

MAPESTONE PFS 2 VISCO

Low-viscosity ready-mixed mortar with excellent mechanical resistance, resistant to de-icing salts, freeze-thaw cycles and seawater, for grouting architectural paving slabs and blocks in exposure class XF4 and XS3. Available in NEUTRAL and DARK GREY colours



DESCRIPTION OF THE PRODUCT

Mapestone PFS 2 Visco is a ready-to-use ready-mixed powder for grouting slabs and stone blocks pavings suitable for vehicular traffic.

Mapestone PFS 2 Visco is a complementary product of **Mapestone** system that enables the creation of highly durable architectural stone pavings even in environments subject to water saturation, freeze-thaw cycles in the presence of de-icing salts and seawater (environmental conditions classified by EN 206 as XF4 and XS3). The product is available in the NEUTRAL version for architectural pavings with light-coloured slabs and blocks, and in the DARK GREY version, ideal for architectural pavings with dark-coloured slabs and blocks.

Dark Grey

Neutral

The colours illustrated are merely indicative and may vary for printing reasons

WHERE TO USE

Mapestone PFS 2 Visco is used for grouting joints in architectural paving and road finishes made of flagstones, blocks and concrete slabs. The low viscosity of **Mapestone PFS 2 Visco** allows the joints to easily reach the contact surface between the screed and the stone elements, ensuring the absence of air pockets that can form on the underside during installation and improving the adhesion between the stone and the screed.

TECHNICAL CHARACTERISTICS

Mapestone PFS 2 Visco is a cement-based ready-mixed powder mortar made from selected aggregates with a maximum grain size of 2 mm and special additives.

Joints grouted with **Mapestone PFS 2 Visco** have significantly higher performance characteristics than traditional systems and are able to withstand freeze-thaw cycles, the action of de-icing salts and seawater. **Mapestone PFS 2 Visco** achieves high mechanical strengths with excellent abrasion resistance. **Mapestone PFS 2 Visco** is supplied ready-to-use and just needs to be mixed with water, which makes it particularly easy to use. This prevents mistakes in the dosing of binder and aggregate, thus avoiding compromising the initial and final characteristics of the grout.

RECOMMENDATIONS

- Apply **Mapestone PFS 2 Visco** only if the surrounding temperature and the temperature of the substrate and the stones is between +5°C and +30°C.
- **Mapestone PFS 2 Visco** is a ready-mixed powdered mortar; do not add other binders or aggregates.
- Mix **Mapestone PFS 2 Visco** with suitable mechanical equipment (e.g., vertical concrete mixer, drill mixer or buckets equipped with mixing auger) with the correct amount of water (about 3-3.5 litres per bag) for at least 3 minutes.
- Do not mix the product manually.
- **Mapestone PFS 2 Visco** should be applied on the same day as the paving (using the "fresh on fresh" technique), i.e. before the screed has fully set.
- If the product is to be applied on a screed that has been set for one or more days, it is necessary to saturate the substrate with water in order to clean the joints from dust or dirt that could affect the correct adhesion of **Mapestone PFS2 Visco** and apply it before the substrate is completely dry.
- In order to ensure the durability of the paving, use the ready-mixed mortar **Mapestone TFB 60** to create the installation bed for stones.
- It is recommended that suitable expansion and perimeter joints be included along kerbs and pavements, around manholes and storm drains, at the slope change line, and along rainwater collection channels. A maximum pitch area of 30 m² is recommended in accordance with the UNI 11322 standard.

APPLICATION PROCEDURE

To ensure the durability of the paving, the substrate on which the pavement will be installed must be properly designed and prepared (e.g., concrete slab with electro-welded mesh) to withstand the stresses and loads to which it will be subjected. Where existing joints need to be re-grouted, it is the responsibility of the designer to ensure that the causes of the deterioration (e.g. subsidence in the substrate or bedding, poor quality of existing grout) have been completely eliminated before proceeding with the grouting.

Preparation of the joints

- Make sure that stones are wet and joints are clean, with no standing water or crumbling parts, before pouring the product.
- Completely fill the joint according to the size of the stone and for a depth of at least 25 mm.

Preparation of the mix

- Mix with a vertical concrete mixer, drill mixer or bucket equipped with an auger the pre-mixed mortar **Mapestone PFS 2 Visco**, for at least 3 minutes, with 3.0 to 3.5 litres of water per bag (depending on outside temperature) until a smooth, homogeneous slurry is obtained.
- Never mix the product manually.
- Apply the mix within 40 minutes after mixing at +20°C. At higher temperatures, the workability time of the mix is significantly shortened.

Application of the mix

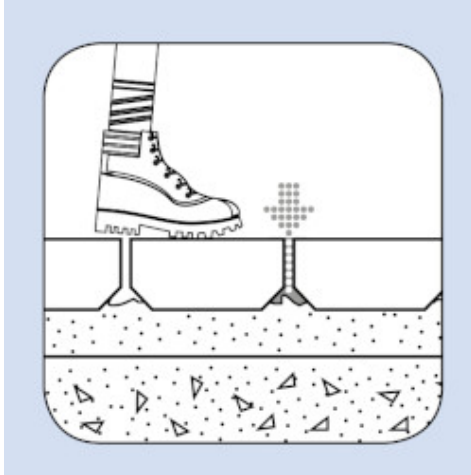
- Apply the mix only at temperatures between +5°C and +30°C.
- The joints should be grouted on the same day as the paving (using the "fresh on fresh" technique), i.e. before the screed has fully set.
- If the product is to be applied on a screed that has been set for one or more days, it is necessary to saturate the substrate with water in order to clean the joints from dust or dirt that could affect the correct adhesion of **Mapestone PFS2 Visco** and apply it before the substrate is completely dry.
- On wet stones, pour the slurry directly into the joints using suitable containers. Joints deeper than 25 mm can also be filled in a single coat.

- Clean the stones as usual before the complete curing of **Mapestone PFS 2 Visco**: mortar residues can be removed with a wet sponge and then cleaning the paving surfaces with a gentle, continuous stream of water or by using an appropriate cleaning machines.
- The grout must be protected for at least 12 hours after application from:
 - high temperatures, e.g., with wet jute bags;
 - rain and frost, e.g., through the use of nonwoven fabric or sawdust under thick nylon sheeting.

The grout sets to foot traffic after 12–24 hours, and to vehicle traffic after just 7 days at +20°C. At temperatures below +15°C, these times can be significantly longer.



Mix **Mapestone PFS 2 Visco** only with water using a mixing drill or concrete mixer



Flagstones grouted with **Mapestone PFS 2 Visco**



Example of pavement protection

CONSUMPTION

The consumption of **Mapestone PFS 2 Visco** for architectural stone paving depends on the format and thickness of stones, as well as on the width and depth of joints.

CLEANING

Tools and stones can be cleaned with water before the products hardens.

PACKAGING

Mapestone PFS 2 Visco is available in 25 kg bags, in the colours, NEUTRAL (**MapestonePFS 2 Visco**) and DARK GREY (**Mapestone PFS 2 Visco DARK GREY**).

STORAGE

Mapestone PFS 2 Visco has a shelf life of 12 months when stored in a dry place away from moisture.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION



Instruction for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.com.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	powder
Colour:	neutral and dark grey
Maximum grain size:	2 mm
pH value:	approx. 12 to +20°C in saturated solution
Bulk density:	approx. 1,750 kg/m ³
Modulus of elasticity:	approx. 30 GPa

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

Mixing ratio:	3.0-3.5 litres per bag, depending on temperature
Density of fresh mix:	2,000 kg/m ³
Mixing time:	3 minutes
Application temperature:	from +5°C to +30°C

Strength	Compressive strength	Flexural strength
after 1 day	15 MPa	3 MPa
after 7 days	45 MPa	5 MPa
after 28 days	55 MPa	8 MPa

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.

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.

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