  
C2TE S1

## High performance extra flexible tile adhesive

### DESCRIPTION

High performance, polymer modified, extra flexible, cementitious tile adhesive with zero vertical slip and extended open application time. Suitable for fixing tiles of any type and size, on horizontal and vertical surfaces. For indoor and outdoor application.

Classified as C2TE S1 according to EN 12004 with CE marking.

With EUROFINS - Indoor Air Comfort Gold certification which ensures that FLEX 2000 meets the strictest European regulations regarding VOC emissions.

In addition, the product is accompanied by an Environmental Product Declaration (EPD) regarding the environmental impact during its life cycle. (EPD registration number: S-P-09964).

FLEX 2000 is suitable for application on the following types of substrates:

- Concrete and cement mortars
- Coatings & mortars
- Brick masonry
- Cement boards, plasterboards
- Mosaic and existing old tiles (by using the quartz-filled adhesion primer Marmoline Pro Contact)

FLEX 2000 is suitable for application on horizontal and vertical surfaces in the following areas:

- Living areas (kitchens, living room, bedrooms, bathrooms, showers)
- Balconies, terraces, terraces, patios
- Pools
- Warehouses & handling areas
- Office spaces
- Commercial buildings
- Surfaces with underfloor heating system

### APPLICATION FIELDS

FLEX 2000 is suitable for fixing the following types of tiles:

- Tiles of any type, medium to and large dimensions
- Marble and mosaics
- Low absorbency tiles
- Artificial and natural granite tiles
- Glass tiles
- Gres porcelain type tiles
- Decorative stones, natural or artificial

### CHARACTERISTICS/ ADVANTAGES

Ideal for fixing absorbent and non-absorbent tiles of large dimensions on surfaces and especially where high adhesion, extra flexibility & moisture resistance is required (old tiles, underfloor heating, pools, plaster boards). Suitable for indoor and outdoor applications.

## PRODUCT INFORMATION

<b>Composition</b>	Portland Cement, aggregates of selected granulometry, special additives and polymer components
<b>Colour</b>	Off-white powder <i>(Color tone variations may occur between batches, as the raw materials include crushed white Dionyssos marble aggregates, which naturally shows fluctuations in shade)</i>
<b>Packaging</b>	<ul style="list-style-type: none"> <li>• 25 kg paper bag - 1500 kg pallet (60 paper bags)</li> <li>• 5 kg plastic bag - Pallet of 960 kg (48 cartons of 4x5 kg)</li> </ul>
<b>Storage Conditions</b>	In the original, closed, sealed and indestructible packaging, protected from direct sunlight and frost and at temperatures from +5°C to +35°C
<b>Shelf life</b>	12 months from the date of production in unopened package

## TECHNICAL CHARACTERISTICS

<b>Specific gravity of wet mortar:</b>	~ 1.55 kg/lit (+20°C)	
<b>Slip:</b>	≤ 0.5 mm	(EN 1308)
<b>Adhesion strength</b>		
<i>Average values of production quality control results :</i>		
<b>On concrete after 28 days:</b>	1.80 N/mm <sup>2</sup>	(EN 1348)
<b>After heating at 70°C:</b>	1.60 N/mm <sup>2</sup>	(EN 1348)
<b>In water:</b>	1.30 N/mm <sup>2</sup>	(EN 1348)
<b>After 25 cycles of freezing – thawing:</b>	1.40 N/mm <sup>2</sup>	(EN 1348)
<b>Open time for application:</b>	30 min	
<b>Time for minor corrections:</b>	10 min	
<b>Deformation:</b>	> 2.5 mm (S1)	(EN 12002)

## APPLICATION INFORMATION

<b>Substrate temperature</b>	+5°C / +35°C
<b>Environmental temperature</b>	+5°C / +35°C
<b>Mixing ratio</b>	~7.0 lt water/bag 25 kg
<b>Maximum application thickness</b>	10 mm
<b>Consumption</b>	2.5 – 4.0 kg/m <sup>2</sup> , depending on the levelling of the surface, the size and the type of tile
<b>Grouting</b>	On floor: ~24 h at +20°C On walls: ~12 h at +20°C

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

Check that the substrate is clean, dry and free from loose particles and other materials. If the substrate is unstable or crumbles, then it is recommended to prime the surface with MARMOLINE MST 11 acrylic water based primer.

### MIXING

Mix well, with a low-speed electric stirrer, one bag 25 kg of FLEX 2000 with around 7 Liters of clean water until a homogeneous, lump-free mixture is obtained. Leave the mixture to set for 5-10 minutes and stir again for 1-2 minutes. Spread with a notched trowel; choose the size according to the type of tile and the substrate.

Tiles must be fixed within 30 minutes after applying the adhesive and before it skins-over.

### APPLICATION

Fix the tiles by applying pressure to them. The adhesive remains workable in the pot for approximately 3 hours, depending on the season, temperature and humidity of the environment. When the adhesive begins to set, stir again without adding water. Proceed to grouting after 24 hours for floors and 12 hours for walls.

### TOOLS CLEANING

Raw material should be removed immediately from the application equipment with water.

Hardened/mature material can only be removed mechanically.

### IMPORTANT NOTES

- The application of the adhesive should be done at temperatures between +5°C and +35°C, without exposure to extreme weather conditions.
- Apply only on stable, well-prepared substrates.
- Do not exceed the recommended maximum amount of mixing water.
- Do not add extra water to adhesive that has already started to set.
- Do not exceed the maximum application thickness. Protect the application surface from frost, wind and direct sunlight for at least 24 hours after application.
- Regarding large tiles, apply adhesive to both the tile and the floor: comb the adhesive towards the small dimension of the tile, perpendicularly to the large dimension of the tile, and fix the tile before the adhesive crusts.

### COMPLIANCE WITH STANDARDS

It has CE marking and Performance Declaration as improved, deformable, normal setting cementitious tile adhesive with reduced slip and extended available time, C2TE S1, according to EN 12004: 2007.

## HEALTH, SAFETY & ENVIROMENTAL PROTECTION

Detailed information and instructions regarding the safe management of the product and in matters of Health & Safety, are provided in the most recent Safety Data Sheet (SDS), copies of which are available on the company's website <https://marmoline.gr/> or upon request.

on the information and instruction given in this Technical Data Sheet.


The Company reserves the right to modify data listed in this Product Data Sheet, with no previous warning. Users must refer to the latest version of the product Technical Data Sheet.

## LEGAL NOTICE

We guarantee the quality of all our products, based on their technical specifications, as described in the Declaration of Performance (CE) and this Technical Data Sheet. Such guarantee refers only to the products that we deliver for use and never to its application or final result, which largely depends on the experience and quality of work of each user and on the application conditions. The user is advised to test the product on a small scale, and if he is satisfied with the result, then to use the product on large scale in his project.

All data stated in this Technical Data Sheet are based on laboratory tests. The really measurable data might differentiate due to conditions that are not subject to our control. The recommendations and implementation instructions must be considered by the user as indicative, and always with given that the product has been traded and traded and stored according to its instructions.

As it is not possible to control the parameters/conditions of its application product in practice, no guarantee is provided for the final result of each application. Consequently, no legal liability of the Company can be established based

 12 DoP: 006 MARMO-CPR	
NORDIA SA 364 Kifissias Av., 15233 Chalandri, Athens, Greece	
EN 12004:2007 + A1:2012 MARMOLINE FLEX 2000 Improved deformable cementitious adhesive with reduced slip and extended open time, for internal or external use	
Initial tensile adhesion strength:	≥ 1 N/mm <sup>2</sup>
Tensile adhesion strength after heat ageing:	≥ 1 N/mm <sup>2</sup>
Tensile adhesion strength after water immersion:	≥ 1 N/mm <sup>2</sup>
Tensile adhesion strength after freeze/thaw cycles:	≥ 1 N/mm <sup>2</sup>
Reaction to fire:	Class A2-s1, d0
Release of dangerous substances:	See product's SDS
see detailed DoP in <a href="https://marmoline.gr">https://marmoline.gr</a>	