

MAPEGUARD 2

Premium crack-isolation and sound-reduction sheet membrane



DESCRIPTION

Mapeguard 2 is a next-generation, flexible, thin, 1 mm lightweight, load-bearing, fabric-reinforced “peel-and-stick” crack-isolation membrane. After application, ceramic tile or stone can be installed immediately with any polymer-modified cement-based adhesive. Glue-down timber flooring can also be installed with MAPEI polyurethane adhesives such as **Ultrabond P990 1K** or **Ultrabond Eco S955 1K**.

Mapeguard 2 helps to prevent existing or future in-plane floor cracks (with movement up to 10 mm wide) from transmitting through grout, ceramic tile or natural stone. It also reduces the transmission of impact sound (footsteps, dropped objects, etc.) and airborne sound (voice, TV, etc.) through floors when installed under ceramic tile, stone or timber floor coverings.

WHERE TO USE

- Residential (homes and apartments) and commercial (airports, malls, office buildings, restaurants and galleries) floors, both interior and exterior (with proper drainage).
- Ideal for multi-family or multi-story buildings to reduce noise transmission through floors.

TECHNICAL CHARACTERISTICS

- Dual protection – Provides crack isolation and sound reduction.
- Lightweight – 35% lighter than previous generations of comparable membranes.
- Semi-rigid sheet – Easy to position on floor and cut to size.
- Split-back release film – installs faster than membranes with 1-piece liners.
- White surface – easy to view under lower-light conditions.
- Thin-film adhesive backing – bonds to a variety of substrates.
- Time-saving – prime, peel, stick and then install tile or timber flooring immediately.
- No odour – great for confined spaces.
- Contains post-industrial recycled material

RECOMMENDATIONS

- Do not use over cracks or control joints subject to: out-of-plane movement; or in-plane movement greater than 10 mm. Note: See the “Expansion Joints” section.
- Do not use over substrates containing asbestos, plank wood flooring, presswood, particleboard, chipboard, oriented strand board (OSB), pressure- or oil-treated plywood, Lauan plywood, Masonite, self-stick tile, laminate, metal or fiberglass surfaces, poured epoxy floors or similar dimensionally unstable materials.
- Do not use where excessive substrate moisture and/or where negative hydrostatic pressure exists. The maximum amount of acceptable moisture in a concrete substrate for **Mapeguard 2** is 85% R.H. when tested to ASTM F2170 or 25 g/m² /24hr with ASTM F1869. When moisture vapour emissions are in excess, call MAPEI's Technical Services for recommendations. Do not use on vertical surfaces; under glass tile installations; as a waterproofing or roof deck membrane or wear surface; for submerged applications; or on plywood in exterior applications.
- Do not use on exterior floors with improper drainage (no standing water).
- Do not use **Mapeguard 2** with solvent-based materials.
- Do not use self-leveling products over **Mapeguard 2**.
- Do not use premixed products to set tile over **Mapeguard 2**.

- Do not install moisture-sensitive tile or stone with waterbased setting materials.

Note: On occasion, dimensionally weak natural stone tile that normally would not be categorized as moisture-sensitive (such as travertine, limestone, marble and agglomerates) can exhibit doming, cupping or curling when wet-set or medium-bed mortar methods of installation are used over impervious sheet membranes such as **Mapeguard 2**. For this reason, areas requiring more than 10 mm buildup require the use of a self-leveling underlayment or screed application before installation of **Mapeguard 2**. When installing natural stone, always do a mockup area of the proposed installation and allow materials to reach a full cure to ensure achieving the desired effect. For more information regarding these methods or materials, contact MAPEI's Technical Services before installation or design.

SUITABLE SUBSTRATES

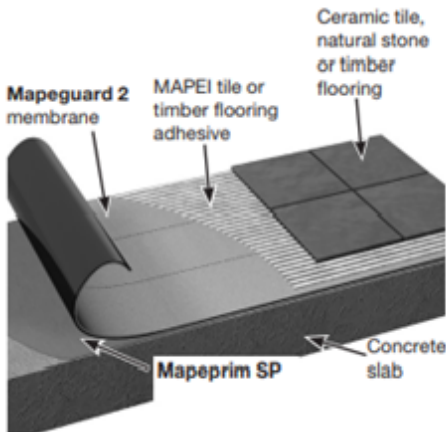
- Fully cured concrete (at least 28 days old).
- Cement mortar beds and leveling coats.
- Fiber cement sheeting - see manufacture's installation guidelines.
- Properly prepared cement terrazzo floors, and well-bonded ceramic tile and natural stone; and vinyl composition tile.
- Exterior-grade plywood for interior residential floors and countertops in dry areas only. Plywood must be manufactured to the relevant Australian Standards.

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

1. All suitable substrates must be smooth, structurally sound and free of any substance that could prevent adhesion.
2. Do not use chemical means (acid etching or stripping) to prepare approved substrates. Use mechanical methods only.
3. To remove any bond-inhibiting materials, mechanically clean and prepare concrete substrates by diamond-cup grinding or other engineer-approved methods to obtain the International Concrete Repair Institute (ICRI) concrete surface profile (CSP) #2. When concrete requires more mechanical preparation, the profile will typically increase. In such cases, the surface should be made smooth by applying **Mapecem Quickpatch** or **Planiprep SC**. For large areas, consider using one of MAPEI's self-leveling underlayments. See the respective Technical Data Sheets (TDSs) for more information. See MAPEI's "Surface Preparation Requirements" document located on the MAPEI website

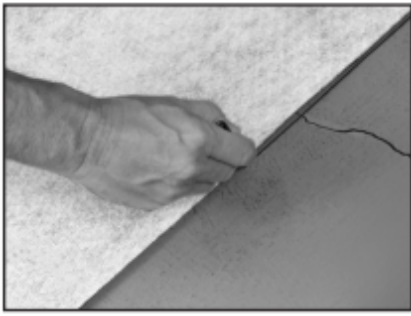
PRODUCT APPLICATION



- Apply when substrate and ambient temperatures are between +5°C and +35°C.
- Install **Mapeguard 2** only in conjunction with **Mapeprim SP**.
- Allow **Mapeprim SP** to dry tacky before installing **Mapeguard 2**.

1. Individual crack isolation before installing tile

- 1.1 **Mapeguard 2** may be applied directly to the substrate area that has existing in-plane cracks (with movement up to 10 mm wide).
- 1.2 Cut **Mapeguard 2** to size so that the length and width of the membrane will cover the entire length and width of the crack, plus 3 times the width of the largest tile being used.
- 1.3 Centre the cut membrane over the crack's width and length. Mark on the floor where the membrane is to start.



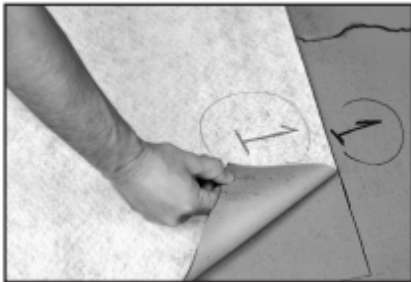
1.4 Set aside precut sections (or entire rolls) of **Mapeguard 2**. Continue with installation instructions at Step 2.3.

2. Full-floor crack isolation (or sound reduction)

2.1 To effectively isolate and protect an entire tile installation from existing or future substrate cracks, and to achieve effective sound reduction, **Mapeguard 2** must be installed over 100% of the substrate that will be covered with ceramic tile or stone. For effective sound reduction, an approved acoustical sealant should fill gaps between the end of the tile or timber and walls, columns, etc.

2.2 Unroll **Mapeguard 2** and cut it to size for the substrate to be tiled. For easier handling and installation, each roll may be cut into shorter lengths (such as 3 m) before installation. Ensure that all edges or ends of each roll abut edges or ends of other rolls. To ensure a flat surface and proper sound reduction, do not overlap edges or ends from one roll onto another.

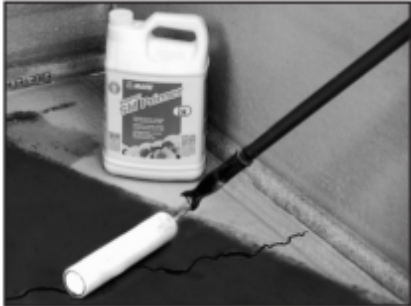
2.3 Number each sheet and mark its starting point on the floor.



2.4 Set aside precut sections of **Mapeguard 2**.

3. Mapeprim SP application

3.1 Using a roller or brush, prime the clean, properly prepared substrate with **Mapeprim SP**.



3.2 Allow the primer to dry until tacky (about 1 - 3 hours).

4. Mapeguard 2 installation

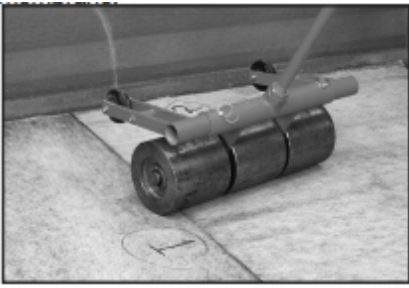
4.1 Peel back the first 25 mm of release film from the end of the precut sections or roll.



4.2 Apply this leading edge at the previously marked starting point to the primed and tacky substrate.

4.3 Continue removing short amounts of release film and apply the membrane to the substrate. Continue until the substrate is covered with the membrane.

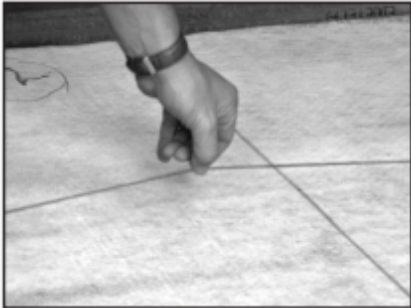
4.4 To ensure a positive bond between the sticky membrane and substrate, roll a 35 - 45 kg roller over the installed membrane.



4.5 Using a utility knife, remove any wrinkles or objects trapped beneath the membrane, and then repair.



4.6 Chalk lines or other layout methods are easily applied over the light-coloured **Mapeguard 2** surface.



5. Tile or timber flooring adhesive

Use an appropriate MAPEI latex polymer-modified adhesive meeting AS ISO 13007 Australian Standards to set tile, or use a polyurethane adhesive to install timber flooring. For moisture-sensitive tile or stone, use a rapid-setting or reactive adhesive.

Note: For installation of tiles larger than 400 x 400 mm, longer mortar-cure times may be required before the tiles can be grouted or walked on. For shorter turn around times when installing larger tiles, use a MAPEI rapid-set adhesive such as **Keraquick S1** or **Granirapid**.

For additional information, instructions and recommended protection, see the respective MAPEI TDS for the adhesive selected.

6. Glue-down timber flooring installation (for sound reduction)

Apply a MAPEI polyurethane adhesive (**Ultrabond P990 1K** or **Ultrabond Eco S955 1K**). Follow the wood-flooring manufacturer's instructions and recommended trowel size.

Note: Timber by nature will normally expand and contract with variances in ambient relative humidity. Moreover, it is MAPEI's experience that different species and/or different wood construction of wood floors (e.g., engineered floors) will undergo greater or lesser dimensional changes. Because of this, some expansion and contraction of planks used for wood flooring can be expected and therefore will not be considered a defective condition resulting from using MAPEI's membrane.

7. Nail-down timber-flooring installation (for sound reduction)

7.1 Follow Steps 2.2, 2.3 and 2.4 above.

7.2 Follow the wood-flooring manufacturer's instructions.

EXPANSION JOINTS

1. Do not cover any substrate expansion joints with **Mapeguard 2**, mortar or tiles. Provide for expansion joints where specified.
2. When necessary, cut tiles along both edges of the expansion joints. Do not allow tiles and mortar to overlap the joints.
3. Protect tiles with metal strips (edge metal) along both edges of structural building expansion joints.
4. Install the specified compressible bead and sealant into all expansion and control joints.

GROUTING

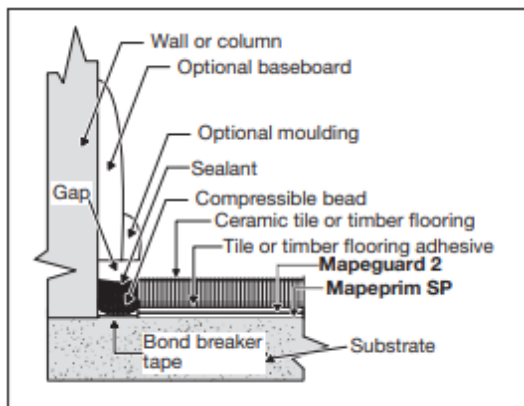
Select an appropriate MAPEI cementitious or epoxy grout meeting AS ISO 13007 standards. For additional information, instructions and recommended protection, see the respective TDS for the MAPEI grout selected.

CLEANUP

Remove excess **Mapeprim SP** with clean water or mineral spirits while fresh.

PROTECTION

- Provide for dry, heated storage on site and deliver materials at least 24 hours before tilework begins.
- Do not store **Mapeguard 2** in direct sunlight.
- Do not allow **Mapeprim SP** to freeze.
- Protect **Mapeguard 2** from spills, contamination and damage before and during tilework to ensure a positive bond with the adhesive.
- Always provide proper protection of finished floors when heavy equipment (such as fork lifts or scissor lifts) is to be used over installations with sheet membrane underlayments during construction.



PACKAGING

Mapeguard 2 is available in 1 metre x 20.9 metre rolls. Total weight is 19 kg.

STORAGE

12 months when stored in the original, unopened container at between +5°C and +35°C.

TECHNICAL DATA (typical values)	
DIMENSIONS	
Colour:	white
Length:	20.9 metres
Width:	1 metre
Thickness:	1 mm
VOCs (Rule #1168 of California's SCAQMD)	0 g per L
PROPERTIES	
ANSI A118.12 (Crack-isolation membranes for thin set ceramic tile and dimensionally stable stone installations):	
4.1 Fungus and micro-organism resistance:	pass
5.1 Shear strength to ceramic tile and cement mortar: - 5.1.6 After accelerated ageing	pass
5.2 Point load test - 5.2.3 Point load resistance after 28 day cure:	pass
5.3 Robinson floor test (ASTM C 627):	extra heavy (Contact Mapei for tested system information)
5.4 – System crack resistance test: - 5.4.9 – Standard performance - 5.4.9 – High performance	exceeds exceeds
Maximum crack movement capacity	10 mm wide, in plane
	Sound-Reduction Ratings (Over 15 cm Concrete Slab)

	Solid Porcelain Tile ¹ Engineered Oak Flooring ²				
ASTM Test Methods	Type of Sound Transmission Measurement	Suspended Ceiling ³	No Suspended Ceiling ⁴	Suspended Ceiling ³	No Suspended Ceiling ⁴
E492-04 (IIC)	Impact sound	64	47	71	51
E2179-03 (Delta IIC)	Impact sound	N/A	16	N/A	N/A
E90-04 (STC)	Airborne sound	66	52	66	51
¹ 30 x 30 cm solid-body, unglazed, porcelain tile installed with Ultraflex 2 mortar (with 6 x 10 x 6 mm square-notched trowel) and Keracolor S grout					
² 10 mm x 7.5 cm engineered, prefinished oak flooring installed with Ultrabond ECO 980 (with 4,5 x 4 mm sawtooth trowel)					
³ Drywall grid suspension system consisting of 16 mm Type X gypsum board (11.2 kg/m ²) attached with screws 30 cm on center to suspended grid suspension system; and 30 cm plenum with 8.9 cm lay-in fiberglass insulation (0,78 kg/m ²)					
⁴ Bare concrete ceiling in room below					

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 our Safety Data Sheet available for download from our website at www.mapei.com.au.
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.au.

LEGAL NOTICE

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.com.au.
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