

# MAPEPROOF ESM

Two-component, solvent-free, damp-proof surface membrane



## DESCRIPTION

A two-component, solvent free, pure epoxy resin, used as a moisture vapour barrier on cement-based substrates containing high residual moisture. It is a low viscosity product with high penetration capacity in the porosity of the substrate. Because of the absence of solvents, and very low odour it can be used in inhabited environments (e.g. hospitals, schools, offices, etc).

**Mapeproof ESM** can be applied as a 1 coat system on substrates with moisture up to 92% R.H. or as a 2 coat system up to 97% R.H.

### Mixing

The components should not be mixed until the application is ready to start and should be applied as soon as mixing is completed.

The two components are supplied in pre-measured ratios:

part A: 3 parts by weight;

part B: 1 part by weight.

Mix the two components completely and accurately with a low speed mixer until a uniform mix is obtained.

### Application Procedure 1 - 2 Coat System

#### Power Floated and New Substrates:

- The substrate should be abraded by mechanical means to remove any curing agents or contamination, to assist penetration and adhesion of the membrane.
- The area should then be thoroughly vacuumed to remove all dust and debris.
- Apply **Mapeproof ESM** ensuring it is well worked into the substrate and that complete coverage of the area is achieved at a maximum rate of 13 m<sup>2</sup> per 4 kg unit (depends on the porosity of the sub-floor) and allow to cure (approx. 5 hours).
- When cured, a coat of **Eco Prim T Plus** or **Eco Prim Grip Plus** primer should then be applied within maximum 24 hours (primer drying times vary with ambient conditions i.e. temperature and humidity).
- The levelling compounds should be applied within 24 hours of the primer application.

### Application Procedure 2 - 2 Coat System

#### Sand/Cement and Existing Substrates:

- All existing materials, adhesives, laitance and contamination should be removed prior to preparation work commencing.
- Any cracks in the substrate should be filled with **Eporip**.
- Where the substrate has a textured or profiled finish, **Latexplan Trade** levelling compound should be applied to provide a level surface for the membrane to be applied onto.

- Apply the first coat of **Mapeproof ESM** ensuring it is well worked into the substrate and that complete coverage of the area is achieved at a maximum rate of 20 m<sup>2</sup> per 4 kg unit (depends on the porosity of the sub-floor) and allow to cure (approx 5 hours).
- Apply the second coat of **Mapeproof ESM** at right angles to the first coat, again ensuring complete coverage.
- When the second coat has cured, a coat of **Eco Prim T Plus** or **Eco Prim Grip Plus** primer should then be applied within maximum 24 hours. (primer drying times vary with ambient conditions i.e. temperature and humidity).
- The levelling compound should be applied within 24 hours of the primer application.
- If required, the second coat of **Mapeproof ESM** can be blinded with sharp sand (when still fresh), which removes the need for a primer.
- It is essential that pinhole free coatings be achieved.

### Underfloor Heating - 2 Coat System Only

The screed must be allowed to cure for a minimum 28 day period.

The underfloor heating must be commissioned prior to the installation commencing; it should be turned on to +5°C and the temperature increased by +5°C per day up to a maximum +27°C, run at this temperature for several days then cooled down and switched off for at least 48 hours. Up to a level of 97% RH, 2 coats of **Mapeproof ESM** should be applied.

The heating must then remain off for a further 48 hours (minimum) after completion of the installation, and when turned back on run at a maximum temperature of +27°C in accordance with BS 8203 and BS 5325.

## CLEANING

**Mapeproof ESM** can be cleaned from tools and clothing with ethyl alcohol while the product is still fresh.

## CONSUMPTION

Approx 3.25 m<sup>2</sup> and 13 m<sup>2</sup> 4 kg unit - 1 coat system.

Approx 5 m<sup>2</sup> per 1 kg unit and 20 m<sup>2</sup> per 4 kg unit - 2 coat system.

## PACKAGING

1 kg (part A = 0.75 kg + part B = 0.25 kg);

4 kg (part A = 3 kg + part B = 1 kg).

## STORAGE

24 months in its original, well sealed container stored under normal conditions.

Protect from frost.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website [www.mapei.co.uk](http://www.mapei.co.uk)

PRODUCT FOR PROFESSIONAL USE.

### TECHNICAL DATA (typical values)

#### PRODUCT IDENTITY

part A

part B

<b>Colour:</b>	transparent yellow	transparent yellow
<b>Density (g/m<sup>3</sup>):</b>	1.12	1.00
<b>Brookfield Viscosity (mPa·s):</b>	350 (#1 - rpm 50)	50 (#1 - rpm 50)
<b>Dry solid content (%):</b>	100	100
<b>Storage:</b>	24 months	24 months
<b>APPLICATION DATA</b>		
<b>Mix ratio:</b>	part A: part B = 3 : 1	
<b>Consistency of the mix:</b>	liquid	
<b>Colour:</b>	transparent	
<b>Density (g/m<sup>3</sup>):</b>	1.1	
<b>Brookfield Viscosity (mPa·s):</b>	300 (#1 - rpm 10)	
<b>Application temperature ranges:</b>	from +10°C to +30°C	
<b>Workability:</b>	120 minutes	
– at +10°C:	90 minutes	
– at +23°C:	60 minutes	
– at +30°C:		
<b>Setting time:</b>	5-6 hours	
– at +10°C:	3-4 hours	
– at +23°C:	2-3 hours	
– at +30°C:		
<b>Final curing at +23°C:</b>	7 days	
<b>FINAL PERFORMANCES</b>		
<b>Resistance to abrasion:</b>	excellent	
<b>Resistance to moisture:</b>	excellent	
<b>Resistance to temperature:</b>	excellent	
<b>Adhesion to concrete (N/mm<sup>2</sup>):</b>	> 3 (breaking point of substrate)	

#### **N.B.**

Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that the end users satisfy themselves that the product and conditions are suitable for the envisaged application. No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification. End users should ensure that our latest product data and safety information sheets have been consulted prior to use.

Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.co.uk](http://www.mapei.co.uk)

## LEGAL NOTICE

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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.co.uk](http://www.mapei.co.uk).

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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2912-1-2025 (UK)

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