

Mapeheat Mesh

Self-Adhering, Pre-Wired, Floor-Heating Mesh



Technology from



DESCRIPTION

Mapeheat™ Mesh is a self-adhesive, pre-wired, floor-heating mesh that can be adhered onto the subfloor during the layout process. Its compatibility with all subfloor types and its low profile (3/16" or 4.5 mm) make it ideal for renovation projects. *Mapeheat Mesh* can be installed under ceramic tile, porcelain tile, natural stone, laminate flooring, engineered wood flooring and luxury vinyl flooring.

Mapeheat Mesh's heating cable is attached to the self-adhesive mesh layer by three mesh bands. These bands help to maintain consistent spacing of the cable while allowing easy removal of the cable during installation in hard-to-reach areas. Thanks to its twisted pair design, the PVC-coated heating cable emits no measurable electromagnetic fields. Plus, the cable features a thin mechanical splice and a thin, flexible, 10-foot (3.05-m) cold lead that is easy to embed in the subfloor and route to the thermostat's location.

FEATURES AND BENEFITS

- Easy to install under tile, stone, laminate, engineered wood and luxury vinyl floors
- Use with a self-leveler (recommended) or a polymer-modified mortar
- Can be configured on site to fit any room
- Suitable for wet environments such as showers and steam rooms
- Low-profile cold lead and splice joint

APPROVALS

- Approved for indoor embedded floor-heating applications (-X)
- Approved for wet (-W) areas in the USA and Canada per Table 1 of C22.2 NO.130-16 and CEC section 62-104

WHERE TO USE

- Use to provide comfort heating in bathrooms, kitchens, entryways and other interior living areas.
- *Mapeheat Mesh* is also approved for installation in wet areas such as showers and steam rooms.

LIMITATIONS

- Do not install beneath carpet, linoleum, solid hardwood, rubber or parquet. Install only beneath flooring types that are approved in this Technical Data Sheet.
- Do not use in exterior applications.
- Do not install in, on or under walls or inside closets.
- Do not use sharp tools or power tools to clean grout lines.
- The heating wire cannot be overlapped, crossed, cut, shortened or modified.
- The sheath of this device should not be utilized as a grounding conductor but must be bonded to the ground.
- The total combined R-value of all floor covering layers installed over *Mapeheat Mesh* must not exceed R-1.5.
- Do not cover expansion joints. Do not use over cracks or movement joints subject to out-of-plane movement, or where in-plane movement exists greater than 1/8" (3 mm). Refer to the most current TCNA Handbook, Method EJ171, or TTMAC Tile Installation Manual, Detail 301MJ.
- Do not use over substrates containing asbestos, plank wood flooring, presswood, particleboard, chipboard, pressure- or oil-treated plywood, Luan, Masonite, self-stick tile, laminate, metal, fiberglass or similar dimensionally unstable materials.
- Do not use for submerged applications or for floors subject to standing water.
- Do not use premixed products to set tile over *Mapeheat Mesh*.
- Do not use on bituminous substrates.
- Do not use on highly flammable material.

SUITABLE SUBSTRATES

- Cured or young concrete. When used over young (green) concrete, the concrete must have cured for at least 7 days and be suitable to support tile installation traffic as determined by the project design professional, construction manager or general contractor.
- Cement mortar beds and leveling coats
- Cement backer units (CBUs) – see manufacturer’s installation guidelines
- Industry-approved, exterior-grade plywood and APA Sturd-I-Floor, Exposure 1 OSB (in interior, dry areas only). Regarding deflection requirements, refer to the local building code; to the TCNA Handbook, Field Installation Requirements, subsection “Maximum Allowable Deflection for Floor System and Substrate;” to the TTMAC 09 30 00 specifications guide; and to ANSI A108.01, Section 3.4.
- Existing, well-bonded ceramic tile and dimensionally stable natural stone
- Existing, structurally sound vinyl floor without any foam or cushioning mat underneath
- Existing, cement terrazzo floors

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

SURFACE PREPARATION

- All suitable substrates must be smooth, structurally sound and free of any substance that could prevent or reduce proper bond and/or affect product performances.
- For concrete slab subfloors, it is best to insulate the slab before installing *Mapeheat Mesh*. Insulation will improve the upward heat transfer from the cable to the flooring surface.
- Gypsum-based patching or leveling compounds may leave a dusty residue on the surface. Clean the dusty substrate before applying primer and an approved MAPEI adhesive. See the technical bulletin “Tiling over gypsum” in the Tile & Stone Installation Systems section of MAPEI’s Website.
- Wood subfloors must be prepared according to ANSI A108.01 and A108.02; to the TCNA Handbook, Field Installation Requirements, Subsection “Maximum Allowable Deflection for Floor System and Substrate;” and to the TTMAC 09 30 00 specifications guide.
- Do not use chemical means (acid etching or stripping) to prepare approved substrates. Use mechanical methods only.
- Concrete substrates must be flat, smooth and absorptive. To remove any bond-inhibiting materials, concrete substrates should be mechanically prepared to obtain the International Concrete Repair Institute (ICRI) concrete surface profile (CSP) #2.

See the “Surface preparation requirements” reference guide in the Tile & Stone Installation Systems section of MAPEI’s Website.

EXPANSION JOINTS

- Honor expansion joints through *Mapeheat Mesh*, tiles and grout per tile industry standards.
- When necessary, cut tiles along both edges of the expansion joints. Do not allow tiles and mortar to overlap the expansion joints.
- Provide for movement joints as required by TCNA Method EJ171, or by TTMAC Specification Guide 09 30 00, Detail 301MJ.

PRODUCT INSTALLATION

Install per the “*Mapeheat Mesh* Installation Manual” provided inside the packaging and that is available for download at www.mapei.com.

MAPEHEAT MESH – ORDERING DETAILS

Select the *Mapeheat Mesh* size that is no larger than the heated area. The heated area is the area of the floor that does not include such permanent fixtures as cabinets, toilets, sinks and tubs. The selected kit can be configured on the jobsite to fit the shape of the area to be heated.

INSTALLATION EXAMPLE

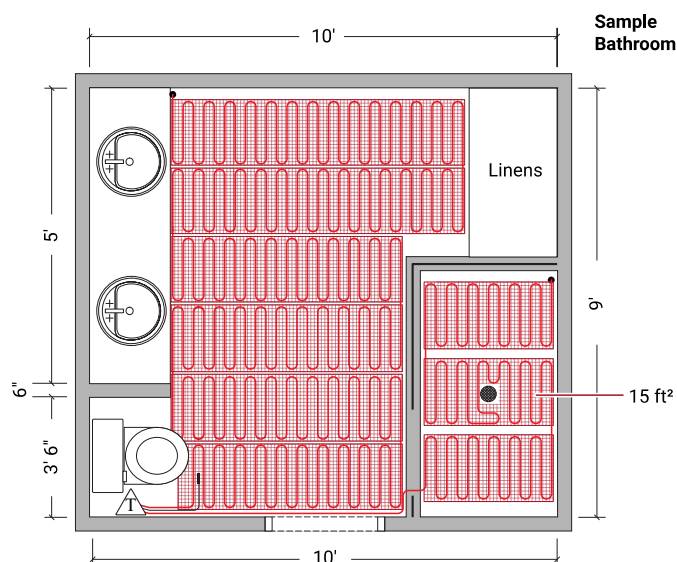
Challenge:

A bathroom measuring 9 x 10 ft. (2.74 x 3.05 m)	90 sq. ft. (8.36 m ²)
Minus the cabinet area	-10 sq. ft. (0.93 m ²)
Minus the toilet space	-6 sq. ft. (0.56 m ²)
Minus the linen closet	-8 sq. ft. (0.74 m ²)
Minus the shower area	-15 sq. ft. (1.39 m ²)*
Total area to be heated	51 sq. ft. (4.74 m ²)

Solution:

Choose a *Mapeheat Mesh* roll covering 50 sq. ft. (4.65 m²).

* If the shower area is to be heated, select a 15 sq. ft. (1.39 m²) roll for that area.



Product Specifications

Operating voltage	120 V
Power output	12 W/ft ²
Minimum bending radius	1/2" (12 mm)
Minimum cable spacing	3" (7.5 cm)
Maximum storage temperature	194°F (90°C)
Minimum installation temperature	50°F (10°C)
Heating cable	2-wire, grounded, twisted pair with PVC outer jacket
Cold lead	2-wire, 16-18 AWG plus ground braid; length of 10 ft. (3.05 m)

Sizes for Mapeheat Mesh

Product Codes	Product Size	Coverage**	Amps	Watts
2866101	20" x 8 ft. (51 cm x 2.44 m)	12 sq. ft. (1.11 m ²)	1.2	139
2866201	20" x 9 ft. (51 cm x 2.74 m)	15 sq. ft. (1.39 m ²)	1.4	170
2866301	20" x 15 ft. (51 cm x 4.57 m)	25 sq. ft. (2.32 m ²)	2.5	300
2866401	20" x 19 ft. (51 cm x 5.79 m)	30 sq. ft. (2.79 m ²)	2.9	344
2866501	20" x 23 ft. (51 cm x 7.01 m)	40 sq. ft. (3.72 m ²)	3.7	442
2866601	20" x 29 ft. (51 cm x 8.84 m)	50 sq. ft. (4.65 m ²)	4.7	563
2866701	20" x 36 ft. (51 cm x 11.0 m)	60 sq. ft. (5.57 m ²)	6.0	720
2866801	20" x 41 ft. (51 cm x 12.5 m)	70 sq. ft. (6.50 m ²)	6.7	809
2866901	20" x 49 ft. (51 cm x 14.9 m)	80 sq. ft. (7.43 m ²)	7.9	947
2867101	20" x 52 ft. (51 cm x 15.8 m)	85 sq. ft. (7.90 m ²)	8.5	1,022

** Coverage is based on square room with a 2" (5 cm) unheated border.

Accessories

Product Name	Description
Mapeheat Thermo Connect thermostat	WiFi-enabled floor-heating thermostat. This programmable thermostat can be controlled using a mobile smart phone app (iOS and Android) or Web browser.
Mapeheat Thermo Touch thermostat	Color touchscreen programmable floor-heating thermostat with intuitive user interface and energy usage information
Mapeheat Thermo Basic thermostat	Non-programmable thermostat for simple control of any electric floor-heating system
Mapeheat Fault Sensor	<i>Mapeheat Fault Sensor</i> is used to verify the continuity of the heating cable and the integrity of its outer jacket during the installation process. The device connects to the cold leads of the cable and, if the heating cable is damaged, the alarm on the monitor will sound. The monitor can also be re-used for subsequent installations and to help troubleshoot any problems that may arise.
Mapeheat Cable Repair Kit	<i>Mapeheat Cable Repair Kit</i> can be used for repairing <i>Mapeheat Mesh's</i> heating cable if it has been damaged during installation.
Mapeheat Lead Wire Repair Kit	<i>Mapeheat Lead Wire Repair Kit</i> contains all materials needed to repair a damaged cold lead for <i>Mapeheat Mesh</i> .

RELATED DOCUMENTS

- “Surface preparation requirements” reference guide***
- “Mapeheat Mesh Installation Manual”

*** At www.mapei.com

ADDITIONAL INFORMATION

For information on MAPEI’s commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

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 nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **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.**

CONTACT INFORMATION

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For the most current product data and BEST-BACKEDSM warranty information,
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