



Mapeproof Swell

Single component hydro-expansive paste supplied in cartridges, used to waterproof and seal cracks in concrete



WHERE TO USE

Mapeproof Swell has been specially developed to form flexible, waterproof seals in cracked reinforced concrete or in prefabricated elements with infiltration of water.

Some application examples

- Sealing pipe-work which passes through concrete.
- Sealing spacers in formwork.
- Sealing cold joints in reinforced concrete structures.
- Sealing where water seeps through cracks in reinforced concrete structures.
- Bonding various types of joints.
- Sealing lights and drainage outlets in swimming pools and tanks.
- Sealing construction joints in concrete walls.

TECHNICAL CHARACTERISTICS

Mapeproof Swell is a single component hydrophilic paste, used in repair and waterproofing operations. It may be applied on damp or uneven surfaces, and may be used at any temperature and with any kind of water which infiltrates or seeps through. On contact

with water, its volume increases and, if well confined, is resistant to considerable hydrostatic pressure.

Mapeproof Swell bonds perfectly to slightly damp surfaces, as long as they are clean and solid.

RECOMMENDATIONS

- Do not apply **Mapeproof Swell** if the surface on which it is to be applied is highly contaminated with acid or solvents. Carefully clean the surface before application.
- Do not use **Mapeproof Swell** on dirty or weak surfaces.

APPLICATION PROCEDURE

Eliminate all dust and loose parts from the surface, and any other material which could compromise the bond of **Mapeproof Swell**. The substrate may be damp, but there must be no water on the surface. The size of the bead of **Mapeproof Swell** which is extruded may be adjusted by cutting the tip on the nozzle according to the diameter required. The normal size of the bead is from 6 to 13 mm. Cut the tip at the first line to obtain this size. With a single cartridge, approximately 3 metres of bead with a diameter of from 6 to 13 mm may be formed. Apply the bead of **Mapeproof Swell** continuously and evenly. **Mapeproof Swell** expands in all three directions, in the direction of the lowest resistance. Therefore, to make sure that **Mapeproof Swell**

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Breaking out structure around a pipe



Piercing the protective membrane on the Mapeproof Swell tube



Applying Mapeproof Swell around a pipe

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	thixotropic paste
Colour:	light grey
Density (g/cm ³):	1.25-1.30
Brookfield viscosity at +23°C (mPa·s):	700,000 (rotor F - 5 RPM)
Dry solids content (%):	90
Solubility:	insoluble in water
Corrosiveness:	non-corrosive

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

Recommended application temperature range:	from +5°C to +40°C
Volumetric expansion in water (%):	minimum 100
Formation of surface skin:	after 180-200 minutes
Polymerisation time:	2 mm every 9 hours
Consumption:	approximately 320 ml per 3 linear metres

FINAL PERFORMANCE

Shore A hardness (DIN 53505):	32
Elongation (DIN 53504) (%):	> 700
Load at break (DIN 53504) (N/mm ²):	2.5
Modulus of elasticity at 100% elongation DIN 53504 (N/mm ²):	0.55
Tear strength ISO 34-1 (N/mm):	10
Sealing of water:	1 ATM

functions correctly, it must be enclosed or injected into a crack or a joint. This product is not suitable for surface only application, and must always be confined. Before pouring on the concrete, wait until the product has completely set.

If **Mapeproof Swell** is applied on steel pipe-work, remove all traces of oil and grease used to lubricate the joints using ethanol.

If cracked concrete requires sealing, break out the sides of the cracks or construction joint using suitable mechanical means, to a depth of at least 6 cm. After removing all dust and rubble, apply **Mapeproof Swell** and then limit its boundaries using a suitable product from the **Mapegrout** line. If water is seeping through, block the flow using **Lamposilex** and then apply **Mapeproof Swell** on both sides, making sure that the boundary formed is at least 5 cm.

Mapeproof Swell is available in cartridges containing 320 ml of the product. To apply **Mapeproof Swell**, cut off the tip of the nozzle according to the size of bead required, and pierce the membrane under the nozzle. Insert the cartridge in an extrusion gun and apply the product directly onto the concrete or element to be sealed.

PACKAGING

Boxes containing 6 cartridges, each one containing 320 ml.

CONSUMPTION

Each cartridge forms approximately 3 metres of **Mapeproof Swell**.

STORAGE

Mapeproof Swell may be stored for up to 12 months in a dry place and at a temperature between +15°C and +25°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeproof Swell may cause sensitization when inhaled for those who are sensible to isocyanates.

While using wear protective gloves and goggles and take the usual precautions for handling chemical products. If the product

comes in contact with the eyes or skin wash immediately with plenty of water and seek medical advice. Use a suitable device for protecting the respiratory track.

Mapeproof Swell is dangerous for aquatic organisms – do not dispose of the product to the environment.

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

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



Mapeproof Swell after application



Confining Mapeproof Swell with a product of the Mapegrout line



**Mapeproof
Swell**



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2063-9-2016 (GB)