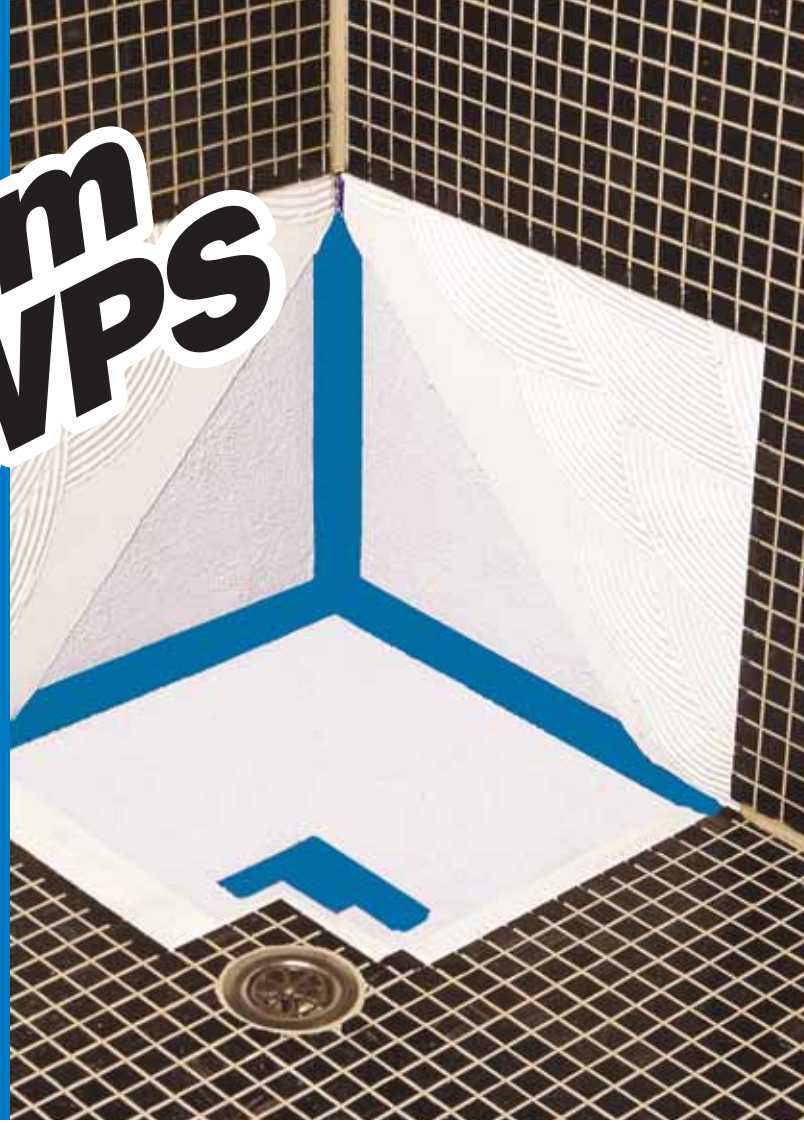


# Mapegum WPS

**Fast drying flexible liquid membrane for interior waterproofing**



## WHERE TO USE

Waterproofing indoor floor and wall surfaces that are not subject to continuous immersion in water, or rising damp. Flexible, anti-fracture membrane. Apply before the installation of ceramic tiles or stone material.

**Mapegum WPS** may be used on the following:

- plasterboard, gypsum or cementitious render, lightweight cement block and marine-plywood;
- cementitious, anhydrite, wooden and magnesite substrates and existing ceramic and natural stone after the application of **Mapeprim SP** primer.

## Some application examples

- Waterproofing walls and floors in bathrooms and shower cubicles before laying ceramic tiles, natural stone and mosaic.
- Waterproofing kitchen walls and floors and work tops before laying ceramic tiles and natural stone.

## TECHNICAL CHARACTERISTICS

**Mapegum WPS** is a ready-to-use, solvent-free, single component, grey-coloured paste with a base of synthetic resins in water dispersion. **Mapegum WPS** has a thixotropic consistency which makes it easy to apply on horizontal, sloping and vertical surfaces. After rapid evaporation of the water content, **Mapegum WPS** forms a flexible membrane which is not sticky and which is strong enough to withstand light pedestrian traffic. It also forms an excellent surface

which bonds perfectly to adhesives used for laying ceramics, marble and natural stone.

The flexibility of **Mapegum WPS** enables it to withstand normal expansion and contraction movements of the substrate due to temperature variations and vibrations. Thanks to the flexibility of **Mapegum WPS**, it acts as an anti-fracture membrane for substrates which are subject to light cracking (< 1 mm).

**Mapegum WPS** is resistant to water, limewater (pH > 12), water which contains chlorides and normal household detergents and cleaning products.

Systems based on the use of **Mapegum WPS** flexible membrane, on which various types of tiles have been laid using MAPEI cementitious-based adhesives (such as **Granirapid**, **Keraflex** and **Adesilex P9**) and water dispersion adhesives (**Ultramastic III**), have been certified for use in damp environments by the following institutes:

- Säurefliesner (Germany);
- Sp Swedish National Testing & Research Institute (Sweden);
- Norwegian Research and Building Institute (Norway).

## RECOMMENDATIONS

- Do not apply **Mapegum WPS** if the temperature is lower than +5°C.
- Create sloping surfaces where necessary to avoid the formation of puddles of water.
- Do not apply **Mapegum WPS** on damp cementitious substrates or on substrates which are subject to rising damp.

# Mapegum WPS



Applying Mapegum WPS on a wall with a roller



Bathroom wall waterproofed with Mapegum WPS and Mapeband



Spreading Mapegum WPS around the drain in a shower cubicle

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

<b>Consistency:</b>	paste
<b>Colour:</b>	light grey
<b>Density (g/cm<sup>3</sup>):</b>	1.45
<b>pH:</b>	9.0
<b>Dry solids content (%):</b>	75
<b>Brookfield viscosity (mPa·s):</b>	130,000 (rotor E - 5 revs)
<b>Shelf life:</b>	24 months in its original, unopened packaging. Protect from frost
<b>Hazard classification according to Directive 1999/45/CE:</b>	none. Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet
<b>Customs class:</b>	4002 11 00

### APPLICATION DATA

<b>Minimum film-forming temperature:</b>	+5°C
<b>Application temperature range:</b>	from +5°C to +35°C
<b>Completely dry (2 mm of thickness) at +23°C:</b>	5 hours
<b>Completely dry (2 mm of thickness) at +5°C:</b>	12 hours
<b>Waiting time before laying coating material:</b>	12-24 hours

### FINAL PERFORMANCES

<b>Resistance to temperature variations:</b>	excellent
<b>Resistance to ageing:</b>	excellent
<b>Resistance to solvents and oil:</b>	good
<b>Resistance to acids and alkalis:</b>	good
<b>Elongation at breakage (DIN 53504) (%):</b>	180
<b>In service temperature range:</b>	from -30°C to +100°C
<b>Water absorption (%) (by weight) 7 days at +23°C + 21 days immersed in water:</b>	10 (Standard UNI 8202/22a)
<b>Vapour permeability (μ):</b>	650 (Standard UNI 8202/23a)

	Acceptable limits according to EN 14891	Performance figures for Mapegum WPS
<b>Impermeability to water under pressure: according to EN 14891-A.7 (1.5 bar of positive lift for 7 days):</b>	no penetration	no penetration
<b>Crack-bridging ability at +20°C according to EN 14891-A.8.2 (mm):</b>	> 0.75	4.5
<b>Initial bond strength according to EN 14891-A.6.2 (N/mm<sup>2</sup>):</b>	> 0.5	1.6
<b>Bond strength after immersion in water according to EN 14891-A.6.3 (N/mm<sup>2</sup>):</b>	> 0.5	1.2
<b>Bond strength after application of heat source according to EN 14891-A.6.5 (N/mm<sup>2</sup>):</b>	> 0.5	1.6
<b>Bond strength after freeze-thaw cycles according to EN 14891-A.6.6 (N/mm<sup>2</sup>):</b>	> 0.5	1
<b>Bond strength after immersion in basic water according to EN 14891-A.6.9 (N/mm<sup>2</sup>):</b>	> 0.5	1.3

Bond values according to EN 14891 measured using Mapegum WPS and C2 type cementitious adhesive according to EN 12004





- Do not apply **Mapegum WPS** on bitumen or asphalt membranes which could bleed oil or plasticisers.
- Do not use **Mapegum WPS** on surfaces which are immersed continuously in water, such as swimming pools, fountains, water tanks, etc. For these applications, use **Mapelastic** or **Mapelastic Smart**.
- Do not use **Mapegum WPS** to cover cracks which are subject to shearing movements.
- **Mapegum WPS** must be protected from abrasion caused by pedestrian traffic by installing ceramic tiles or stone material.

## APPLICATION PROCEDURE

### Preparation of the substrate

Substrates must be solid, clean, dry and free of oil, grease, old paintwork or any other material which could compromise bonding. Thoroughly clean all the mould, loose material etc. from existing surfaces to be waterproofed (existing flooring, old bitumen membranes, asphalt, metallic surfaces, etc.) by washing and brushing them down, or by spraying water and steam.

Cementitious substrates must be stable and dry, and not subject to rising damp.

Substrates which are highly absorbent or gypsum must be pre-treated with **Primer G** (usually diluted with water at a ratio of 1:1 or 1:2 to ensure thorough penetration). Wait several hours until the coating of **Primer G** is completely dry.

Anhydrite or gypsum substrates must be perfectly dry (maximum residual humidity 0.5%), sanded and treated with a coat of **Primer G** or **Primer S**. Existing substrates of ceramic tiles or natural stone must be treated with **Mapeprim SP** primer before applying **Mapegum WPS**.

If a slope has to be created and the base needs to be smoothed off before spreading on **Mapegum WPS**, use one of the recommended MAPEI products.

### Application of the product

**Mapegum WPS** may be applied by trowel,

with a roller, by brush or spray (if required, dilute with up to 5% of water).

The product must be applied evenly in thin coats (approx. 1 mm maximum per coat). Wait until the first coat is dry before applying further coats crossways (1-2 hours according to temperature conditions).

The final thickness of **Mapegum WPS** must never be less than 1 mm, in order to form a consistent, flexible continuous coat. Make sure that there are no gaps caused by imperfections in the substrate.

**Mapegum WPS** is used as an anti-fracture membrane on cracked substrates, we recommend inserting a layer of 4.5x4 mm **Fibreglass Mesh** in the first layer of fresh **Mapegum WPS** to act as a reinforcement (refer to the **Fibreglass Mesh** Data Sheet).

To further improve both elongation at failure and crack-bridging of **Mapegum WPS**, we recommend inserting **Mapetex Sel** large-mesh non-woven polypropylene fabric (refer to the **Mapetex Sel** Data Sheet).

After 12-24 hours from applying the final coat of **Mapegum WPS** (according to temperature conditions), the surface is ready for laying ceramic tiles or natural stone etc. Use an adhesive from the MAPEI range to lay ceramic tiles and natural stone; class C2 if it is cementitious based or class D2TE if it is a water dispersion type, in accordance with Standard EN 12004.

In order to guarantee continuity in the waterproofing coat, we recommend placing **Mapeband**, alkali-resistant rubber tape with felt, between the wall and the floor and between contiguous walls before applying **Mapegum WPS**.

Special **Mapeband** or **Mapeband PE 120** pieces are available to be inserted in correspondence of corners, drains and pipe-work.

**Mapeband** or **Mapeband PE 120** must be bonded to the substrate using **Mapegum WPS** and must be completely embedded in the waterproofing layers.

### Laying the tiles

After applying **Mapegum WPS** wait:

- 12-24 hours on absorbent substrates;
- 4-5 days on substrates which are not absorbent.

Lay the tiles using an adhesive from the MAPEI range (such as **Keraquick**, **Granirapid**, **Adesilex P9**, **Keraflex** or **Ultramastic III**); the width of the joints depends on the size of the tiles to be laid. Grout the tile joints using **Ultracolor Plus**, **Keracolor FF** or **GG** plus **Fugolastic** or **Kerapoxy**, available in a variety of colours. Expansion joints must be sealed using the special MAPEI sealants.

### Cleaning

**Mapegum WPS** may be easily removed while still fresh from tools and surfaces with water.

### CONSUMPTION

The consumption of **Mapegum WPS** is approximately 1.5 kg/m<sup>2</sup> per mm of thickness.



*Positioning the special piece of Mapeband over Mapegum WPS*



*The special piece of Mapeband embedded in the Mapegum WPS*



*End result of a waterproofing treatment using Mapegum WPS and Mapeband*

# Mapegum WPS



Applying Mapegum WPS with a brush



Spreading a coat of adhesive on Mapegum WPS



Laying glass mosaic



## PACKAGING

Mapegum WPS is available in 5, 10 and 25 kg drums.

## STORAGE

24 months in original packaging. Protect from frost.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapegum WPS is not considered a dangerous substance according to

current norms and regulations regarding the classification of preparations. The usual precautions taken when handling chemical products are recommended. The Safety Data Sheet is available upon request for professional users.

PRODUCT FOR PROFESSIONAL USE.

## 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)**