Mapeheat Mat

Pre-Wired, Floor-Heating Fabric

Technology from nVent NUHEAT

DESCRIPTION

Mapeheat™ Mat is a pre-wired floor-heating fabric designed for easy installation. The pre-wiring aspect of *Mapeheat Mat* guarantees even heat distribution because the heating wires embedded within the fabric are evenly spaced during production.

A single standard-size mat can provide adequate floor-heat coverage for most standard bathroom and living areas. Installers can also combine multiple standard mats to heat the desired area. When full coverage cannot be achieved with standard-size mats (such as areas with curves, angles or obstructions), *Mapeheat Mat* can be customized to provide optimal coverage.

FEATURES AND BENEFITS

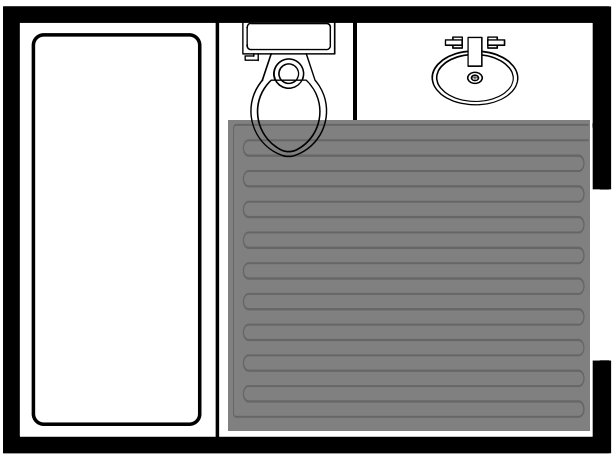
- Pre-built floor-heating fabric
- Compact 1/8" (3 mm) profile for minimal floor buildup
- Even heat distribution, with no cold spots
- Available in more than 70 standard sizes
- Custom sizing available through Product Support
- Floor covering can be installed immediately
- Available in 120 V and 240 V
- Output 12 W/ft^2 to 15 W/ft^2

APPROVALS

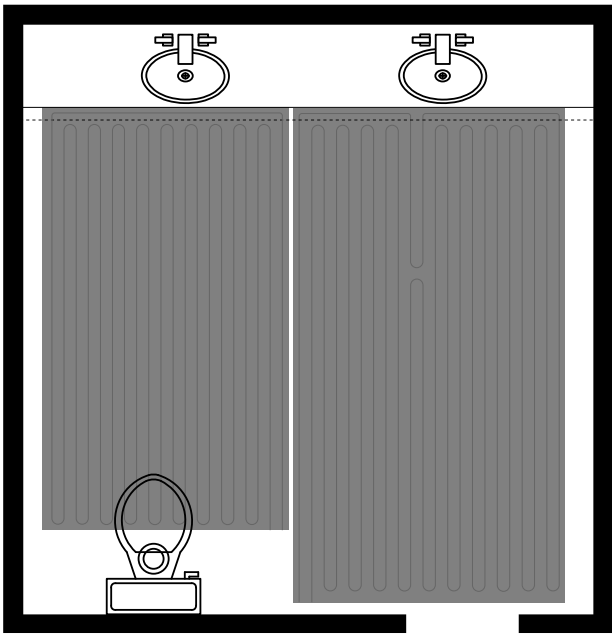
- Approved for indoor embedded floor-heating applications (-X)
- Approved for wet (-W) areas in the USA and Canada per Table 1 of C22.2 NO.130-16 and CEC section 62-104

WHERE TO USE

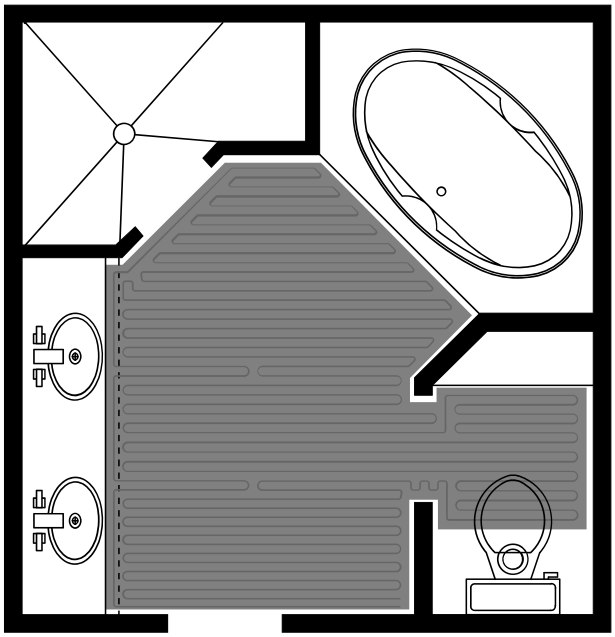
- Use under ceramic and natural stone tile, laminate flooring, engineered wood flooring and luxury vinyl tile/plank, in interior residential spaces such as kitchens, bathrooms, shower floors and three-season rooms.



Mapeheat Mat single standard mat



Mapeheat Mat multiple standard mats



Mapeheat Mat custom-sized mat

LIMITATIONS

- 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).
- Do not cover expansion joints. 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, Lauan, 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 in exterior applications.
- Do not use premixed products to set tile over *Mapeheat Mat*.
- Do not install moisture-sensitive tile or stone with water-based 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 installed over impervious mats such as *Mapeheat Mat*.
- Do not use on bituminous substrates.
- Do not use on highly flammable material.
- Do not use with solid, hardwood flooring.

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.
- 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.

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 Mat*, 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 Specifications

Operating voltage	120 V and 240 V
Power output	12 W/ft^2 or 15 W/ft^2
Maximum continuous exposure temperature	194°F (90°C)
Minimum installation temperature	50°F (10°C)
Heating cable	Single wire with ground braid outer layer
Cold lead	2-wire, 18 AWG plus ground braid layer; 10 feet (3.05 m) in length

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

ORDERING CUSTOMIZED SIZES

If desired coverage cannot be obtained using one or a combination of standard sizes of *Mapeheat Mat*, *Mapeheat Mat* can be customized to provide the desired coverage for any area regardless of shape or size.

1. Provide an accurate drawing of the area including the full on-site perimeter dimensions, voltage, and desired thermostat location with all obstructions identified (vanities, toilets, vents, etc.). Please ensure that the installer or contractor contact information is provided if we need to verify or confirm the dimensions.
2. Submit the drawing to the *Mapeheat* Customer Care Team at mapeheatusa@mapei.com for U.S. customers and at mapeheatcanada@mapei.com for Canadian customers. A quote will be provided, including freight and an AutoCAD drawing to confirm the submitted dimensions, within 24 to 48 hours.
3. Once dimensions are accepted by the customer and payment is confirmed, the *Mapeheat Mat* will be manufactured within 10 business days and shipped to the customer.

Sizes for *Mapeheat Mat*, 120 V

Product Size	Dimensions	Ohms	Amps	Watts
Shower Mat*	32" x 32" (81 x 81 cm)	171	0.7	84
3.5 ft. series	40" x 27" (102 x 69 cm)	160	0.8	90
	40" x 32" (102 x 81 cm)	135	0.9	107
	40" x 48" (102 x 122 cm)	90	1.3	160
4 ft. series	48" x 24" (122 x 61 cm)	150	0.8	96
	48" x 30" (122 x 76 cm)	120	1.0	120
	48" x 36" (122 x 91 cm)	100	1.2	144
	48" x 48" (122 x 122 cm)	75	1.6	192
5 ft. series	60" x 24" (152 x 61 cm)	120	1.0	120
	60" x 30" (152 x 76 cm)	96	1.3	150
	60" x 36" (152 x 91 cm)	80	1.5	180
	60" x 42" (152 x 107 cm)	69	1.8	210
	60" x 48" (152 x 122 cm)	60	2.0	240
	60" x 60" (152 x 152 cm)	48	2.5	300
6 ft. series	72" x 24" (183 x 61 cm)	100	1.2	144
	72" x 30" (183 x 76 cm)	80	1.5	180
	72" x 36" (183 x 91 cm)	67	1.8	216
	72" x 42" (183 x 107 cm)	57	2.1	252
	72" x 48" (183 x 122 cm)	50	2.4	288
	72" x 60" (183 x 152 cm)	40	3.0	360
	72" x 72" (183 x 183 cm)	33	3.6	432
7 ft. series	84" x 24" (213 x 61 cm)	86	1.4	168
	84" x 30" (213 x 76 cm)	69	1.8	210
	84" x 36" (213 x 91 cm)	57	2.1	252
	84" x 42" (213 x 107 cm)	49	2.5	294
	84" x 48" (213 x 122 cm)	43	2.8	336
	84" x 60" (213 x 152 cm)	34	3.5	420
	84" x 72" (213 x 183 cm)	29	4.2	504
	84" x 84" (213 x 213 cm)	25	4.9	588

8 ft. series	96" x 24" (243 x 61 cm)	75	1.6	192
	96" x 30" (243 x 76 cm)	60	2.0	240
	96" x 36" (243 x 91 cm)	50	2.4	288
	96" x 42" (243 x 107 cm)	43	2.8	336
	96" x 48" (243 x 122 cm)	38	3.2	384
	96" x 60" (243 x 152 cm)	30	4.0	480
	96" x 72" (243 x 183 cm)	25	4.8	576
	96" x 84" (243 x 213 cm)	21	5.6	672
	96" x 96" (243 x 243 cm)	19	6.4	768
9 ft. series	108" x 30" (274 x 76 cm)	53	2.3	270
	108" x 36" (274 x 91 cm)	44	2.7	324
	108" x 42" (274 x 107 cm)	38	3.2	378
	108" x 48" (274 x 122 cm)	33	3.6	432
	108" x 60" (274 x 152 cm)	27	4.5	540
	108" x 72" (274 x 183 cm)	22	5.4	648
	108" x 84" (274 x 213 cm)	19	6.3	756
	108" x 108" (274 x 274 cm)	15	8.1	972
10 ft. series	118" x 30" (300 x 76 cm)	49	2.5	295
	118" x 36" (300 x 91 cm)	41	3.0	354
	118" x 48" (300 x 122 cm)	31	3.9	472
	118" x 60" (300 x 152 cm)	24	4.9	590
	118" x 72" (300 x 183 cm)	20	5.9	708
	118" x 84" (300 x 213 cm)	17	6.9	826
	118" x 96" (300 x 243 cm)	15	7.9	944
	118" x 116" (300 x 295 cm)	13	9.5	1,141

** The shower mat size has a 5" (7.5 cm) center drain hole and exterior dimensions of 32" x 32" (81 x 81 cm).*

Sizes for *Mapeheat Mat*, 240 V

Product Size	Dimensions	Ohms	Amps	Watts
5 ft. series	60" x 36" (152 x 91 cm)	320	0.8	180
	60" x 42" (152 x 107 cm)	274	0.9	210
	60" x 48" (152 x 122 cm)	240	1.0	240
	60" x 60" (152 x 152 cm)	192	1.3	300
6 ft. series	72" x 30" (183 x 76 cm)	320	0.8	180
	72" x 36" (183 x 91 cm)	267	0.9	216
	72" x 42" (183 x 107 cm)	229	1.1	252
7 ft. series	84" x 36" (213 x 91 cm)	229	1.1	252
	84" x 48" (213 x 122 cm)	171	1.4	336
8 ft. series	96" x 48" (243 x 122 cm)	150	1.6	384
10 ft. series	118" x 42" (300 x 107 cm)	140	1.7	413
	118" x 48" (300 x 122 cm)	122	2.0	472
	118" x 60" (300 x 152 cm)	98	2.5	590
	118" x 116" (300 x 295 cm)	51	4.8	1,141
12 ft. series	144" x 36" (366 x 91 cm)	133	1.8	432
	144" x 60" (366 x 152 cm)	80	3.0	720
	144" x 120" (366 x 304 cm)	40	6.0	1,440
20 ft. series	240" x 120" (610 x 304 cm)	24	10.0	2,400

RELATED DOCUMENTS

- "Surface preparation requirements" reference guide**
- "*Mapeheat Mat* Installation Instructions"**
- "*Mapeheat Mat* Shower Installation Instructions"**
- "Surface prep over *Mapeheat Mat* for floor coverings"**
- "How to measure for custom-made *Mapeheat Mat*"**
- "*Mapeheat Mat* measuring grid"**
- *Mapeheat Mat* brochure**

*** At www.mapei.com*

ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (SDS) for specific data related to health and safety as well as product handling.

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-durabilite@mapei.com.

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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Flooring: 1-800-992-6273
Concrete and heavy construction: 1-888-365-0614
Canada:
1-800-361-9309

Customer Service
1-800-42-MAPEI (1-800-426-2734)

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For the most current product data and BEST-BACKED[SM] warranty information, visit www.mapei.com.

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