

# Mapeheat™ Cable & Membrane

Uncoupling solutions for heated floors





## Floor heating without the hassle

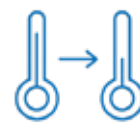
*Mapeheat* Floor-Heating Systems are easy-to-install, electric floor-heating systems that combine installation versatility with advanced new technology.



NO CRACK



WATERPROOFING



HIGH THERMAL  
CONDUCTIVITY

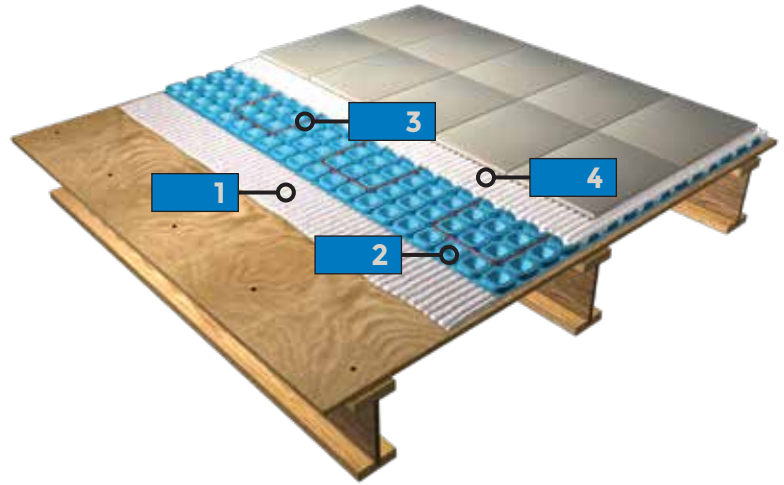
*Mapeheat Membrane* is an underlayment that can be installed over the entire subfloor for uncoupling, crack-isolation, waterproofing and floor-heating purposes. It can eliminate the need for a second layer of plywood or concrete backer board in most tile installations.

Membrane pillars have been designed to embed *Mapeheat Cable* for an easy installation method and to guarantee even heat distribution.

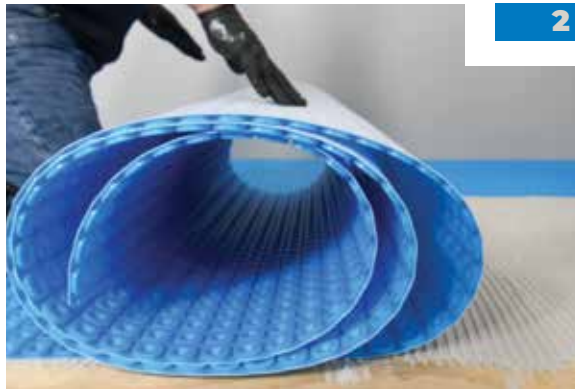
Visit [www.mapei.com](http://www.mapei.com) to find a distributor near you.

# Membrane Installation

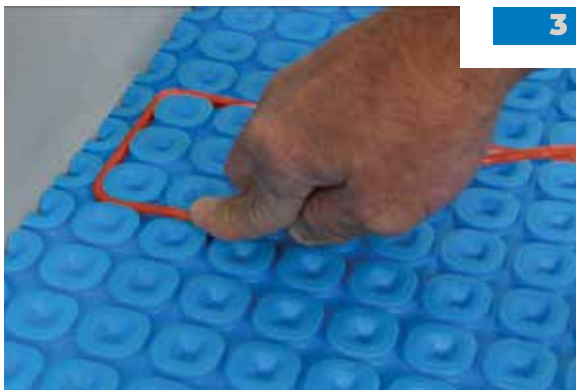
*Mapeheat Membrane* offers an integrated uncoupling, waterproofing and heating solution over such subfloors as plywood and concrete. *Mapeheat Cable* can be installed directly into the membrane, providing heat in targeted areas. Once *Mapeheat Cable* is installed, tiling with thin-set mortar can begin immediately.



Apply thin-set to subfloor.



Roll membrane onto the subfloor.

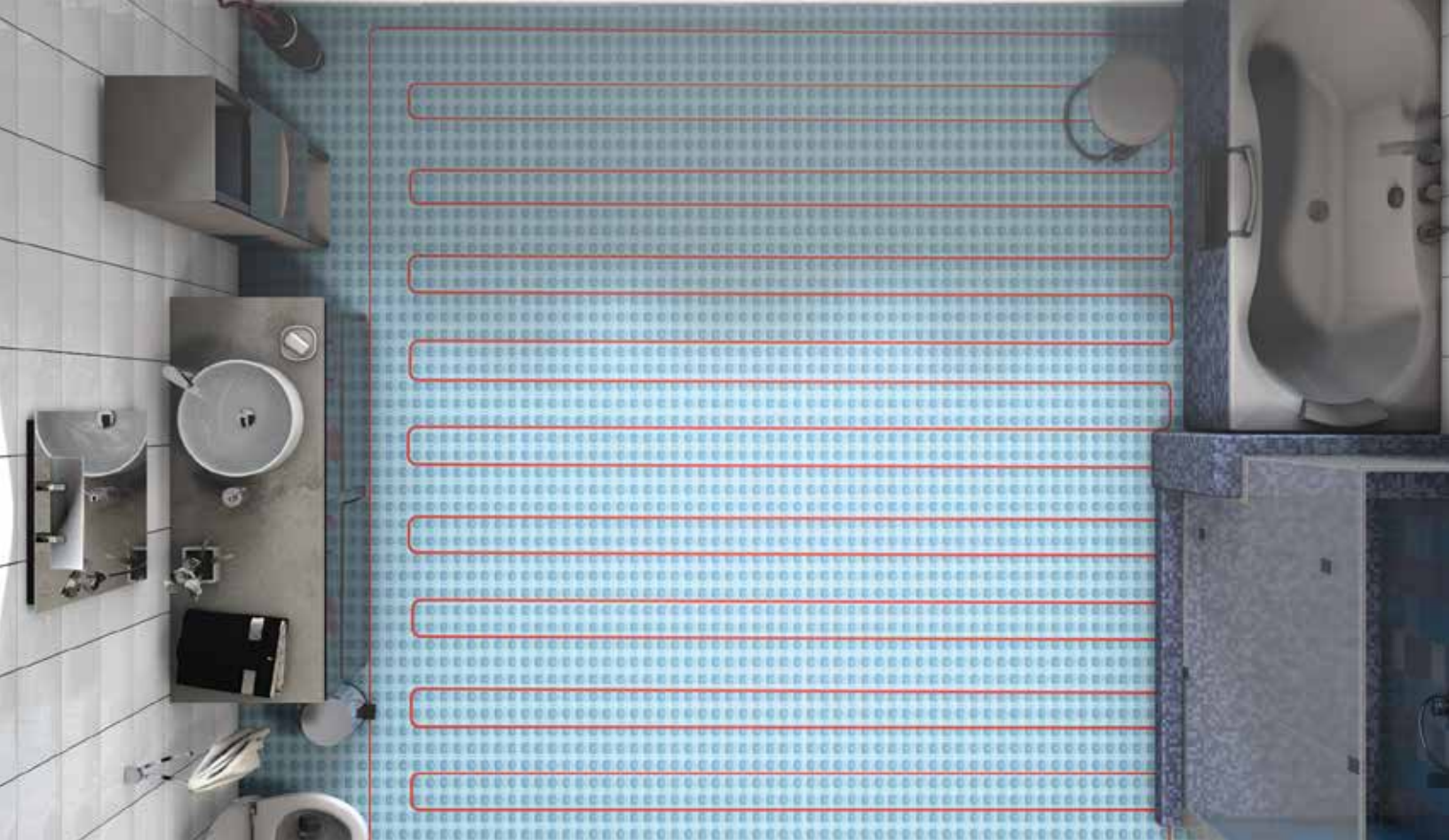


Snap the cable into the membrane.



Trowel thin-set and install tile.

**Note:** A professional tile setter or licensed electrician must install the *Mapeheat Cable* onto the subfloor. A licensed electrician must connect a *Mapeheat* floor-heating system to household wiring.



## Mapeheat Membrane | Fast Facts

- Also provides crack isolation and waterproofing
- Replaces plywood and cement board as tile underlayment
- Accepts use of polymer-modified mortars for tile setting

### Robinson Floor Test Rating

Mapeheat Membrane receives an “Extra Heavy” rating in the Robinson Floor Test (ASTM C627):

Report Number	Substrate	Tile	Joist Spacing	Rating
TNCA-773-14	OSB/plywood	12" x 12" (30 x 30 cm) porcelain tile	19.2" O.C.	Extra Heavy
TCNA-772-14	Concrete	12" x 12" (30 x 30 cm) porcelain tile	N/A	Extra Heavy

## Mapeheat Cable | Fast Facts

- Great for heating tile/stone (and can also heat laminate, engineered wood and luxury vinyl floors)
- Zero EMF (electromagnetic field) cable design
- Over 30 kit sizes; the largest 120 V length covers 122 sq. ft. (11.3 m<sup>2</sup>) and the largest 240 V length covers 246 sq. ft. (22.9 m<sup>2</sup>)
- Available in 120 V and 240 V
- Spacing options for 10, 12 or 15 W/ft<sup>2</sup>
- Ultra thin cold-lead splice fits easily into *Mapeheat Membrane*
- Can heat wet environments, such as floors of showers and steam rooms
- Halfway marker on heating cable for easy layout planning
- Industry-leading 25-year warranty



## FAQs about | Mapeheat Cable

**Q: Can Mapeheat Cable replace my electric baseboard heaters?**

**A: Yes.** *Mapeheat Cable* produces 12 W/sq. ft. (129.2 W/m<sup>2</sup>) for a heat output of 41 BTUs/sq. ft., or 15 W/sq. ft. (161.5 W/m<sup>2</sup>) for a heat output of 51 BTUs — easily heating most rooms.

**Q: Can I use Mapeheat Cable to replace my hot-water radiator?**

**A: Yes.** *Mapeheat Cable* is a viable alternative to water radiators. Invisible and maintenance-free, *Mapeheat Cable* is a perfect heating option for renovations or additions.

**Q: Will Mapeheat Cable heat the whole room or just the floor?**

**A: The whole room!** *Mapeheat Cable* can transform the entire floor area into the room's heat source — guaranteeing even, consistent heat.

### Heat Coverage Comparison

MAPEHEAT CABLE

**41 to 51**

BTUs per sq. ft.

BASEBOARD HEATER

**34**

BTUs per sq. ft.

### Operating Cost Example

	Coverage	Time	Cost*
Bathroom	50 sq. ft. (4.65 m <sup>2</sup> )	5.5 hours	17¢
Kitchen	150 sq. ft. (13.9 m <sup>2</sup> )	7.5 hours	70¢
Living room	200 sq. ft. (18.6 m <sup>2</sup> )	7.5 hours	94¢

\*Average winter operating cost. Based on U.S. Energy Information Administration's 2016 national average of \$0.12/kWh and modern insulation standards.

# Mapeheat Thermostats

**3**  
YEAR  
warranty

All Mapeheat thermostats come with manufacturer's limited (3) three-year warranty (valid from the date of purchase) and built-in GFCI protection.



## Mapeheat Thermo Connect

Programmable, WiFi floor-heating thermostat

- WiFi-enabled
- 3.5" (9 cm) color touchscreen
- Energy usage monitor
- 7-day programmability
- Dual-voltage (120 V and 240 V)



## Mapeheat Thermo Touch

Programmable floor-heating thermostat

- 3.5" (9 cm) color touchscreen
- Energy usage monitor
- 7-day programmability
- Dual-voltage (120 V and 240 V)



## Mapeheat Thermo Basic

Non-programmable floor-heating thermostat

- Manual temperature control
- Dual-voltage (120 V and 240 V)



# System Selection Guide

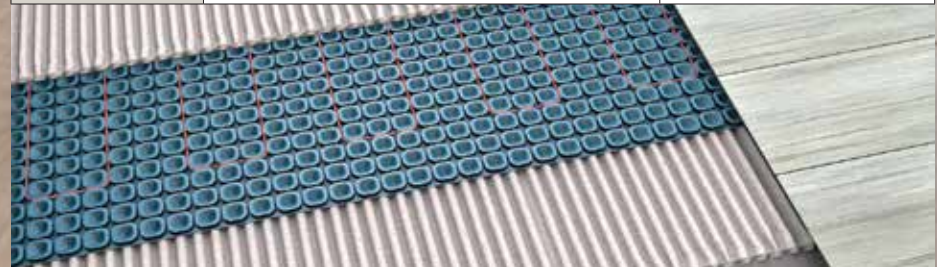
No matter the dimensions or location of your room, if you have an approved substrate, there's a *Mapeheat* system solution to heat your room from the floor up.



## STEP 1

Select the products for covering the floor area.

Product #	Description	Dimensions
2855915	<i>Mapeheat Membrane</i> , large roll covering 161 sq. ft. (15.0 m <sup>2</sup> )	49'3" x 3'3" (15 x 1 m)
2855905	<i>Mapeheat Membrane</i> , small roll covering 54 sq. ft. (5.02 m <sup>2</sup> )	16'4" x 3'3" (5 x 1 m)
2855925	<i>Mapeheat Membrane</i> , sheets covering 9 sq. ft. (0.84 m <sup>2</sup> ) each	2'9" x 3'3" (0.84 x 1.0 m) sheets (box of 25 sheets)
2851030	<i>Mapeguard</i> <sup>®</sup> ST sealing tape, large roll	5.9" x 98.4' (15 cm x 30 m)
2851010	<i>Mapeguard</i> ST sealing tape, small roll	5.9" x 32.8' (15 cm x 10 m)
2856405	<i>Mapeguard WP ST</i> waterproofing sealing tape, small roll	4.7" x 16.4' (12 cm x 5 m)
2856430	<i>Mapeguard WP ST</i> waterproofing sealing tape, large roll	4.7" x 98.4' (12 cm x 30 m)
See product codes in the two charts on the following pages	<i>Mapeheat Cable</i>	30+ options





## STEP 2

Select the correct *Mapeheat Cable* to cover the desired heated floor area.

Coverage for <i>Mapeheat Cable</i> <b>120 V</b>				Coverage with <i>Mapeheat Membrane</i>		
				3-pillar spacing (low output)	2/3/2-pillar spacing (standard output)	2-pillar spacing (high output)
Product #	Cable length	Cable amps	Cable watts	10 W/sq. ft. (107.6 W/m <sup>2</sup> )	12 W/sq. ft. (129.2 W/m <sup>2</sup> )	15 W/sq. ft. (161.5 W/m <sup>2</sup> )
2855101	29 ft. (8.8 m)	0.7	80	9 sq. ft. (0.8 m <sup>2</sup> )	8 sq. ft. (0.7 m <sup>2</sup> )	6 sq. ft. (0.6 m <sup>2</sup> )
2858101	47 ft. (14.3 m)	1.2	138	14 sq. ft. (1.3 m <sup>2</sup> )	12 sq. ft. (1.1 m <sup>2</sup> )	10 sq. ft. (0.9 m <sup>2</sup> )
2858201	57 ft. (17.4 m)	1.4	170	17 sq. ft. (1.6 m <sup>2</sup> )	15 sq. ft. (1.4 m <sup>2</sup> )	12 sq. ft. (1.1 m <sup>2</sup> )
2858301	98 ft. (29.9 m)	2.5	299	30 sq. ft. (2.8 m <sup>2</sup> )	25 sq. ft. (2.3 m <sup>2</sup> )	21 sq. ft. (2.0 m <sup>2</sup> )
2858401	120 ft. (36.6 m)	2.9	343	36 sq. ft. (3.3 m <sup>2</sup> )	31 sq. ft. (2.9 m <sup>2</sup> )	25 sq. ft. (2.3 m <sup>2</sup> )
2858501	148 ft. (45.1 m)	3.7	442	45 sq. ft. (4.2 m <sup>2</sup> )	38 sq. ft. (3.5 m <sup>2</sup> )	31 sq. ft. (2.9 m <sup>2</sup> )
2858601	188 ft. (57.3 m)	4.7	562	57 sq. ft. (5.3 m <sup>2</sup> )	48 sq. ft. (4.5 m <sup>2</sup> )	39 sq. ft. (3.6 m <sup>2</sup> )
2858701	234 ft. (71.3 m)	6	719	71 sq. ft. (6.6 m <sup>2</sup> )	60 sq. ft. (5.6 m <sup>2</sup> )	49 sq. ft. (4.6 m <sup>2</sup> )
2858801	265 ft. (80.8 m)	6.8	810	81 sq. ft. (7.5 m <sup>2</sup> )	68 sq. ft. (6.3 m <sup>2</sup> )	55 sq. ft. (5.1 m <sup>2</sup> )
2858901	318 ft. (96.9 m)	7.9	947	97 sq. ft. (9.0 m <sup>2</sup> )	82 sq. ft. (7.6 m <sup>2</sup> )	66 sq. ft. (6.1 m <sup>2</sup> )
2859101	334 ft. (101.8 m)	8.5	1,021	102 sq. ft. (9.5 m <sup>2</sup> )	86 sq. ft. (8.0 m <sup>2</sup> )	69 sq. ft. (6.4 m <sup>2</sup> )
2859201	377 ft. (114.9 m)	9.7	1,161	115 sq. ft. (10.7 m <sup>2</sup> )	97 sq. ft. (9.0 m <sup>2</sup> )	78 sq. ft. (7.2 m <sup>2</sup> )
2859301	423 ft. (128.9 m)	10.8	1,299	129 sq. ft. (12.0 m <sup>2</sup> )	109 sq. ft. (10.1 m <sup>2</sup> )	88 sq. ft. (8.2 m <sup>2</sup> )
2859401	474 ft. (144.5 m)	12.2	1,461	145 sq. ft. (13.5 m <sup>2</sup> )	122 sq. ft. (11.3 m <sup>2</sup> )	98 sq. ft. (9.1 m <sup>2</sup> )



**Mapeheat Cable** offers flexible spacing for varying watt density, allowing installers flexibility on the jobsite. The coverages in the chart above are estimated based on a square area with an unheated border of 2" (5 cm). Actual coverage will vary depending on the number of turns in the cable path (with more turns resulting in slightly less coverage).

High output	A 2-pillar spacing in <i>Mapeheat Membrane</i> produces 15 W per sq. ft., which is best for installations on a concrete slab or when heat loss is a concern.
Standard output	An alternating pillar spacing of 2-3-2 in <i>Mapeheat Membrane</i> produces 12 W per sq. ft.
Low output	A 3-pillar spacing in <i>Mapeheat Membrane</i> produces 10 W per sq. ft., which is not typically recommended but acceptable for low-use areas when trying to stretch coverage.

## STEP 2

Select the correct *Mapeheat Cable* to cover the desired heated floor area.

Coverage for <i>Mapeheat Cable</i> <b>240 V</b>				Coverage with <i>Mapeheat Membrane</i>		
				3-pillar spacing (low output)	2/3/2-pillar spacing (standard output)	2-pillar spacing (high output)
Product #	Cable length	Cable amps	Cable watts	10 W/sq. ft. (107.6 W/m <sup>2</sup> )	12 W/sq. ft. (129.2 W/m <sup>2</sup> )	15 W/sq. ft. (161.5 W/m <sup>2</sup> )
2859501	56 ft. (17.1 m)	0.7	165	17 sq. ft. (1.6 m <sup>2</sup> )	14 sq. ft. (1.3 m <sup>2</sup> )	12 sq. ft. (1.1 m <sup>2</sup> )
2859601	80 ft. (24.4 m)	0.9	224	24 sq. ft. (2.2 m <sup>2</sup> )	21 sq. ft. (2.0 m <sup>2</sup> )	17 sq. ft. (1.6 m <sup>2</sup> )
2859701	102 ft. (31.1 m)	1.3	302	31 sq. ft. (2.9 m <sup>2</sup> )	26 sq. ft. (2.4 m <sup>2</sup> )	21 sq. ft. (2.0 m <sup>2</sup> )
2859801	136 ft. (41.5 m)	1.7	403	41 sq. ft. (3.8 m <sup>2</sup> )	35 sq. ft. (3.3 m <sup>2</sup> )	28 sq. ft. (2.6 m <sup>2</sup> )
2859901	178 ft. (54.3 m)	2.2	523	54 sq. ft. (5.0 m <sup>2</sup> )	46 sq. ft. (4.3 m <sup>2</sup> )	37 sq. ft. (3.4 m <sup>2</sup> )
2860201	207 ft. (63.1 m)	2.6	632	63 sq. ft. (5.9 m <sup>2</sup> )	53 sq. ft. (4.9 m <sup>2</sup> )	43 sq. ft. (4.0 m <sup>2</sup> )
2860301	250 ft. (76.2 m)	3.1	742	76 sq. ft. (7.1 m <sup>2</sup> )	64 sq. ft. (5.9 m <sup>2</sup> )	52 sq. ft. (4.8 m <sup>2</sup> )
2860401	277 ft. (84.4 m)	3.5	842	84 sq. ft. (7.8 m <sup>2</sup> )	71 sq. ft. (6.6 m <sup>2</sup> )	58 sq. ft. (5.4 m <sup>2</sup> )
2860501	334 ft. (101.8 m)	4.3	1,020	102 sq. ft. (9.5 m <sup>2</sup> )	86 sq. ft. (8.0 m <sup>2</sup> )	69 sq. ft. (6.4 m <sup>2</sup> )
2860601	358 ft. (109.1 m)	4.6	1,102	109 sq. ft. (10.1 m <sup>2</sup> )	92 sq. ft. (8.5 m <sup>2</sup> )	74 sq. ft. (6.9 m <sup>2</sup> )
2860701	393 ft. (119.8 m)	5	1,211	120 sq. ft. (11.1 m <sup>2</sup> )	101 sq. ft. (9.4 m <sup>2</sup> )	82 sq. ft. (7.6 m <sup>2</sup> )
2860801	472 ft. (143.9 m)	5.9	1,427	145 sq. ft. (13.5 m <sup>2</sup> )	121 sq. ft. (11.2 m <sup>2</sup> )	98 sq. ft. (9.1 m <sup>2</sup> )
2860901	529 ft. (161.2 m)	6.8	1,621	162 sq. ft. (15.1 m <sup>2</sup> )	136 sq. ft. (12.6 m <sup>2</sup> )	110 sq. ft. (10.2 m <sup>2</sup> )
2861101	561 ft. (171.0 m)	7.1	1,704	172 sq. ft. (16.0 m <sup>2</sup> )	144 sq. ft. (13.4 m <sup>2</sup> )	116 sq. ft. (10.8 m <sup>2</sup> )
2861201	630 ft. (192.0 m)	8	1,914	193 sq. ft. (17.9 m <sup>2</sup> )	162 sq. ft. (15.1 m <sup>2</sup> )	131 sq. ft. (12.2 m <sup>2</sup> )
2861301	665 ft. (202.7 m)	8.6	2,054	204 sq. ft. (19.0 m <sup>2</sup> )	171 sq. ft. (15.9 m <sup>2</sup> )	138 sq. ft. (12.8 m <sup>2</sup> )
2861401	757 ft. (230.7 m)	9.6	2,314	233 sq. ft. (21.6 m <sup>2</sup> )	195 sq. ft. (18.1 m <sup>2</sup> )	157 sq. ft. (14.6 m <sup>2</sup> )
2861501	849 ft. (258.8 m)	10.8	2,589	261 sq. ft. (24.2 m <sup>2</sup> )	219 sq. ft. (20.3 m <sup>2</sup> )	176 sq. ft. (16.4 m <sup>2</sup> )
2861601	953 ft. (290.5 m)	12.1	2,905	293 sq. ft. (27.2 m <sup>2</sup> )	246 sq. ft. (22.9 m <sup>2</sup> )	198 sq. ft. (18.4 m <sup>2</sup> )

### *Mapeheat Membrane Specifications*

Material	Polypropylene
Thickness	7/32" (5.5 mm)
Weight of nonwoven polypropylene bottom layer	1.5 U.S. oz. per sq. yd. (50 g per m <sup>2</sup> )
Weight of polypropylene membrane	22.1 U.S. oz. per sq. yd. (750 g per m <sup>2</sup> )
Storage conditions	Store in a cool and dry place, avoiding direct sunlight and heat sources.

### *Mapeheat Cable Specifications*

Operating voltage	120 V and 240 V
Power output	10 to 15 W per sq. ft. (depending on wire spacing)
Minimum bending radius	1/2" (12 mm)
Maximum continuous exposure 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; PVC outer jacket; 10 feet (3.05 m) length



### Compatible with MAPEI's extensive mortar family

*There's not just one type of tile installation. MAPEI's extensive range of mortars ensures that you have exactly what you need for a successful installation – taking into account the tile type, substrate, installation challenges and application conditions.*



### Compatible with MAPEI's tried-and-true grouts

*Everything under the tile is invisible. Grouts are the one thing that customers see. MAPEI's industry-leading grouts show your customer that you don't sacrifice on quality.*



MAPEI USA

#### **MAPEI Headquarters of North America**

1144 East Newport Center Drive  
Deerfield Beach, Florida 33442  
1-888-US-MAPEI (1-888-876-2734) /  
(954) 246-8888

#### **Technical Services**

1-800-992-6273 (U.S. and Puerto Rico)  
1-800-361-9309 (Canada)

#### **Customer Service**

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

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Technology from

