



# 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 cement or in prefabricated elements with infiltration of water.

### Some application examples

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

## 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** also 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 rib 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 rib 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 rib with a diameter of from 6 to 13 mm may be formed. Apply the rib 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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Demolition of the 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 <sup>3</sup> ):	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 metres

### FINAL PERFORMANCE

Shore A hardness (DIN 53505):	32
Elongation (DIN 53504) (%):	> 700
Failure limit (DIN 53504) (N/mm <sup>2</sup> ):	2.5
Modulus of elasticity at 100% elongation DIN 53504 (N/mm <sup>2</sup> ):	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 application on surfaces, 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, demolish 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 **Mapegrout T40** or a similar product. If water seeps 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 cc of the product. To apply **Mapeproof Swell**, cut off the tip of the nozzle according to the size of rib 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 c.c.

#### 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** is harmful, and may be harmful if inhaled by those who are allergic. When handling and applying the product, use protective gloves and goggles and apply in a well ventilated area. For further information, please refer to the product Safety Data Sheet.

FOR PROFESSIONALS USERS.

#### WARNING

*While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.*

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**



Mapeproof Swell after application



Confining Mapeproof Swell with Mapegrout T40



**Mapeproof  
Swell**



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