

MAPESTONE JOINT

One-component, solvent-free, non-flammable polyurethane binder with a characteristic odour for sealing joints between blocks, setts, and cobblestones in flexible and pervious stone architectural road surfaces



BENEFITS AND FEATURES

- Compliant with UNI 11714-1
- Resistant to frost, deicing salts, acids, sea spray, and thermal shocks
- Solvent-free
- Ideal for heavy and high-intensity vehicular traffic
- Noise-reducing
- Pervious

WHERE TO USE

Sealing of previously vibro-compacted architectural paving made of natural stone elements, such as cobblestones, setts and blocks.

TECHNICAL CHARACTERISTICS

Mapestone Joint is a solvent-free, one-component polyurethane binder with a characteristic odour. It allows sealing joints that have already been filled with properly sized aggregates, and to obtain pervious and flexible natural stone architectural paving.

The resin is poured deep down and binds to the aggregates to form a strong yet elastic structure. The result is a system particularly suitable for architectural road surfaces subject to vehicular traffic and significant temperature changes. An additional advantage of this sealing system is its quick readiness for vehicle traffic. The joints sealed with **Mapestone Joint** allow for the creation of pavements that are:

- flexible and pervious;
- particularly resistant to de-icing salts and thermal stress;
- resistant to grass or moss growth;
- resistant to street cleaning operations made with street sweepers;
- resistant to acids;
- noise-reducing;
- not required to have expansion joints;

- ready to traffic quickly, within 48 hours after application at +20°C;
- applied at low pressure (max. 3 bar) with the Zème injector, preventing exposure of people or objects to violent and uncontrolled spills of the product.

RECOMMENDATIONS

- For the application of the product, it is essential that the filling aggregates and the other stone elements are completely dry.
- The curing time to prevent unforeseen reactions caused by water or snow is at least 36 hours.
- The bedding and filling aggregate must be washed, clean, dry and free from contaminants such as sand or sand and cement, oil, moss, dust, etc.

APPLICATION PROCEDURE

Mapestone Joint is applied at the end of the following laying procedures:

- Installation of stone paving elements sized according to the expected loads and laid on a concrete screed or stabilized soil with load-bearing capacity consistent with the intended use. The bedding must be a layer of dry crushed material with a particle size of 3-6 mm or 4-8 mm, a Los Angeles test coefficient $\leq 20\%$, and a thickness between 50 and 80 mm, up to a maximum of 90 mm.
- Vibrocompaction must be carried out after filling the joints. The equipment to be used must be suitable for the thickness of the stone elements. The joints should be preferably filled using the same aggregate as for the bedding. Vibrocompaction can be carried out using water to allow washing of the crushed stone and stone elements. For the application of the **Mapestone Joint**, it is essential that the filling aggregates and the other stone elements are completely dry after the compaction phase. The application depends on the season and weather conditions.
- Additional joint filling using aggregates with a grain size of 2-4 mm.

Mapestone Joint is applied manually using the specific Zème equipment, consisting of a tank with an expanding tank and a low-pressure nozzle (maximum 3 bar).

The product is dispensed with careful oversight into the joints, in a quantity sufficient to avoid spillage onto the stone elements.

Low application pressure is an important factor for the safety of the applicators.



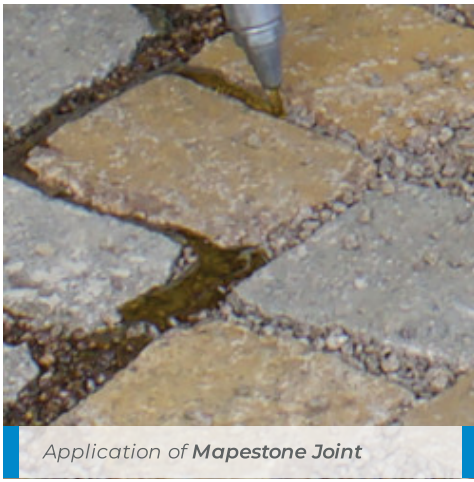
Installation of porphyry setts



Close-up of setts installation



Filling the joints with gravel



CONSUMPTION

The consumption of **Mapestone Joint** depends on the size of the joints and the morphological characteristics of the filling aggregates. As a rough guideline, 1 kg of **Mapestone Joint** is sufficient to seal 1 m² of 8/10 cm setts paving.

CLEANING

In the event of accidental spillage of the product outside the joint, it is recommended to clean it as quickly as possible, first by removing the excess product from the joint, then treating the area with **Mapestone Joint Cleaner**.

The same product is also used for cleaning the nozzles.

A thin blade (cutter type) can be used to remove hardened product from smooth stones.

PACKAGING

25 kg jerrycan, 1000 kg and 200 kg IBC.

STORAGE

The product can be stored for 12 months in its original packaging, in a dry place at a temperature between +10°C and +30°C. Protect from frost.

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:	liquid
Colour:	amber
Dry solids content:	100%

APPLICATION DATA (at +23°C - 50% R.H.)

Viscosity (EN ISO 3219):	between 850 and 1100 mPa.s
Density (EN ISO 2811-1):	1.10 g/cm ³
Skin time and tack-free time:	approx. 3 hours and 30 minutes

APPLICATION DATA (at +23°C - 50% R.H.), mixed with Ø 3/4 mm Trentino porphyry gravel, mass ratio 1:11

Hydraulic index / In situ drainability (EN 12697-40):	38 Lsec/m ²
Compressive strength, 3 days curing (EN 12390-3):	6.0 MPa
Compressive strength, 7 days curing (UNI EN 12390-3):	6.5 MPa
Bond strength by pull-off at +5°C (EN 1542):	1.0 MPa
Bond strength by pull-off at +40°C (EN 1542):	1.5 MPa
Freeze resistance - 100 cycles, in 3% NaCl solution (ACI Technical Paper n. 112 - M57) - mass variation:	< 5%

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

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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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