

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



BENEFITS AND FEATURES

- Complies with UNI 11714-1 standards
- Resistant to freezing weather, de-icing salts, acid, sea-spray and high temperature variations
- For EN 206 exposure classes XF4 and XS3
- ideal for vehicle traffic, including intense, heavy traffic
- Durable and strong
- Complete sistem with the installation of products of the **Mapestone PFS** range
- Quick setting and quickly ready for use
- Maximum practicality: pre-blended, ready-to-use product. Just add water and mix with a power mixer for 3 minutes

PRODUCT DESCRIPTION

Mapestone TFB 60 is a pre-mixed, ready-to-use powder mortar for the grouting of joints of external natural stone paving and road finishes suitable for vehicular use.

Mapestone TFB 60 is a complementary product of **Mapestone** system, which allows to install architectural stone paving with high durability even in environments subject to rain, to freeze-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 architectural stone pavings suitable for squares, roads, pavements, parking lots, pedestrian crossings, roundabouts and speed humps. **Mapestone TFB 60** is suitable for installing:

- small blocks;
- smaller bricks;
- cobblestones;

- slabs;
- blocks;
- precast elements;
- interlocking 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



An example of a road with a central reservation in cobblestones

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, 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	Flexural strength
after 1 day	> 25 MPa	4 MPa
after 7 days	> 45 MPa	5 MPa
after 28 days	> 60 MPa	8 MPa

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 installed.
- For installation layers thicker than 10 cm, it is possible 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.
- It is recommended to include expansion joints, where possible, along kerbs, pavements, around manholes and drains, along the lines of changes in slope and along rainwater run-off troughs, with a maximum pitch area of 16 m² in exterior. Reference standard: UNI 11714.

HOW TO USE

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

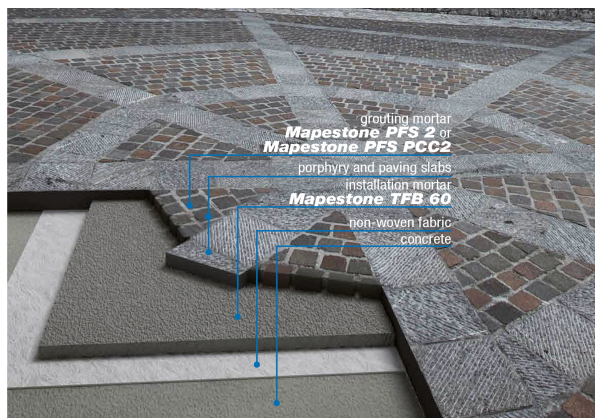
- Uncouple the substrate (e.g. a reinforced concrete floor slab with fibres or with electro-welded reinforcement mesh) from the paving if necessary, by using non-woven fabric or PVC sheet before setting up the installation screed.
- Form the expansion joints if required.
- Spread **Mapestone TFB 60** installation layer:

1. Mix **Mapestone TFB 60** with the amount of water required, according to the type of paving to be installed, using a mechanical mixer (e.g. bucket equipped with mixing auger):
 - to install *slabs and paving bricks*, mix **Mapestone TFB 60** with water to obtain a plastic consistency (approximately 9%). The same consistency may also be used for installing straight rows of small blocks;
 - to install *small blocks, smaller bricks and cobblestones*, mix **Mapestone TFB 60** with water to obtain a “no-slump” consistency (approximately 7%).
2. Spread a 5-7 cm thick layer of **Mapestone TFB 60** in small areas at a time.
3. Make sure that the consistency of the mortar remains the same in order to maintain its characteristics.
 - If the paving is made from slabs, before installing the stone on the fresh **Mapestone TFB 60** installation layer, apply a layer of bonding slurry made from 1 kg of **Planicrete**, 1 kg of water and 3 to 4 kg 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 installing 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 free-standing water and uneven or loose areas.

To form a monolithic paving, 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 “wet on wet” 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

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 25 kg bags and in bulk quantities.

STORAGE

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

SILOS

The silos currently in use contain up to 34 tonnes of product (circa 17 m³) and require the following:

- electrical current: 380 Volt (8 KW/h);
- water: 2 Bar (16 litres/min);
- the silo must be earthed;
- a support slab authorised by the client;
- two parking spaces for each silo.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

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
Reaction to fire (EN 13501-1):	Euroclass A1

APPLICATION DATA (at +20°C - 50% R.H.)

Mixing water:	7-9%
Bulk density of fresh blend:	2,100 kg/m ³ (according to degree of tamping)
Mixing time:	3 minutes for material from a bag
Workability time:	30 minutes at +20°C
Application temperature:	from +5°C to +30°C



An example of a piazza

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

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The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

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

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