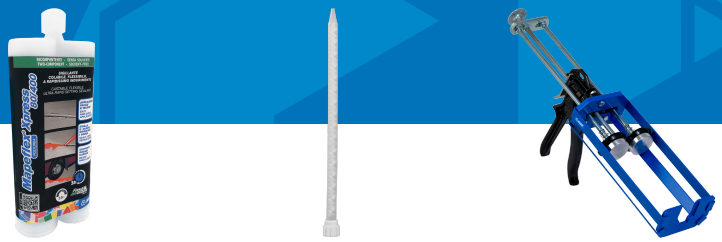
MAPEFLEX XPRESS 80/400

Two-component, ultra-rapid setting, polyurea-based, cold-applied joint sealant





WHERE TO USE

Mapeflex Xpress 80/400 is a deformable, high modulus, ultra-rapid-setting sealant for sealing horizontal joints and cracks in building materials with a limited amount of movement and subjected to intense mechanical stresses or loads from heavy vehicles.
Mapeflex Xpress 80/400 is specifically designed for sealing horizontal joints and cracks in areas where normal operations can only be interrupted for a few hours in order to carry out the repair work. Typical applications are repairs to existing joints, filling seals and sudden cracks, maintenance work and repairs in industrial settings during the night shift and sealing joints in extreme application and service conditions.
Mapeflex Xpress 80/400 is ideal for sealing new joints and for re-sealing existing joints and cracks, including when the edges of joints are not perfectly even and/or straight or have low to medium mechanical properties.
Mapeflex Xpress 80/400 is also used in the preparation of existing concrete or asphalt substrates prior to the installation of resin sports flooring from the **Mapecoat TNS** range.

ADVANTAGES

- Two-component product, also available in a single cartridge: practical and quick
- Self-levelling sealant: fills and seals the entire joint/crack evenly
- Ultra-rapid setting: reduced waiting time after application
- High modulus of elasticity: limited deformation when under load
- High mechanical strength: seals joints/cracks and repairs the edges of joints in one single operation
- Surface can be sanded down: perfectly flat joint
- Reduced waiting times between joint and crack sealing on concrete and asphalt and subsequent resin sports flooring from the **Mapecoat TNS** range

TECHNICAL CHARACTERISTICS

Mapeflex Xpress 80/400 is a two-component, polyurea-based sealant formulated at a ratio of 1:1 by volume. It is applied using a sealant gun and is suitable for use at ambient temperature (no need to heat the two components prior to use).
Mapeflex Xpress 80/400 is highly fluid during application and cures very quickly, even at low temperatures. Once set, excess sealant can be sliced off to create a perfectly flat surface level with the flooring adjacent to the seal.

The curing speed of **Mapeflex Xpress 80/400** makes it suitable for transit after 45 minutes at +23°C, although complete curing, without volume shrinkage, occurs in 24 hours at +23°C.
For limited or non-continuous applications, **Mapeflex Xpress 80/400** is supplied in 600 ml bi-axial cartridges containing the two pre-dosed components in a 1:1 volume ratio. The cartridges are supplied with a static mixer to be used in combination with **Mapei Gun 600 2K**, special sealant gun.
When larger areas need to be filled or sealed, 20 litre buckets are also available (component A and component B) for use with a special extrusion pump.
In both cases the two components are correctly mixed together when they are extruded through the static mixer supplied with the packaging (in the case of cartridges) or separately (in the case of buckets) and no pre-mixing of the two components is required.
Mapeflex Xpress 80/400 can be used for horizontal joints and cracks with a slope of up to 4%.
Mapeflex Xpress 80/400, after complete curing, becomes a slightly deformable elastomer, resistant to water, weakly acidic or basic chemicals, abrasion, sliding and rolling friction, and occasional contact with hydrocarbons.
Mapeflex Xpress 80/400 bonds well to cementitious and metal substrates, bituminous conglomerate and the most common building materials without the need of priming.
Once completely cured, **Mapeflex Xpress 80/400** can be sliced off using special tools or sanded with an abrasive disc so that it is level with the adjacent surfaces.
Mapeflex Xpress 80/400 has a high level of hardness, which reduces the amount of stress acting on the edges of joints when vehicles pass over them and prevents the joint from breaking.
Mapeflex Xpress 80/400 can be applied on dry or slightly damp substrates.

RECOMMENDATIONS

- Do not apply in joints in not fully cured concrete as it is subject to volume shrinkage.
- Do not use on dusty or crumbly surfaces or surfaces contaminated with oil, grease or release agents as this may compromise or reduce adhesion.
- Do not use on bituminous surfaces where the bleeding of oil may be present.
- The colour of the product may change if it is exposed to light, even indirect light. However, this does not affect the performance of the product.
- If possible, do not apply if the surrounding temperature or the temperature of the substrate is less than 0°C. When applying the product in low ambient and/or substrate temperatures, store the product for a few hours in an area with a temperature of at least +20°C.
- Excess sealant removed from the joint surface may leave a dark mark, which can be removed or reduced by light sanding of the surface: carry out preliminary tests.

APPLICATION PROCEDURE

Preparation of the joint

Eliminate any old sealant from the joint by removing the old material or by cutting the edges of the joint and then widening the joint.
The joint or crack must be at least 6 mm wide: widen the joint to suit if necessary.
Accurately clean the surface of the joint using suitable manual or mechanic tools without water, to remove any loose material such as dust, stripping compounds, cement laitance, hardened cement slurry, traces of old sealants and dirt in general.
Before applying the sealant, make sure the surfaces of the joint are dry or slightly damp.

Sizing of the joint

The sealant can only carry out its specific function and last over time if the expected movements in the joint are lower than its elasticity.
Therefore, make sure that the maximum expected movement of the joint does not exceed 5% of its average width: some indicative values in the table below.

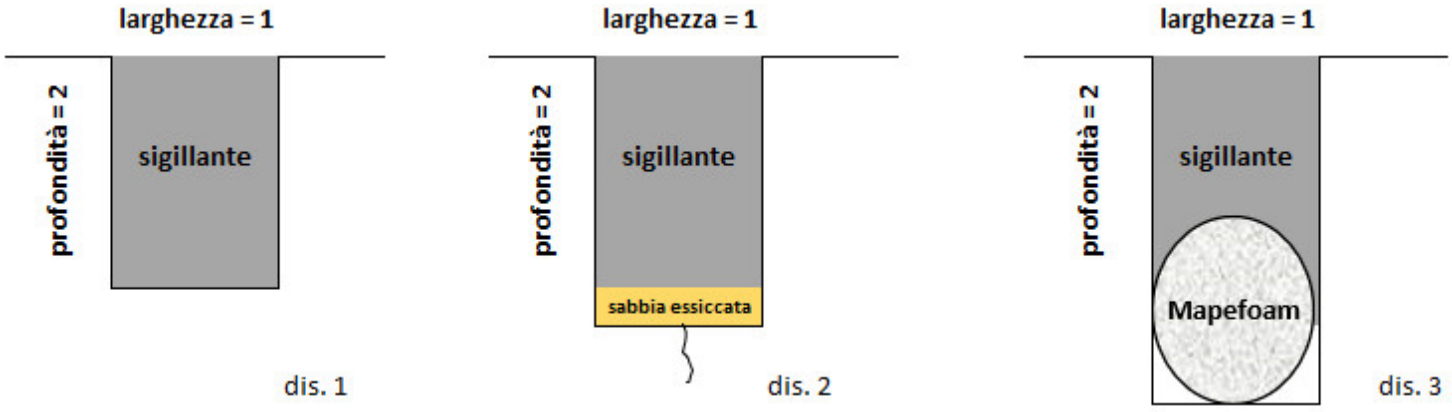
expected movement of the joint	mm	0.5	1	2	3	4
minimum joint width		10	20	40	60	80

Although the sealant can be applied to the full depth of the joint regardless of its width, the ideal depth for high modulus, deformable sealants such as **Mapeflex Xpress 80/400** is twice the width of the joint (see sketch 1): the table below gives a range of values for guidance.

width of joint = 1	mm	5	10	15	20	30	40	50	75
depth of sealant = 2		10	20	30	40	60	80	100	150
pre-filling of the joint		*dried sand* ***Quartz 1.2***					***Mapefoam***		

If necessary, for example in the case of particularly deep joints or cracks, joints with a cracked bottom, etc., set the depth of **Mapeflex Xpress 80/400** by pre-filling the joint with the following materials:

- Loose dried sand (e.g., **Quarzo 1,2** from Mapei, see sketch 2), for sealant backfill depth less than 60 mm
- closed-cell expanded PE foam cord (e.g. **Mapefoam** by Mapei, see sketch 2) for joints/cracks for sealant backfill deeper than 60 mm



Preparation of the product (600 ml cartridge)

Shake the cartridge for 30–40 seconds to homogenize the two components.
Always hold the cartridge vertically with the cap pointing upwards: this operation prevents the product from leaking out of the cartridge, due to its high fluidity.
Remove the cap and screw on the supplied static mixer.
Insert the cartridge into **Mapei Gun 600 2K**, special manual extrusion gun.

Application of the product

Discard the first two shots of sealant to ensure that the two components in the cartridge are properly mixed.
Extrude the sealant in a continuous bead and without interruption into the joint/crack prepared as specified above.
Fill the entire section of the joint and apply just enough sealant so that it remains slightly protruding from the top of the joint (sketch 1).
If the sealant is applied in more than one layer, the second layer should be applied after no more than a few minutes on top of the previous layer so that it is at least 5-6 mm thick and slightly protruding from the top of the joint.
If the static mixer becomes clogged due to an unexpected application interruption, place the cartridge in a vertical position, unscrew and discard the static mixer and replace it with a new one.

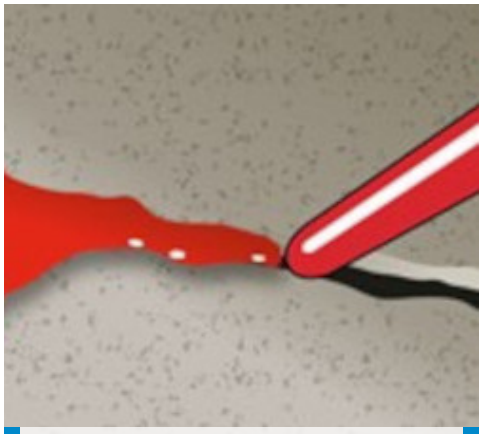
Preparation of the product (20 liter bucket)

Contact Mapei Technical Services Department.

Removing excess product

Excess product protruding from the joint can be removed once the sealant has set by trimming with a special tool between 20 and 30 minutes after application.
Excess sealant may also be sliced off after the time mentioned above, but it will require much more effort and the cut will be less precise.
Slicing off the excess sealant creates a seamless surface without steps between the floor and sealant, which benefits the durability of the joint.

After slicing off the sealant, it is possible to sand it with suitable abrasives.



sketch 1



sketch 2



sketch 3

CLEANING

The cured product can be removed only using mechanical tools. The single components of the product can be removed with solvents. Never use alcohol or water for cleaning.

CONSUMPTION

According to the volume of the hole to be filled.

PACKAGING

Boxes of 8 600ml cartridges with 8 static mixers.
Additional static mixers available (**Mapeflex Xpress Mixers**).

- 20 l bucket Comp. A
- 20 l bucket Comp. B

COLOURS

Gray, black (other colours available upon request).

STORAGE

24 months in their original packaging at a temperature of +5° to +25°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions 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	
Components:	2
Mixing ratio (components A and B):	1 : 1 (by volume)
Consistency:	high flow, fluidliquid
Colour:	gray and black
Viscosity:	1000 mPa·s (comp. B) 1800 mPa·s (comp. A)
Density:	1.00 g/cm^3(comp. A) 1.13 g/cm^3 (comp.B) 1.07 g/cm^3 (comp. A+B)

APPLICATION DATA (at +23°C and 50% R.H.)	
Application temperature:	from +0°C to +40°C
Start hardening time:	90 seconds
Dust dry:	5-7 minutes
Slice off time:	after 20 minutes and within 3 hours
Set to traffic:	after 45 minutes
End hardening time:	7 days

PERFORMANCE CHARACTERISTICS	
Maximum elongation:	400%
Tensile strength:	10 MPa
Modulus of elasticity at 100% elongation:	4 MPa
Shore A hardness:	80
Tear strength:	35 N/mm
Resistance to abrasion (EN ISO 5470-1):	< 500 mg (disk H22, 1000 cycles, 1000 g load)
Adhesion to concrete (EN 1542):	> 1 MPa
Service temperature:	-40/+60°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.
Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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