



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-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 realize 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 squares, 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.

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 laid.

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

Mapestone TFB 60



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 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
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

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

along rainwater run-off troughs. A maximum pitch area of 30 m² is recommended, according to the norm UNI 11322.

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, smoller bricks and cobblestones*, mix **Mapestone TFB 60** with water to obtain a “no-slump” consistency (approximately 7%);
 - 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 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 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 free-standing 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.

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.

This product complies with the prescriptions of Reg. (EC) N. 1907/2006 (REACH) - Annex XVII, item 47.

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

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 Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

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

LEGAL NOTICE

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.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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



Mapestone TFB 60 mixed to a “no-slump” consistency

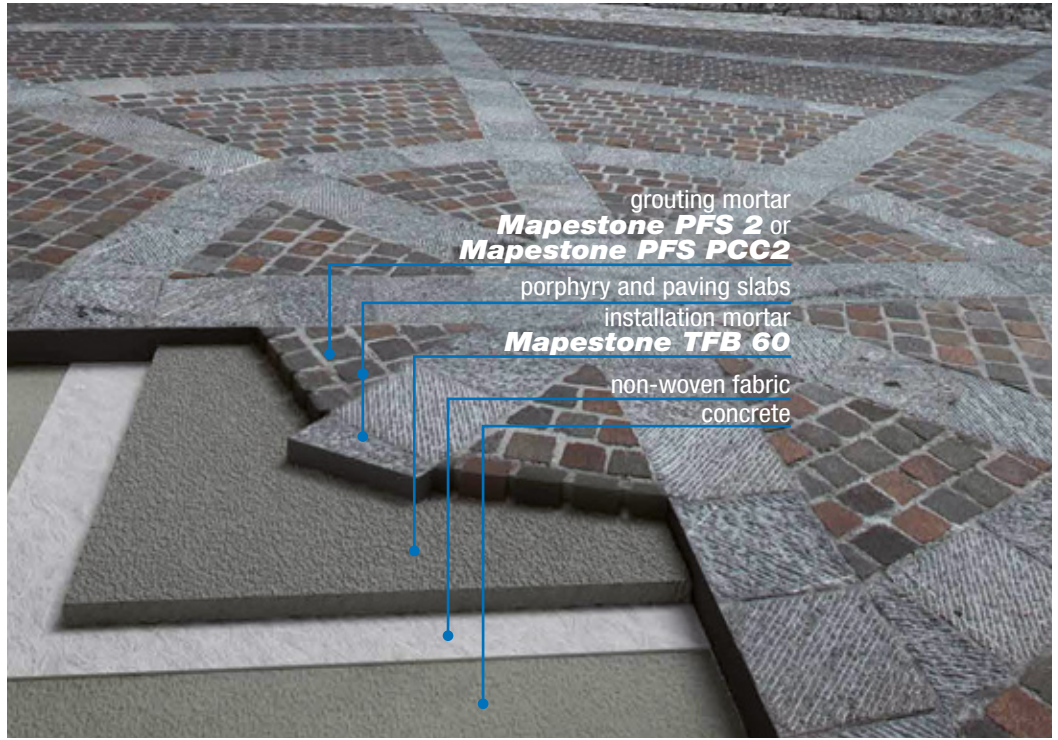


An example of an expansion joint



An example of a road with a central reservation in cobblestones

**Mapestone
TFB 60**



grouting mortar
Mapestone PFS 2 or
Mapestone PFS PCC2
porphyry and paving slabs
installation mortar
Mapestone TFB 60
non-woven fabric
concrete

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



An example of a piazza

