



Marble & Stone



White high performance flexible rapid setting variable bed adhesive especially designed for the installation of natural stone under a wide range of service conditions

CLASSIFICATION TO EN 12004

Marble & Stone is a cement-based (C), improved (2), slump resistant, rapid setting (F) adhesive conforming to class C2F.

WHERE TO USE

Marble & Stone is a high quality adhesive for the installation of marble and other natural stone tiles such as limestone, travertine, quartzite and sandstone. The material is also suitable for the installation of other tile types including ceramic, porcelain and terrazzo.

Marble & Stone can be used in interior and exterior areas on walls and floors. It is fully water resistant and therefore suitable for use in wet duty environments such as bathrooms, showers and wet rooms. The product also benefits from a versatile bed thickness ranging from 3-12 mm making it ideal for fixing irregular stone to uneven substrates.

Some application examples

Marble & Stone can be used for tiling to most conventional substrates found in construction.

- Installation of natural stone tiles including translucent tiles provided they are not prone to discolouration or curling.
- Sand:cement and calcium sulphate based screeds including those containing underfloor heating systems.
- Substrates fitted with electric cable undertile heating systems.
- Concrete.

- Gypsum plaster and sand:cement render.
- Masonry work.
- Existing unglazed ceramic or natural stone tiles.
- Plywood overlaid substrates (minimum 15 mm WBP or marine grade).

TECHNICAL CHARACTERISTICS

Marble & Stone is a specially formulated polymer enhanced adhesive based on selected and matched binders, aggregates, synthetic resins and accelerators that develop high bond strength within 3 hours after mixing. This permits floor finishes to be completed quickly. Floors can be grouted and subjected to light foot traffic after 3 hours and are ready to receive pedestrian traffic after 24 hours.

Once cured **Marble & Stone** is fully frost and weather resistant and therefore ideal for use on external walkways, balconies and terraces.

RECOMMENDATIONS

- Do not use to bond tiles to chipboard or direct to timber floorboards, use Mapei **Elastorapid**.
- Do not use on metal substrates, use Mapei **Keralastic**.
- Ensure that gypsum plaster is primed with Mapei **Primer G** diluted 1:1 with water.
- Calcium sulphate screeds must be installed and prepared as per manufacturer's instructions. Ensure

TECHNICAL DATA (typical values)	
Conformity with:	<ul style="list-style-type: none"> - EN 12004 C2F - European UEAtc directive - DIN 18156 - Part 2 - American ANSI A 118.4 - 1992 - Canadian 71 GP 30 M type 2
PRODUCT IDENTITY	
Type:	powder
Colour:	white
Bulk density (kg/m ³):	1,400
Dry solids content (%):	100
Storage life:	12 months in a cool dry place in the original packaging
Hazard classification according to EC 1999/45:	none. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packing and Safety Data Sheet
Inflammability:	no
Customs class:	3824 50 90
APPLICATION DATA (at +23°C - 50% R.H.)	
Mixing ratio:	Marble & Stone 100 parts of powder with 23-26 parts by weight of water
Consistency of mix:	creamy paste
Density of the mix (kg/m ³):	1,500
pH of mix:	> 12
Setting time:	45 minutes
Application temperature range:	from +5°C to +35°C
Pot life of mix:	20 minutes
Open time:	15 minutes
Adjustability time:	5-10 minutes
Ready for traffic on dry substrate:	3 hours
Cure time on dry substrate:	24 hours
Grouting on dry substrate:	3 hours
FINAL PERFORMANCES	
Moisture resistance:	excellent
Ageing resistance:	excellent
Resistance to solvents and oils:	excellent
Resistance to temperature:	from -30°C to +90°C
Flexibility:	moderate
Bonding strength EN 1348 (N/mm ²):	
- after 28 days +23°C - 50% R.H.:	1.5
- after heat ageing:	1.3
- after water immersion:	1.0
- after freeze-thaw cycles:	1.2

that any laitance is thoroughly removed by mechanical abrasion followed by the effective removal, e.g. by vacuum, of all dust created. Prime with Mapei **Eco Prim T**, diluted 1:2 with water or **Primer G**, diluted 1:1 with water. Ensure that the primer penetrates the screed.

- Plywood overlay to existing floor substrates must be a minimum of 15 mm thick and of marine or WBP quality.
- Not suitable for the installation of agglomerate stone or those prone to staining or curling. Please contact the Technical Services Department for further advice.
- Ensure that large tiles and translucent tiles are completely back buttered before installing.

APPLICATION PROCEDURES

Substrate preparation

The substrate must be clean, solid, load bearing, free from cracks and all loose or adhesion inhibiting components (such as e.g. oil, dust, existing paint, contamination etc.) and adequately dry as well as in compliance with recognized technical regulations.

- Concrete sections must be at least 6 weeks old at the time of tiling.
- Heated floor constructions are to be professionally planned in accordance with current technical information and to be appropriately commissioned in line with current standards.
- Existing finishes must be well adhered to the substrate. Remove hollow sounding tiles. Thoroughly clean the substrate with a suitable degreasing agent and remove all adhesion inhibiting components such as dust, contamination, waxes, polishes. Prime with **Eco Prim T**.
- Highly porous cement-based substrates such as aerated concrete are to be primed with **Primer G** diluted up to 1:3 with water dependent on the porosity.
- Calcium sulphate screeds are to be abraded and vacuumed. As a matter of course prime calcium sulphate screeds with the appropriate MAPEI primer **Eco Prim T** (1:2) or **Primer G** (1:1) and water.
- The rear of the tile to be laid must be clean and dry, free from all loose material likely to lead to discoloration and poorly bonded components (such as e.g. dust, rust, slurry from wet cutting etc.).
- Gypsum plaster must be a minimum of 4 weeks old.
- Sand:cement render must be a minimum of 2 weeks old and sand:cement screed a minimum of 3 weeks old.
- Ensure that plywood overlay provides a firm, rigid substrate and that the boards are screw fixed at a maximum of 300 mm

centres in all directions. Stagger board joints and ensure all edges are supported.

Preparing the mix

Place the mixing water (4.6-5.2 litres) into a clean mixing bucket and continually add 20 kg of **Marble & Stone** and mix to a homogenous, smooth, lump free mortar with a suitable stirrer.

After allowing to stand for approx.

2-3 minutes briefly remix the mortar, the consistency should be adjusted to suit the method of fixing, the size of the tile and the type of substrate.

The prepared adhesive can be used for approx. 20 minutes, can take foot traffic after 3-4 hours and can be grouted after 3 hours. Lower temperatures increase and higher temperatures decrease the timings.

Applying the mix

Ensure **Marble & Stone** is applied to the substrate with a suitable notched trowel to a max 12 mm bed of adhesive. 100% coverage of the tile adhesive must be achieved when tiling to floors and walls in wet areas.

When laying translucent natural stone and those sensitive to discoloration it is essential that a contact layer is spread over the rear of the tile to completely cover it, irrespective of installation method. We would however recommend that a trial be carried out to ensure complete compatibility.

In order to achieve an adequate bond frequently check the adhesive for skin formation.

Refrain from wetting the adhesive bed after a skin has formed as this process will heavily impede the adhesion bond (water acts as a separating film).

If necessary, adjustments can be made to the tiling within 5-10 minutes.

Protect the wet adhesive for a minimum of 3 hours from water and 24 hours from frost and direct sunlight.

Laying the Tiles

It is not necessary to wet the tiles before setting; if however the backs are very dusty, they should be wiped over with a slightly wet sponge.

Grouting

Tile joints can be grouted 3-4 hours after application 'depending on substrate and tiles used' MAPEI **Keracolor FF** or **Ultracolor Plus** are highly recommended for this purpose.

Cleaning

Adhesive, whilst in the fresh state, can easily be removed from hands and tools with plenty of water. Once cured **Marble & Stone** can only be removed mechanically.

Sealing

Movement joints should be installed in accordance with BS5385 Part 5 2009 and accommodate the anticipated movement. Use a suitable MAPEI sealant such as **Mapesil LM** or a pre-formed section.

CONSUMPTION

- Ceramic tiling, mosaics and small size tiles (trowel no. 4): 2 kg/m².
- Normal size tiles (trowel no. 5): 2.5-3 kg/m².
- Large sizes, floors, exteriors (trowel no. 10 or larger): from 4 kg/m².
- Consumption figures are given as a guide only. Thicker adhesive beds will require more product.

PACKAGING

20 kg paper bags.

STORAGE

Marble & Stone should be stored in a cool dry place, where it will have a maximum shelf life of 12 months.

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Marble & Stone contains cement which, when in contact with sweat or other bodily fluids, produces an irritant alkaline reaction and allergic reactions to those predisposed. It is recommended to use gloves and eye protection.

For further and complete information about safe use of our product please refer to our latest version of the Material Safety Data Sheet.

FOR PROFESSIONALS.

WARNING

Although the technical details and recommendations contained in this data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application; in every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Disposal

Completely empty the packaging. Dispose of the packaging and product residues in accordance with your local authority guidelines.

Please refer to the current version of the Technical Data Sheet, available from our web site www.mapei.com

All relevant references for the product are available upon request and from www.mapei.com