WHERE TO USE
Realization of an horizontal chemical barrier for new and existing walls, including those of historical or artistic interest, affected by the presence of capillary rising damp.

Some application examples
This system is used to block and/or considerably reduce the rising damp coming from elements below ground level through the capillary pores present in all construction materials, particularly when carrying out renovation work on:

• existing stone, solid brick, tuff and mixed masonry in lagoon areas or near to water courses or the sea;
• rubble masonries, as long as they have been consolidated beforehand by injecting consolidating slurries;
• masonry where previous barriers are no longer efficient, such as bituminous sheets or membranes;
• masonry made from cellular concrete blocks;
• recently constructed masonry, as long as it is made from solid and not perforated bricks;
• existing masonry, including masonry of historical or artistic interest, and the masonry of listed buildings.

TECHNICAL CHARACTERISTICS
Mapestop is a concentrated silane and siloxane-based silicone micro-emulsion which is diluted on site with drinking water before use at a rate of 1:15-19. Once diluted, Mapestop remains stable for approximately 24 hours at normal temperatures. We recommend, therefore, that the mix is applied within 24 hours of preparation by impregnating it slowly into the masonry with low pressure injectors connected to a suitable pneumatic pump. Due to the small size of the particles in Mapestop micro-emulsion (20 to 60 µm), the mixture is able to penetrate very deeply into the masonry with rising damp to form an efficient, long-lasting, horizontal, chemical hydrophobic barrier.

RECOMMENDATIONS
• Use Mapestop within 24 hours of diluting it with water.
• Do not use Mapestop on disjointed and/or uneven rubble masonries. Prior to using the product, all internal cavities must be filled by injecting super-fluid, cement-free, lime and Eco-Pozzolan based slurry from the Mape-Antique line, lime-cement based slurry (such as MapeWall Inject & Consolidate) or cement-based slurry (such as Stabilcem or Stabilcem ARS).
• Do not use Mapestop as a protective, water-repellent treatment for “exposed” masonry or render against water splashing onto the surface (use Antipluviol W or Antipluviol S).
• If the masonry is to be rendered, wait 3-4 weeks after applying the chemical barrier so that any moisture present in the area above the barrier has time to evaporate.
• If there is a high flow of capillary rising damp or a high concentration of soluble salts in the structure to be restored, we recommend applying dehumidifying render from the Mape-Antique or PoroMap line to help to eliminate any small amount of damp or moisture that is not intercepted by the chemical barrier.

• Do not use Mapestop if the temperature is lower than 0°C.

APPLICATION PROCEDURE
Preparation of the substrate
Before injecting the chemical barrier, the type of masonry must be identified to decide which type of installation needs to be carried out.

On disjointed and/or uneven rubble masonries, all internal cavities must be filled by injecting super-fluid, cement-free, lime and Eco-Pozzolan based slurry from the Mape-Antique line, lime-cement based slurry (such as MapeWall Inject & Consolidate) or cement-based slurry (such as Stabilcem or Stabilcem ARS). Use Mape-Antique F21 on walls with smaller cavities or frescoes. Grout and “seal” any cracks and gaps in the face of the wall from where the slurry could seep out with Mape-Antique.

If the masonry is particularly compact, for example stone masonry or masonry made from solid bricks, tuff or blocks of cellular concrete, drill holes in the masonry and inject the mixture as described in the next section. On rendered masonry, only remove the render once the barrier has been injected so that the render holds the mixture injected into the masonry.

Drilling the holes
Drill a series of 15-16 mm diameter holes in the masonry at a downward angle of around 5-10° if the mixture is to be injected using a low pressure injection system, or 12 mm holes if the mixture is to be inserted into the masonry using the slow diffusion system, in which case use the Mapestop Kit Diffusion system. Drill the holes to a depth of around 2/3 the thickness of the wall about 15-20 cm above floor or ground level at a pitch of 20-25 cm.

For walls less than 50-60 cm thick, or which are accessible from one side only, create the chemical barrier on one side only by drilling two staggered rows of holes, while for walls thicker than 60 cm, we recommend creating a barrier on both sides of the wall using the same procedure as described previously. After drilling the holes, clean them out with compressed air to remove all traces of dust and residues of material.

Fasten the diffuser cups or injectors in place, depending on which application method has been selected. For fixing the diffusers follow what indicated in the instructions for use within the packaging of Mapestop Kit Diffusion.

### TECHNICAL DATA (typical values)

<table>
<thead>
<tr>
<th>PRODUCT IDENTITY</th>
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<tbody>
<tr>
<td>Appearance:</td>
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<tr>
<td>Colour:</td>
</tr>
<tr>
<td>Silane/siloxane content (%):</td>
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<tr>
<td>Dimension of particles (µm):</td>
</tr>
<tr>
<td>Density (DIN 51757) (g/cm³):</td>
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<tr>
<td>Viscosity at +25°C (DIN 51562) (mPa·s):</td>
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<table>
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<tr>
<th>APPLICATION DATA OF THE MIXTURE</th>
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<tbody>
<tr>
<td>Mixing ratio:</td>
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<tr>
<td>Consistency of mixture:</td>
</tr>
<tr>
<td>Colour of mixture:</td>
</tr>
<tr>
<td>Application temperature:</td>
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<tr>
<td>Stability of mixture:</td>
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</table>
Preparation of the mixture
To prepare the mixture, pour 15-19 litres of drinking water for each 1 kg can of product into a suitable, clean container and slowly add Mapestop while mixing using a drill with a mixer attachment until the mixture is thoroughly blended. Once the mixture has been prepared as described above, it must be injected within 24 hours.

Injecting the mixture
Inject the mixture into each hole using the gravity method through the Mapestop Kit Diffusion cups or with a low pressure pneumatic pump (max 1 bar) until the area to be impregnated is completely saturated. It is generally better to use the low pressure pump method for particularly damp masonry so that the mixture flows more easily into the pores saturated with water. After injecting the chemical barrier, remove all the injectors or diffuser cups from the holes. Any original render that is still on the wall must be completely removed within 24-48 hours. Wait around 3-4 weeks so that any moisture in the masonry above the area injected with the chemical barrier has time to evaporate off. The amount of time required depends on the amount of damp in the masonry, the thickness of the masonry, the type of material used to build the masonry and the amount of ventilation or direct sunlight to which the structure is exposed. After the drying-out period, fill and “seal” each hole using one of the mortars used previously. If there is a high flow of capillary rising damp or a high concentration of soluble salts in the structure to be restored, we recommend applying dehumidifying render from the Mape-Antique or PoroMap line to help to eliminate any small amount of damp or moisture that is not intercepted by the chemical barrier.

Cleaning
Clean tools used to prepare and inject Mapestop with water.

PACKAGING
1 kg metal can with integrated spout and 10 kg metal drums.

CONSUMPTION
Depending on the absorbency of the masonry. Typical consumption rate: 8-9 kg/m of mixture for a 40 cm thick wall, corresponding to 0.4-0.6 kg/m of neat product.

<table>
<thead>
<tr>
<th>Masonry (cm)</th>
<th>Consumption rate of the mixture (*) (kg/m)</th>
<th>Consumption rate of Mapestop (kg/m)</th>
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<tbody>
<tr>
<td>20</td>
<td>4-4.5</td>
<td>0.2-0.6</td>
</tr>
<tr>
<td>30</td>
<td>6-6.75</td>
<td>0.3-0.45</td>
</tr>
<tr>
<td>40</td>
<td>8-9</td>
<td>0.4-0.6</td>
</tr>
<tr>
<td>50</td>
<td>10-11</td>
<td>0.5-0.75</td>
</tr>
<tr>
<td>60</td>
<td>12-13.5</td>
<td>0.6-0.9</td>
</tr>
</tbody>
</table>

(*) 1 kg of Mapestop + 19 litres of water

STORAGE
12 months in a dry, covered area in its original, unopened packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Mapestop is inflammable. We recommend storing away from naked flames and sparks, to avoid smoking, to prevent the build up of electrostatic energy and to work in well ventilated areas. It is also corrosive and may damage the eyes. It is recommended to use protective gloves and goggles and to take the usual precautions for handling 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