**PREMIUM SOUND-REDUCTION AND CRACK-ISOLATION SHEET MEMBRANE**

**DESCRIPTION**
Mapesonic 2 is a patent-pending, next-generation, flexible, 76-mil thin, lightweight, load-bearing, fabric-reinforced “peel-and-stick” sound-reduction and crack-isolation membrane. Application of Mapesonic 2 can be immediately followed by installation of flooring: ceramic tile or stone with a recommended MAPEI polymer-modified, cement-based mortar; luxury vinyl tile or luxury vinyl plank with an appropriate MAPEI flooring adhesive; or glue-down wood flooring with any MAPEI urethane or hybrid-polymer-based wood adhesive.

**FEATURES AND BENEFITS**
- **Patented design:** Sound-reduction performance with lighter weight and thickness
- **Dual protection:** Provides sound reduction and crack isolation
- **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, vinyl or wood immediately
- **No odor:** Great for confined spaces
- **Contains post-industrial recycled material**

**INDUSTRY STANDARDS AND APPROVALS**
- ASTM C627 (Robinson): See the “Product Performance Properties” section below for Mapesonic 2.
- ANSI A118.13 (Bonded Sound Reduction Membranes for Thin-Set Ceramic Tile Installation): Mapesonic 2 exceeds the standards for bonded sound-reduction membranes. See the “Product Performance Properties” section below for Mapesonic 2.

**LEED v3 Points Contribution**

<table>
<thead>
<tr>
<th>LEED Points</th>
<th>MR Credit 4, Recycled Content*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 2 points</td>
</tr>
</tbody>
</table>

* Using this product may help contribute to LEED certification of projects in the category shown above. Points are awarded based on contributions of all project materials.

**WHERE TO USE**
Use under ceramic tile, natural stone, vinyl and wood flooring in interior, residential areas such as homes, apartments and condominiums. Also use in interior, light commercial areas such as office buildings.

**Sound reduction (for tile, stone, vinyl and wood flooring)**
- For interior residential and light commercial floors
- Ideal for multi-family or multi-story buildings where noise transmission is a common problem
- Reduces transmission of impact sound and airborne sound through floors covered with tile, stone, vinyl and wood floor coverings

**Crack isolation (for grout, ceramic tile and natural stone)**
- For interior residential and light commercial floors
- Helps to prevent existing or future in-plane substrate cracks (with movement up to 3/8” [10 mm] wide) from transmitting through grout, ceramic tile or natural stone

**LIMITATIONS**
(for Mapesonic 2 combined with MAPEI SM Primer™ or MAPEI SM Primer Fast)
- Do not use over cracks or control joints subject to out-of-plane movement; or in-plane movement greater than 3/8” (10 mm).
• Do not cover expansion joints. Refer to most current TCNA Handbook, Detail EJ171, or TTMAC Tile Installation Manual, Detail 301MJ.
• 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, or similar dimensionally unstable materials.
• Do not use where excessive substrate moisture and/or where negative hydrostatic pressure exists. The maximum allowable moisture vapor emission rate (MVER) in a concrete substrate for Mapesonic 2 is 5 lbs. per 1,000 sq. ft. (2.27 kg per 92.9 m²) per 24 hours as determined by ASTM F1869 calcium chloride test. When moisture vapor emissions exceed 5 lbs. per 1,000 sq. ft. (2.27 kg per 92.9 m²) per 24 hours, contact MAPEI’s Technical Services Department for recommendations.

SURFACE PREPARATION

• All suitable substrates must be smooth, structurally sound and free of any substance that could prevent adhesion.
• Unprimed gypsum-based patching or leveling compounds may leave a dusty residue on the surface. Clean the dusty substrate before priming with MAPEI SM Primer or MAPEI SM Primer Fast.

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 delamination. Such substrates should be mechanically cleaned and prepared by diamond cup grinding or other engineer-approved methods to obtain a self-leveling sublayer. A self-leveling underlayment such as Mapesonic 2 can be used to compensate for these conditions before installation of Mapesonic 2.

PRODUCT APPLICATION

SURFACE PREPARATION

• Do not use moisture-sensitive tile or stone with water-based setting materials.
• Do not use premixed products to set tile over reaction-inhibited mortars.
• Do not use self-leveling products over Mapesonic 2.
• Do not use premixed products to set tile over Mapesonic 2.
• Do not install moisture-sensitive tile or stone with water-based setting materials.

Note: The owner should communicate in writing to the project design professional and general contractor the "intended use" of the tile installation, in order to enable the project design professional and general contractor to make necessary allowances for the expected live load, concentrated loads, impact loads, and dead loads including the weight of the tile and setting bed. The tile installer shall not be responsible for any floor framing or subfloor installation not compliant with applicable building codes, unless the tile installer or tile contractor designs and installs the floor framing or subfloor.

SUITABLE SUBSTRATES

• Fully cured concrete (at least 28 days old)
• Cement mortar beds and leveling coats
• Cement backer units (CBUs) – see manufacturer’s installation guidelines
• Properly prepared cement terrazzo floors, and well-bonded ceramic tile and natural stone
• Well-bonded vinyl composition tile (VCT)
• APA Group 1 and CANPLY 0121 exterior-grade plywood (interior, residential and light commercial in dry conditions only)

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

Tile Council of North America (TCNA)
Statement on Deflection Criteria

Floor systems, including the framing system and subfloor panels, over which tile will be installed should be in conformance with the IRC (International Residential Code) for residential applications, the IBC (International Building Code) for commercial applications, or applicable building codes.

Note: The owner should communicate in writing to the project design professional and general contractor the

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.
• Apply Mapesonic 2 when substrate and ambient temperatures are between 40°F and 95°F (4°C and 35°C).

1. Isolation of existing cracks before tile installation

1.1 Mapesonic 2 may be applied directly to the substrate area that has existing in-plane cracks (with movement up to 3/8" [10 mm] wide).
1.2 Cut Mapesonic 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 Center the cut membrane over the crack’s width and length. Mark on the floor where the membrane is to start.

Consult MAPEI’s "Surface Preparation Requirements" document in the Reference & Installation Guides section of the Tile & Stone Installation Systems page on MAPEI’s Website.

See MAPEI’s "Surface Preparation Requirements" document in the Reference & Installation Guides section of the Tile & Stone Installation Systems page on MAPEI’s Website.
1.4 Set aside precut sections (or entire rolls) of Mapesonic 2. Continue with installation instructions at Step 2.3.

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

2.1 To effectively achieve sound reduction and to isolate and protect an entire tile installation from existing or future substrate cracks, Mapesonic 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 tile, vinyl or wood and the walls, columns, etc.

2.2 Unroll Mapesonic 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 10 ft. [3.05 m]) before installation. Ensure that all edges or ends of each membrane section abut edges or ends of other sections. To ensure a flat surface and proper sound reduction, do not overlap edges or ends from one membrane section onto another.

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

2.4 Set aside precut sections of Mapesonic 2.

2.5 With a roller or brush, prime floor with MAPEI SM Primer or MAPEI SM Primer Fast. The surface temperature of the prepared substrate must be at least 5 degrees F (2.8 degrees C) above the dew point to avoid condensation on the substrate surface as MAPEI SM Primer or MAPEI SM Primer Fast dries.

2.6 Let the primer dry until tacky (about 10 to 15 minutes).

2.7 Remove 6” (15 cm) of liner from the underside of the membrane.

2.8 Apply the membrane (at the previously marked starting point) to the tacky substrate.

2.9 Continue removing short lengths of liner and applying membrane to the tacky floor until the application area is covered.

2.10 For a proper bond between Mapesonic 2 and the tacky floor, roll a 75- to 100-lb. (34.0- to 45.4-kg) roller over the installed membrane. For smaller pieces of membrane, use a wood float or steel trowel to apply pressure.

2.11 Cut out wrinkles or trapped objects in membrane with a razor knife, and replace with small pieces of membrane.

2.12 Layout lines for tile, vinyl or wood can be easily applied and viewed on the light-colored membrane.

**FLOORING INSTALLATION**

**Tile and natural stone**

1. Use an appropriate MAPEI latex polymer-modified mortar meeting ISO 13007 classification C2E and ANSI A118.4 and ANSI A118.11 industry standards to set tile. For moisture-sensitive tile or stone, use MAPEI's Planicrete® W urethane adhesive.
Product Performance Properties (for Mapesonic 2)

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness (ASTM D5147)</td>
<td>76 mils nominal</td>
</tr>
<tr>
<td>Maximum crack movement capacity</td>
<td>3/8” (10 mm) wide, in-plane</td>
</tr>
<tr>
<td>Fabric color</td>
<td>White</td>
</tr>
<tr>
<td>VOCs (Rule #1168 of California’s SCAQMD)</td>
<td>0 g per L</td>
</tr>
<tr>
<td>Shelf life</td>
<td>1 year when stored in a dry area in original shipping container at 73°F (23°C)</td>
</tr>
</tbody>
</table>

ANSI A118.12 (Crack-Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation)

4.1 – Fungus and microorganism resistance:
5.1.8 – After accelerated aging: Pass
5.2 – Point load test:
5.2.3 – Point load resistance after 28-day cure: Pass
5.3 – Robinson floor test ASTM C627: Pass
5.4 – System crack resistance test:
5.4.9 – Standard performance: Exceeds
5.4.9 – High performance: Exceeds

ANSI A118.13 (American National Standard Specification for Bonded Thin-Set Ceramic Sound Reduction Membranes for Thin-Set Ceramic Tile Installations)

5.0 – Tests for system performance
5.1 – Shear strength to ceramic tiles and cement mortars
5.1.3 – Seven-day shear strength: Pass
5.1.4 – Seven-day water immersion shear strength: Pass
5.1.5 – Four-week shear strength: Pass
5.2 – Robinson floor test ASTM C627: Pass
5.3 – Sound transmission reduction test
5.3.8 – Testing according to Section 4 of ASTM E2179: Pass

ASTM C627 Service Rating (Robinson)

<table>
<thead>
<tr>
<th>Type of sound-transmission measurement</th>
<th>Suspended ceiling</th>
<th>No suspended ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultrabond ECO 360</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Ultrabond ECO 360</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Ultraflex 2</td>
<td>67</td>
<td>66</td>
</tr>
<tr>
<td>Keracolor S</td>
<td>52</td>
<td>52</td>
</tr>
</tbody>
</table>

1 6" x 48" (15 x 122 cm) luxury vinyl tile flooring installed with Ultrabond ECO 360 (with a 1/16" x 1/32" x 1/32" [1.5 x 1 x 1 mm] U-notched trowel)
2 12" x 12" (30 x 30 cm) solid-body, unglazed porcelain tile installed with Ultraflex 2 mortar (with a 1/4" x 3/8" [6 x 10 mm] square-notched trowel) and Keracolor S grout
3 Drywall grid suspension system consisting of 5/8" (16 mm) Type X gypsum board (2.3 lbs. per sq. ft. [11.2 kg per m²] attached with screws 12" [30 cm] on center) to suspended grid suspension system; and 12" [30 cm] plenum with 3-1/2" (8.9 cm) lay-in fiberglass insulation (0.16 lbs. per sq. ft. [0.78 kg per m²])
4 Bare concrete ceiling in room below

Sound Reduction Ratings Over 6" (15 cm) Concrete Slab

<table>
<thead>
<tr>
<th>ASTM test method</th>
<th>Type of sound-transmission measurement</th>
<th>Luxury Vinyl Tile</th>
<th>Solid Porcelain Tile</th>
</tr>
</thead>
<tbody>
<tr>
<td>E492-09 / E989-06 (IIC)</td>
<td>Impact sound</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>E2179-03 (Delta IIC)</td>
<td>Impact sound</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>E90-04 / E413-10 (STC)</td>
<td>Airborne sound</td>
<td>67</td>
<td>66</td>
</tr>
</tbody>
</table>

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4 Bare concrete ceiling in room below
Note: For installation of tile larger than 18” x 18” (46 x 46 cm), longer mortar-cure times may be required before tile can be grouted or walked on. For shorter turnaround times when installing larger tile, use the MAPEI rapid-set mortar Ultraflex™ LFT™ Rapid, Ultracontact™ RS or Granirapid®.

Glue-down wood flooring
1. Follow Steps 2.1 through 2.12 above.
2. Apply a MAPEI urethane or hybrid-polymer-based wood adhesive (Ultrabond ECO® 975, Ultrabond ECO 980 or Ultrabond ECO 985). Follow wood-flooring manufacturer’s instructions and recommended trowel size.

Luxury vinyl tile/plank
1. Apply MAPEI’s Ultrabond ECO 360 adhesive.
2. Follow the luxury vinyl tile/plank manufacturer’s instructions and trowel-size recommendations.

EXPANSION JOINTS
1. Do not cover any substrate movement joints with Mapesonic™ 2, mortar or tiles. Provide for movement joints where specified. Refer to the most current TCA handbook for ceramic tile installation, Detail EJ171-07, or TTMAC Tile Installation Manual, Detail 301MJ.
2. When necessary, cut tiles along both edges of the expansion joints. Do not allow tile and mortar to overlap the joints.
3. Protect tilework 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 cement grout meeting ISO 13007 classification CG2WA or CG2WAF and ANSI A118.6 or ANSI A118.7 industry standards, or an epoxy grout meeting ISO 13007 classification R2/RG or RG, as well as ANSI A118.3 industry standards. For additional information, instructions and protection recommendations, see the respective TDS for the MAPEI grout selected.

CLEANUP
Remove excess MAPEI SM Primer or MAPEI SM Primer Fast with mineral spirits.

Product Performance Properties (for MAPEI SM Primer or MAPEI SM Primer Fast)

<table>
<thead>
<tr>
<th>Color (when dry)</th>
<th>Drying time before installation of ceramic tile or stone</th>
<th>Shelf life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear</td>
<td>10 to 15 minutes (depending on temperature, humidity and substrate porosity)</td>
<td>1 year when stored in original, unopened container at between 40°F and 95°F (4°C and 35°C)</td>
</tr>
</tbody>
</table>

Packaging and Approximate Coverage*

<table>
<thead>
<tr>
<th>Product</th>
<th>Size</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAPEI SM Primer Fast</td>
<td>Jug: 1 U.S. gal. (3.79 L)</td>
<td>300 to 350 sq. ft. (27.9 to 32.5 m²)</td>
</tr>
<tr>
<td>MAPEI SM Primer</td>
<td>Jug: 1 U.S. gal. (3.79 L)</td>
<td>300 to 350 sq. ft. (27.9 to 32.5 m²)</td>
</tr>
<tr>
<td>MAPEI SM Primer</td>
<td>Pail: 5 U.S. gals. (18.9 L)</td>
<td>1,500 to 1,750 sq. ft. (139 to 163 m²)</td>
</tr>
<tr>
<td>Mapesonic 2</td>
<td>Boxed roll: 39” x 49.2’ (99 cm x 15 m)</td>
<td>160 sq. ft. (14.9 m²)</td>
</tr>
</tbody>
</table>

*Coverage shown is for estimating purposes only. Actual jobsite coverage depends on substrate conditions as well as the type of roller or brush used.

Continued from Page 3

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Luxury vinyl tile/plank
1. Apply MAPEI’s Ultrabond ECO 360 adhesive.
2. Follow the luxury vinyl tile/plank manufacturer’s instructions and trowel-size recommendations.
**PROTECTION**

- Provide for dry storage on site at between 40°F and 95°F (4°C and 35°C). Deliver materials at least 24 hours before application.
- Do not store Mapesonic 2, MAPEI SM Primer or MAPEI SM Primer Fast in direct sunlight.
- Protect installation from contamination and damage before and during tilework.
- Do not allow MAPEI SM Primer or MAPEI SM Primer Fast to freeze.
- 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.

**RELATED DOCUMENTS**

<table>
<thead>
<tr>
<th>Reference Guide: Surface Preparation Requirements for tile and stone installation systems</th>
<th>RGT0309*</th>
</tr>
</thead>
</table>

*At www.mapei.com

Refer to the SDS for specific data related to health and safety as well as product handling.

**STATEMENT OF RESPONSIBILITY**

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.

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