



# Mapeproof 1K Turbo

**One component, solvent-free, moisture curing and rapid drying polyurethane surface membrane with a very low emission of volatile organic compounds**



## WHERE TO USE

Moisture vapour barrier for cement-based substrates that are not subject to rising damp, but have a residual humidity content higher than the Australian Standard 80% RH up to 95% RH (ASTM F2170 as per AS 1884).

### Some application examples

- Consolidating cement-based substrates that are mechanically weak
- Moisture vapour barrier treatment prior to the installation of PVC, vinyl and timber flooring, to prevent a failure due to excessive residual humidity in the substrate

## TECHNICAL CHARACTERISTICS

**Mapeproof 1K Turbo** is a one-component polyurethane primer that hardens due to the humidity present in the surrounding air and in the substrate.

**Mapeproof 1K Turbo** is characterised by its short set to light foot traffic period and that it quickly loses tackiness allowing timber and resilient flooring to be laid after a very short time (approximately 2 hours in normal conditions relating to both temperature and humidity).

**Mapeproof 1K Turbo** does not contain solvents, is odourless and is non-flammable.

**Mapeproof 1K Turbo** has a very low emission level of volatile organic compounds and can contribute valuable points towards Green Star™ credits.

Due to the absence of solvents and any strong odour, **Mapeproof 1K Turbo** may also be used on sites which

are located close to inhabited areas such as apartments, schools, hospitals, offices etc.

After application and rapid curing of the resin, the substrate treated with **Mapeproof 1K Turbo** becomes more consistent, harder and is resistant to abrasion.

**Mapeproof 1K Turbo** complies with ASTM D 1308-87 standard for the resistance to urine and can be used as a urine barrier.

## RECOMMENDATIONS

- DO NOT dilute **Mapeproof 1K Turbo** with water or solvents
- DO NOT apply **Mapeproof 1K Turbo** on wet surfaces or in the presence of rising damp
- If a smoothing and levelling compound has to be applied, apply **Mapeproof 1K Turbo** so that a thin layer remains on the surface. Apply **Eco Prim T Plus** undiluted when dry
- DO NOT apply **Mapeproof 1K Turbo** on to heated screeds as a vapour membrane. It is suitable as a consolidator only.
- DO NOT apply **Mapeproof 1K Turbo** so that it puddles on the surface of the substrate
- For subsequent levelling applications over 10 mm in thickness and to ensure a good bonding of levelling compounds or adhesives over the surface treated with **Mapeproof 1K Turbo**, apply a second coat and sprinkle a layer of **Quartz 0.9 AU** or clean, dry sand of the right size on the product while it is still fresh. Once **Mapeproof 1K Turbo** has set, any remaining loose sand must be removed prior to further application.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Consistency:	liquid
Colour:	brown
Density (g/cm <sup>3</sup> ):	1.20
Maximum residual relative humidity permitted:	up to 95% R.H.
Water vapour transmission rate (ASTM E 96):	<10 g/m <sup>2</sup> /24 hr
Brookfield viscosity (at +23°C) (mPa·s):	300 (# 1 - 10 rpm)
Dry solids content (%):	100
EMICODE:	EC1 Plus - extremely low emission level
APPLICATION DATA (+23°C - 50% R.H.)	
Application temperature range:	from +5°C to +35°C
Loss of tack:	after 30-40 minutes
Set to light foot traffic:	60 minutes
Final hardening time:	after 2 hours
Waiting time between each coat:	minimum 40 minutes, maximum 2 hours
Waiting time before laying directly with polyurethane or epoxy-polyurethane adhesive:	minimum 2 hours, maximum 24 hours
Waiting time before laying with recommended water based adhesive (Eco-Tack):	minimum 2 hours, maximum 24 hours
Minimum waiting time before successive treatments on final coat saturated with sand:	minimum 2 hours

- Direct timber flooring installations on substrates treated with **Mapeproof 1K Turbo** must be carried out using reactive polyurethane adhesives such as **Ultrabond P990 1K** or **Ultrabond Eco S955 1K**
- If direct bonding PVC sheet use **Adesilex G19**. If direct bonding LVT or rubber use **Ultrabond Eco MS 4 LVT Wall**.

## APPLICATION PROCEDURE

### Preparation of the substrate

The substrate must be clean and free of oil, wax and dirt. New concrete substrates must be cured for at least 28 days. Cracks and surface crazing must be opened and then repaired using **Eporip**.

Any existing curing compounds, laitance and contaminants must be mechanically removed as per AS 1884.

If used for consolidating purposes, make sure that the porosity of the surface is sufficient

to allow **Mapeproof 1K Turbo** to penetrate. If the substrate is excessively smooth, the surface must be abraded in order to open up the pores.

For direct application without mechanical profiling, the surface must be porous, concrete surface profile (CSP) of #2 to #3, and be in pristine condition with no contamination present. If these conditions are not present before the application of **Mapeproof 1K Turbo** the surface must be mechanically profiled using dustless, engineer-approved methods to obtain a CSP of #2 to #3.

### Application of the product

Apply **Mapeproof 1K Turbo** with a roller or brush. One coat can be sufficient over concrete substrates providing there is a continuous dry film.

For more porous substrates (such as screeds), or substrates in poor condition, a second



layer should be applied when the first coat is suitable for light foot traffic.

If the substrate needs to be rectified, or a water based adhesive is to be used, a minimum 3 mm cementitious smoothing and levelling compound must be applied over **Mapeproof 1K Turbo**. Allow approximately 2 hours for the **Mapeproof 1K Turbo** to dry and then apply an undiluted coat of **Eco Prim T Plus** before applying a suitable levelling compound from the MAPEI range.

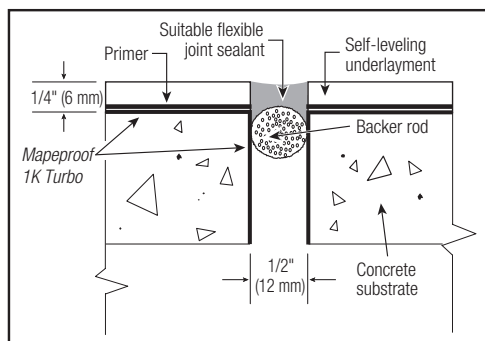
Resilient flooring installations can be directly bonded to **Mapeproof 1K Turbo** using **Adesilex G19** and **Ultrabond Eco MS 4 LVT Wall**.

Timber flooring may be installed directly to **Mapeproof 1K Turbo** with a reactive adhesive such as **Ultrabond P990 1K** or **Ultrabond Eco S955 1K** after at least 2 hours and after no more than 24 hours of its application.

If the timber flooring is to be installed after 24 hours of application it must be protected from contaminants that will affect adhesion. Thoroughly clean before applying the adhesive.

#### For expansion, movement and isolation joint treatment

See the following diagram.



#### Cleaning

**Mapeproof 1K Turbo** may be removed from clothing and tools while still fresh using warm water and detergent. Once set you can use thinners and/or mechanical means to remove.

#### CONSUMPTION

0.1-0.4 kg/m<sup>2</sup> per coat.

#### PACKAGING

10 kg drums.

#### STORAGE

12 months in the original, well-sealed drum stored in a dry, elevated area. Protect from sunlight and frost.

#### SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

For further and complete information about the safe use of our product, please refer to the latest version of the Safety Data Sheet available for download from our website at [www.mapei.com.au](http://www.mapei.com.au).

PRODUCT ONLY 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 at [www.mapei.com.au](http://www.mapei.com.au).

#### LEGAL NOTICE

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This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.

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



**Throwing Quartz  
0.9 AU into wet  
Mapeproof 1K Turbo**



**All loose sand  
removed and final  
surface completely  
saturated**

**Mapeproof 1K Turbo**



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