

MAPESTONE TFB 60

Pre-blended mortar for installation screeds for architectural stone flooring, exposure classes XF4 and XS3, with high compressive strength and good resistance to freeze-thaw cycles, de-icing salts and seawater



PRODUCT DESCRIPTION

Mapestone TFB 60 is a pre-blended mortar used to create screeds for the installation of external block stone paving and road finishes suitable for vehicular traffic.

Mapestone TFB 60 is a complementary product of the **Mapestone** system, that generates architectural stone paving with high durability even in environments subject to rain, to freeze and thaw cycles in the presence of de-icing salts and seawater (environmental conditions classified by EN 206 standard as XF4 and XS3).

WHERE TO USE

Mapestone TFB 60 is used to make installation screeds for natural stone architectural flooring suitable for public areas, roads, pavements, parking lots, pedestrian crossings, roundabouts and speed humps. **Mapestone TFB 60** is suitable for installing:

- small blocks;
- smoller bricks;
- cobblestones;
- slabs;
- blocks;
- precast elements;
- self-locking blocks



An example of a road hump at a pedestrian crossing



An example of a traffic roundabout



An example of a street for vehicular use

TECHNICAL CHARACTERISTICS

Mapestone TFB 60 is a pre-blended mortar made from special binders, selected aggregates in a granulometric curve (maximum size of inert 3.5 mm) and specific admixtures.

Installation screeds made from **Mapestone TFB 60** are resistant to freeze-thaw cycles, de-icing salts, and seawater (exposure classes XF3, XF4 and XS3) and have high mechanical strength (> 60 MPa).

Mapestone TFB 60 is easy to use in that it only needs to be mixed with water. This means that dosing errors for the binder and the choice of aggregates by the user are avoided, errors which would otherwise compromise the initial and final characteristics of the hardened screed.

Mapestone TFB 60 may be prepared in either a plastic or “no-slump” consistency, depending on the type of material to be installed.

Strength (EN 13892/1-2)	Compressive strength (MPa)	Flexural strength (MPa)
after 1 day	> 25	4
after 7 days	> 45	5
after 28 days	> 60	8

RECOMMENDATIONS

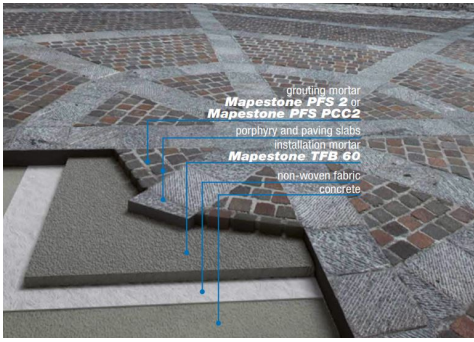
- Only apply **Mapestone TFB 60** if the temperature of the surrounding air, the substrate and the stone is between +5°C and +30°C.
- If **Mapestone TFB 60** is applied when the temperature is between +25°C and +30°C, workability and hardening times are lower.
- Mix **Mapestone TFB 60** with the amount of water required for the type of stone to be laid.
- For installation layers thicker than 7 cm, it is necessary to add 4-8 mm sized gravel (20-25%) in order to give structure to the screed and to allow a proper hydration during the wetting/tamping process.
- Tamp the surface before **Mapestone TFB 60** starts to set to prevent compromising the mechanical characteristics and durability of the flooring.
- Grout the stone with **Mapestone PFS 2**, **Mapestone PFS 2 VISCO** (colour upon request), or **Mapestone PFS PCC 2** pre-blended mortar to guarantee durability of the flooring.
- We recommend including expansion joints, where possible, along kerbs, pavements, around manholes and drains, along the lines of changes in slope and along rainwater run-off troughs. A maximum pitch area of 30 m² is recommended, according to the norm UNI 11714-1.

HOW TO USE

To guarantee the durability of the flooring, the substrate on which it is installed must be designed and prepared according to the stresses and loads the flooring will have to withstand (e.g. a concrete floor slab with electro-welded reinforcement mesh).

- Disconnect the substrate (e.g. a reinforced concrete floor slab with fibers or with electro-welded reinforcement mesh) from the flooring, by using non woven fabric or PVC sheet before setting up the installation screed.
- Form the expansion joints if required.
- Spread on the **Mapestone TFB 60** installation layer:
 - a) mix **Mapestone TFB 60** with the amount of water required, according to the type of flooring to be installed, using a mechanical mixer (e.g. in a bucket with a worm-screw mixing attachment):
 - to lay slabs and bricks, mix **Mapestone TFB 60** with water to obtain a plastic consistency (approximately 9%). The same consistency may also be used for laying straight rows of small blocks;
 - to lay small blocks, smaller bricks and cobblestones, mix **Mapestone TFB 60** with water to obtain a “no-slump” consistency. Mix a 20kg bag with approximately 1.4 litres of water.
 - b) spread on a 5-7 cm thick layer of **Mapestone TFB 60** in small areas at a time;
 - c) make sure that the consistency of the mortar remains the same in order to maintain its characteristics.
- If the flooring is made from slabs, before laying the stone on the fresh **Mapestone TFB 60** installation layer, apply a layer of bonding slurry made from 2kgs of **Planicrete SP** and 3 to 4 kgs of cement on the back of the slabs.
- Lay the stone in the pattern required with a 5 to 15 mm gap around each piece.
- When laying stone on **Mapestone TFB 60** with a “no-slump” consistency, wet the flooring with water to hydrate the installation layer and tamp the surface of the stone.
- Before pouring the grouting mortar into the joints, sprinkle the surface of the stone with water, clean the joints and remove any freestanding water and uneven or loose areas. To form monolithic flooring, we recommend grouting the joints with **Mapestone PFS 2**, **Mapestone PFS 2 VISCO** or **Mapestone PFS PCC 2** the same day as installing the stone (using the “fresh on fresh” technique) before the installation layer has completely set.

- Once grouting has been completed, protect the flooring for at least 12 hours after application if required by the surrounding conditions (high temperatures, rain, low temperatures, etc.) with a suitable protective or anti-evaporation system, to prevent it drying out too quickly and to keep the product at the correct temperature.
- Flooring made using the **Mapestone System** sets to foot traffic after 12-24 hours and to vehicle traffic after just 7 days at +20°C. If the temperature is lower than +15°C, the set to foot traffic and set to vehicle traffic times are considerably longer.



An example of small porphyry blocks and natural stone slabs installed using the Mapestone System



Mapestone TFB 60 mixed to a "no-slump" consistency



An example of an expansion joint



An example of a road with a central reservation in cobblestones



An example of a piazza

CONSUMPTION

The consumption of **Mapestone TFB 60** is approximately 20 kg/m² per cm of thickness.

Cleaning

Clean tools and stone with water before the product has completely hardened.

PACKAGING

Mapestone TFB 60 is supplied in 20 kg bags.

STORAGE

Mapestone TFB 60 remains stable for 12 months if stored in a dry place protected from damp.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapestone TFB 60 contains cement that, when in contact with sweat or other body fluids, produces an irritating alkaline and allergic reactions to those predisposed. It can cause damage to eyes. During use wear protective gloves and goggles and take the usual precautions for handling of chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention. For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet available from www.mapei.com.au.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Consistency:	powder
Colour:	grey
Maximum size of aggregate:	3.5 mm
pH value:	approximately 12 at +20°C in saturated solution
APPLICATION DATA (at +20°C - 50% R.H.)	
Mixing water (%):	7-9 (1.4 - 1.8 litres)
Bulk density of fresh blend (kg/m ³):	2,100 (according to degree of tamping)
Mixing time:	3 minutes for material from a bag
Application temperature:	from +5°C to +30°C

WARNING

Although the technical details and recommendations contained in this product 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 application; 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.

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

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The most up-to-date TDS can be downloaded from our website www.mapei.com.au.

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