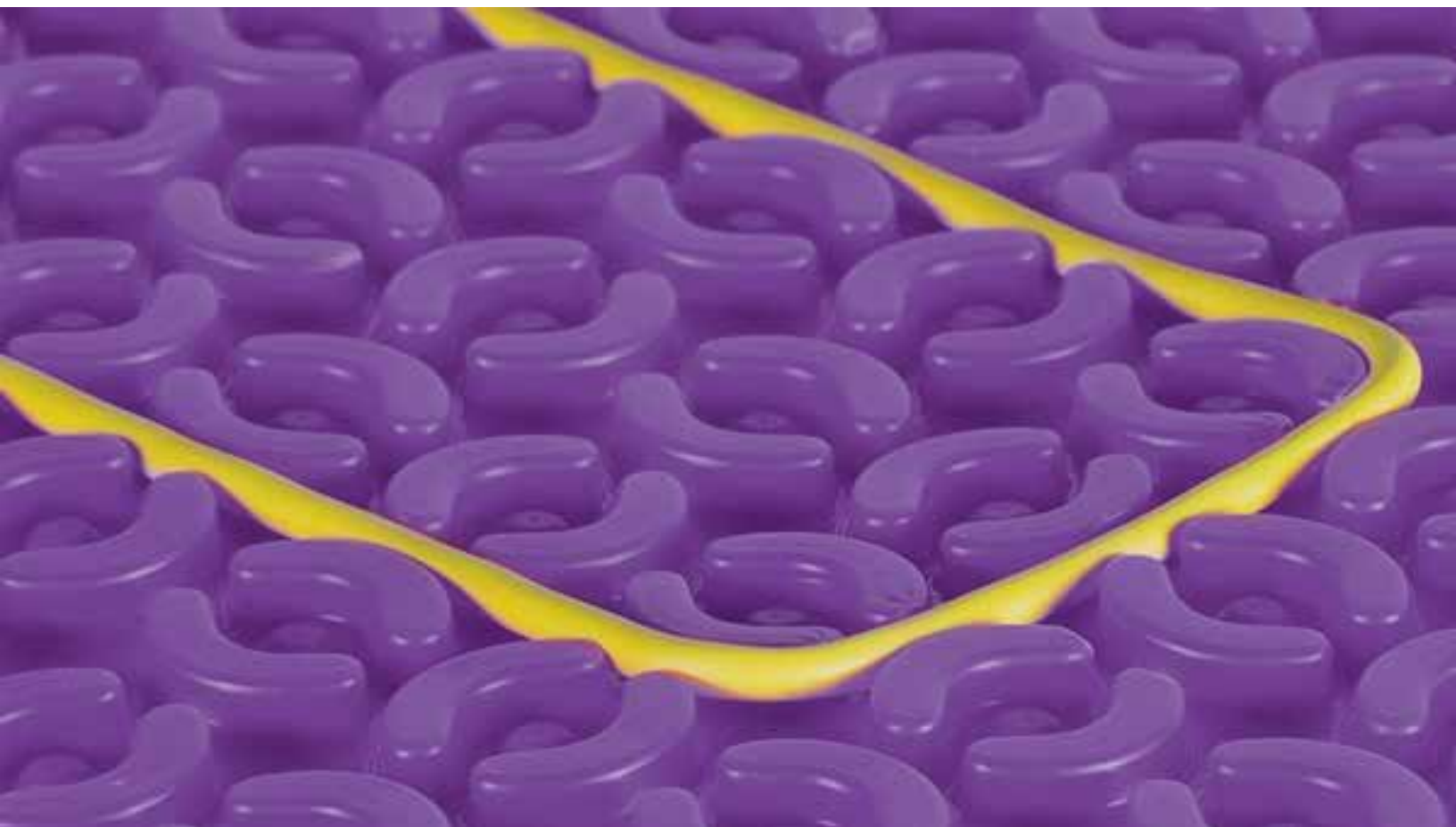


DrexMat-Heat



Installation Manual for DrexMat-Heat-80 or DrexMat-Heat-150

Technical Helpline

1-866-994-4664

IMPORTANT!

Please read this manual before attempting to install your DrexMat-Heat Membrane.



powered by 



Smart Thermostat For
In-Floor Electric Heating

The ultimate smart thermostat for high-voltage in-floor heating designed from the ground up for your comfort.

- Works with high/line voltage
- Comes with class A GFCI and floor temperature sensor
- Sleek, minimalist design with premium look and feel
- Intergrtates with any home automated system

We Play Well With Others

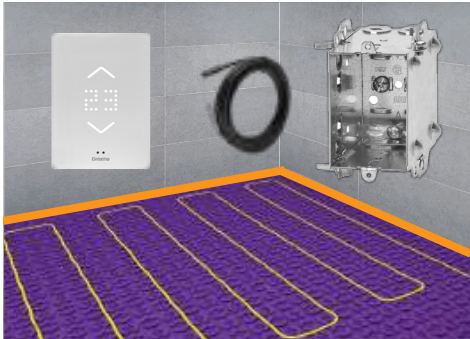


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Quick Install Guide

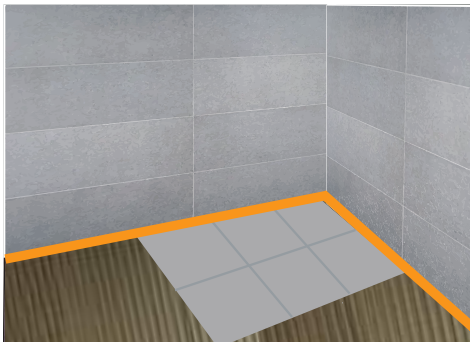
Quick Install Guide – The full installation instructions in this manual must be followed.



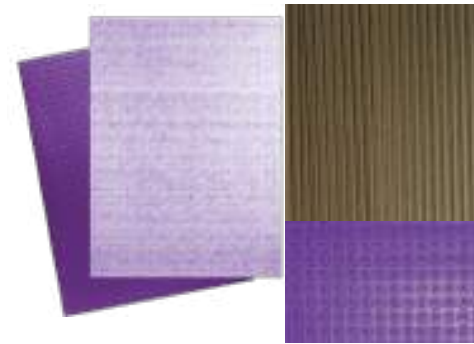
* Make electrical provision for the heater (#3004LH-RT cUL certified electrical back boxes, conduit).



* Make sure that the subfloor is even, devoid of moisture, and does not contain any dust.



** Set up a perimeter strip surrounding the room's edges to accommodate any variable movement between the finished flooring and the walls.



- * When setting up the DrexMat-Heat Fleece membrane, use a 1/4" x 1/4" using mortified thinset square notch trowel to apply a layer of thinset to the base material.
- * Trim the membrane to the desired size and press it into the thinset using either a float or a roller.
- * Place more sheets in the same manner as mentioned above, making certain that the pegs are in alignment.

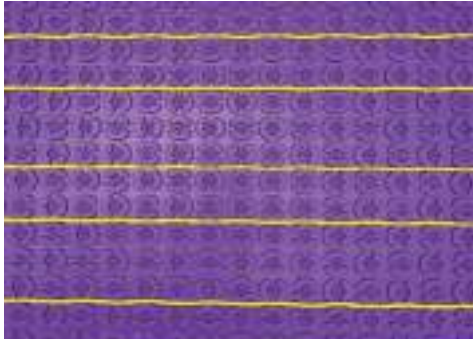


- * When setting up the DrexMat-Heat Peel and Stick membrane, a suitable smoothing or leveling compound must be applied to any rough surfaces.
- * Trim the membrane to fit, remove the backing, and lightly stick it in position. Once it's properly aligned, press it down firmly.
- * Apply a recommended primer prior to laying the membrane peel and stick. See Appendix 1 (page 25)



* Verify the heater's resistance to ensure it falls within the range specified in the Resistance Table.

Quick Install Guide



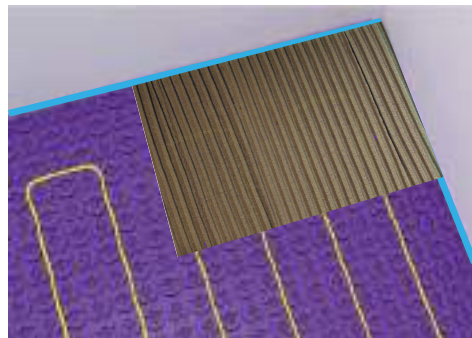
- * Position the heating cable at the preselected intervals.
- * Keep a minimum spacing of 3-2 pegs (equivalent to 3") around the perimeter.



- * Carve out a groove in both the membrane and the subfloor for the coldtail and termination joints, so that they can sit flush with the membrane's top surface.
- Avoid using tape over these joints!**
- * Place the floor sensor in the middle of two heater runs.



- * After the installation, check the resistance of the heating cable again and compare it to the previous value to confirm no damage has been inflicted.



- * Position the tiles or apply the levelling compound over the installed system.
- * The cable, along with its joints, must be entirely embedded in the thinset or levelling compound, and not left exposed.
- * When grouting, make sure to use a flexible type of grout.



- * After tiling, verify the resistance of the heating cable once again and compare it to prior values to ensure that no harm has been caused.



- * Proceed to connect your Drexma thermostat.



Do's

- ❑ Make certain that the thinset you use is compatible with underfloor heating and appropriate for use with non-porous materials like the DrexMat-Heat membrane. (See appendix 1 page 25)
- ❑ Keep a spacing that does not exceed a heat output of 14.7 W/ft² into the floor.
- ❑ Ensure that all electrical tasks are carried out by individuals who are qualified, in line with local building and electrical regulations, the National Electrical Code (NEC), particularly article 424, Part V of the NEC, ANSI/NFPA 70, for the US, and the Canadian Electrical Code, Part 1, for Canada.
- ❑ Verify the resistance of the cable before, during, and after the installation to confirm that no harm has taken place. A deviation of +/- 5% is permissible.
- ❑ Ensure that the cable is connected to a UL/cUL certified GFCI controller or breaker, as mandated by the code.
- ❑ Design the heating system layout and its installation in such a way that any post-tiling drilling activities won't harm the wiring. Don't forget to keep a copy of this plan for future reference.
- ❑ Make sure that the cable is positioned at a minimum distance of 8" from other heat sources like light fixtures and chimneys.
- ❑ Make certain that the cable's minimum free bending radius is no less than 1".
- ❑ Confirm that the subfloor has fully hardened and is stable prior to beginning the cable installation.
- ❑ Confirm that each tile is firmly set in the thinset, with no gaps or empty spaces underneath.
- ❑ Ensure that the cable, including its manufactured joints, is located beneath the final floor finish and is fully encased in thinset.
- ❑ Set up the floor probe for the thermostat. It should be positioned centrally between two runs of the heating element. Ensure that the sensor neither touches nor crosses over the cable, and that it is completely embedded in the thinset.
- ❑ Make certain that you have the necessary electrical arrangements to power the heating system at either 120V AC or 240V AC, in accordance with the specific system being installed.
- ❑ Verify the wattage and voltage of the cable to ensure you have the appropriate system for your specific application.
- ❑ Make sure any parallel runs of the cold tail and sensor wire are kept apart within the wall, using UL/cUL certified conduit where necessary.
- ❑ Ensure that the system is completely grounded in accordance with the wiring instructions provided.
- ❑ Utilize a distinct cable for the area of the shower.
- ❑ Identify the circuits that provide power to the cable on the circuit breaker. Affix the product labels for each heater to the circuit breaker for future reference.

Don'ts



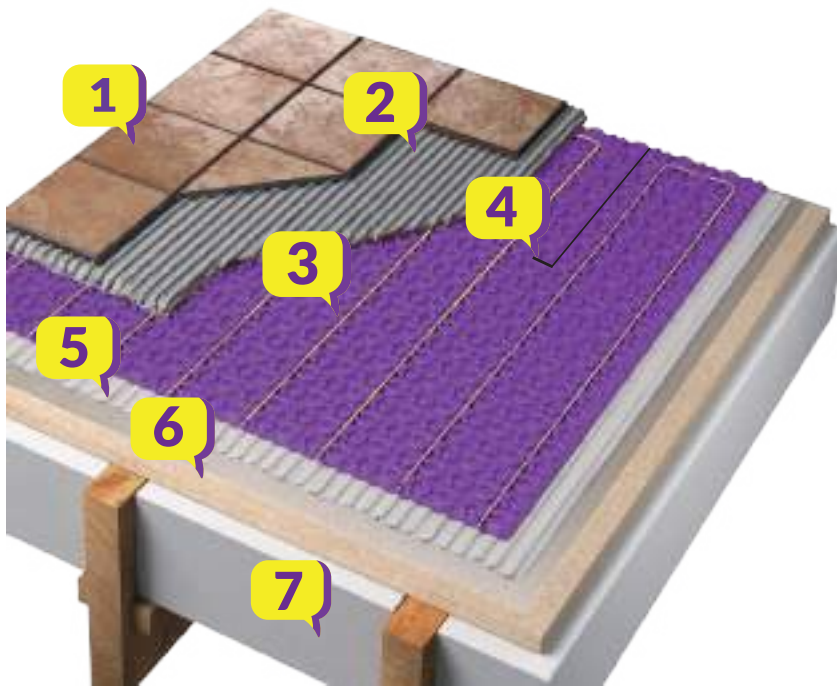
- ⊗ Do not cross the cable over another run, over coldtails, or the floor sensor. This could lead to overheating and damage to the cable.
- ⊗ Never cut or shorten the cable at any point.
- ⊗ Do not install parallel runs of the heating cable closer than 3" if using cable fixing strips, or 2-3 pegs spacing (3") if using the DrexMat membrane. Refer to the Layout Planning page for additional guidance.
- ⊗ Never install the cable using staples or other metal fixings that could potentially cause damage.
- ⊗ Do not store tiles, sharp, or heavy objects on top of the cable.
- ⊗ Never attempt to bypass the GFCI if it trips and cannot be reset during normal operation. Instead, consult a qualified electrician or call the helpline for further assistance.
- ⊗ Avoid installing the cable if the ambient temperature is below 5°F (-15°C).
- ⊗ Do not install the cable under permanent fixtures or inside closets.
- ⊗ Do not start installation on a screed that has not fully hardened.
- ⊗ Avoid covering the cold lead or termination joint with tape as it could create air pockets that may lead to the joints overheating.
- ⊗ Do not install the cable outside the room or area where it originates.
- ⊗ Never try to repair the cable if it's damaged. Instead, call the technical helpline for further instructions.
- ⊗ Do not let the thermostat exceed the maximum temperature for your final floor finish. Always verify the maximum temperatures allowed with the floor covering manufacturer.
- ⊗ Do not turn on the installed cable until the thinset has fully cured.
- ⊗ Avoid installing the heating cable closer than 3" from the wall, partitions, and permanently fixed objects.
- ⊗ Do not store the DrexMat-Heat Peel and Stick membrane in direct sunlight. Extended exposure to UV radiation can change the properties of the adhesive backing, thus voiding the product warranty.

WARNING: «RISK OF ELECTRIC SHOCK AND FIRE».

Damage to supply conductor insulation may happen if the conductors are positioned less than 3" from this heating product.

CAUTION: A ground fault protection device must be used with this heating device.

Subfloor Considerations



WOOD SUBFLOOR (RECOMENDED)

- 1- Floor Finish
- 2- 1/4" Minimum Thinset for fleece back membrane or high acrylic primer for peel and stick
- 3- Drexma Cable
- 4- Drexma DrexMat-Heat Fleece membrane
- 5- Thinset layer applied with 1/4" x 1/4" square notch trowel* or primer**
- 6- Approved sub-floor
- 7- Insulation (if needed)

*A minimum layer of 1/4" thinset or 3/8" levelling compound is measured from the top of the DrexMat-Heat membrane. When utilized, the levelling compound must be applied in a single layer. Extra layers of levelling compound should not be added.

** The thinset layer is only necessary when installing the DrexMat-Heat fleece membrane. On the other a high acrylic primer is required when installing the DrexMat-Heat Peel and Stick membrane (see appendix 1 page 25). However, if the surface to which the DrexMat-Heat Peel and Stick membrane is being applied is smooth enough to create a continuous bond, this layer of levelling compound is not necessary.

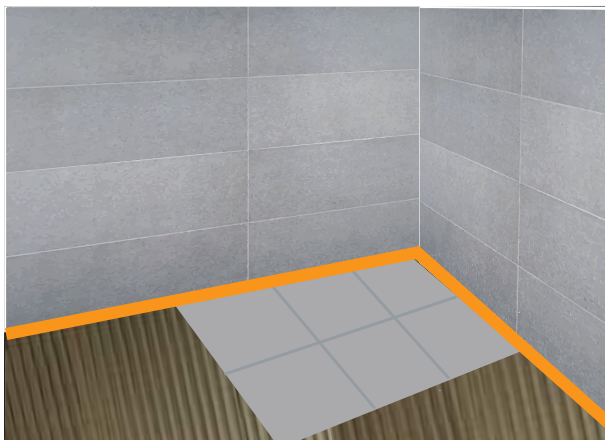
Subfloor Preparation



Confirm that the subfloor is dry and smooth. If necessary, an appropriate smoothing or levelling compound should be applied.



If necessary, prime wooden or sand and cement screeded subfloors with a high acrylic primer. For proprietary subfloors, refer to the manufacturers' instructions.



Recommended Step - Install insulation boards on top of the subfloor, referring to their installation instructions. Insulation boards, made of extruded polystyrene and faced on both sides with a fiberglass mesh embedded into a thin cement polymer mortar, are recommended. These boards will help decrease the heat-up times of your system for optimal performance.



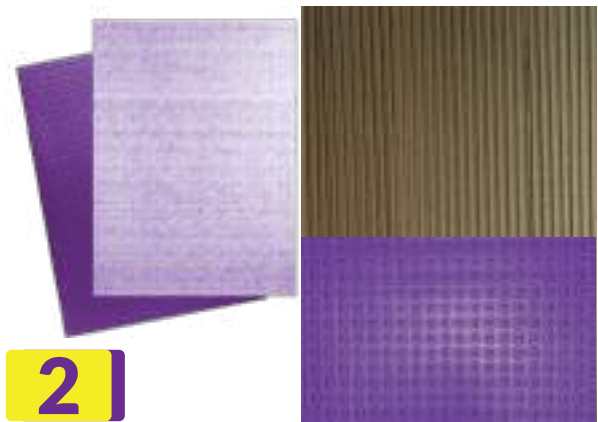
Install perimeter expansion strips within the DrexMat-Heat system, along any perimeter or sectional expansion joints within the subfloor, to maintain their function. To install, remove the tape from the perimeter strip to expose the adhesive back and start pressing it against the wall, making sure the strip also touches the floor. The installation of the perimeter strip allows for differential movement between the finished floor level and the walls.

IMPORTANT: When installing DrexMat-Heat Peel and Stick membrane the surface the membrane is being applied to must be primed and smooth, such that a clean and continuous bond can be made. If necessary an appropriate 1/8» levelling compound should be applied. Coarse and/or loose subfloor surfaces will prevent the membrane from forming a continuous bond. For example; cement coated insulation boards with a raised pattern must have a levelling compound applied over.

Lay DrexMat-Heat



Use a utility knife and/or scissors to measure and cut a length of membrane suitable for your room.



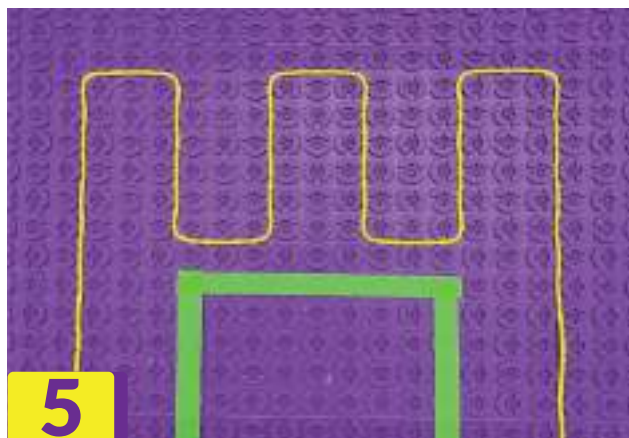
- * If you are installing the DrexMat-Heat Fleece membrane, apply a thinset layer to the substrate using a $\frac{1}{4}$ " x $\frac{1}{4}$ " square notch trowel.
- * Place the membrane with the fleece side down into the thinset.
- * Embed the membrane into the thinset using a float or roller, ensuring to remove any air pockets.



If you're installing the DrexMat-Heat Peel and Stick Membrane, position the membrane, remove the backing from one edge or corner, and stick it in place before removing the rest of the backing.



- * Repeat the previous steps for subsequent runs of the membrane, tightly adjoining the runs of membrane until the floor area is covered. Make sure to align the pegs between the membrane runs.
- * In areas of high foot traffic and under heavy loads, protect the membrane by using walking boards.
- * See Appendix page 25 for approved thinset.

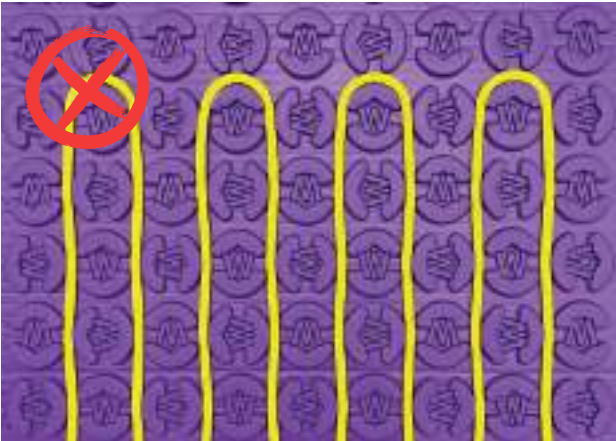


Use your own personal way to mark and outline on the floor where fixtures and other unheated areas are going to be placed.

Layout Planning

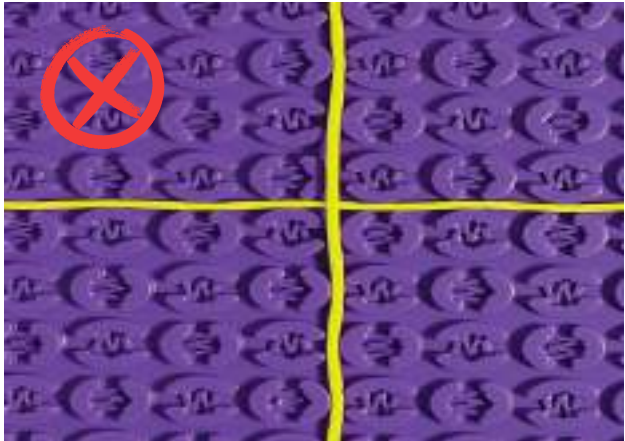
A plan of the cable layout is required as part of the control card so that any cutting or drilling after tiling will not result in injury or damage to the heater.

Before You Begin



The standard (UL-Approved minimum) spacing is 3 pegs (3 5/8") between parallel heating cables.

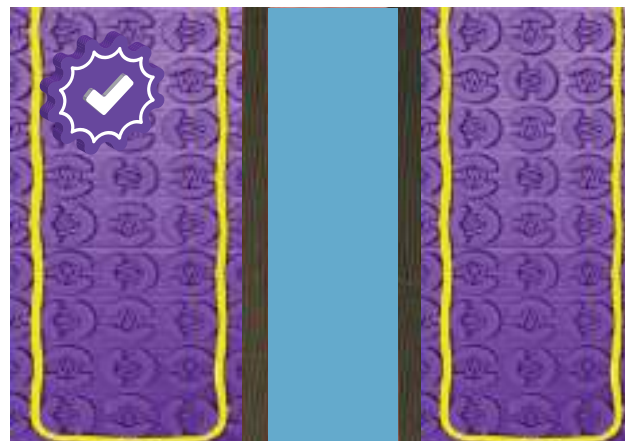
* **DO NOT** install parallel runs of heating cable closer than 3" if using cable fixing strips or 3-2 pegs (3") if using the DrexMat-Heat membrane.



When installing the cable, **DO NOT** cross the cable over another run, over coldtails, or the floor sensor. This action can lead to overheating and damage to the cable.



The heating cable must not be cut, shortened, extended, or left in a void. It must be fully installed within the layer of thinset or levelling compound.



Heating cables cannot be installed across expansion joints within the floor. Where a heated floor is divided by expansion joints, individual cables should be used to heat each area. If necessary, the cold tail can cross the expansion joint within a 12" long UL/cUL certified conduit.

NOTE: The heater should not be installed on irregular surfaces.

NOTE: Make sure the heating cable is positioned at least 8" away from the influence of other heat sources, like heating and hot water pipes, lighting fixtures, or chimneys at all times.

DrexMat-Heat Peg Spacing Diagrams

At a 3 peg spacing, the specific heat load of the DrexMat-Heat system is approximately 12.2 W/ft². The cable spacing can be adjusted to customize the installation to meet both the floor coverage and heat load requirements. When setting up the cable using the DrexMat-Heat membrane, keep a spacing of 2-3 pegs (3») between the heating system and the room's perimeter or any areas that won't be heated.

2-3 Peg (~ 3") Spacing ~14.7 W/ft²



Primarily, higher heater power is used in areas that require a quick heat-up time. However, it's important to note that higher heater power will not necessarily result in a higher heat output, just a faster heating process.

3 Peg (3 5/8") Spacing ~12.2 W/ft²



This is the standard (UL-Approved minimum) spacing and it is most suitable for the majority of projects. It has sufficient excess power for quick heat-up, but uses less wire, making it more economical.

3-4 Peg (~ 4 1/4") Spacing ~10.5 W/ft²



4 Peg (~ 4 7/8") Spacing ~9.2 W/ft²



3-4 or 4 peg spacings are primarily used in areas with lower heat-loss, like well-insulated homes (Passive Houses). With these lower outputs, the choice of flooring becomes important in order to minimize the likelihood of striping, which often happens if the flooring is too thin. Drexma cables are CSA certified or listed for compliance with the following standards and usage:

* UL 1683 «Electric Heating Products For Installation Under Floor Coverings».

* CAN/CSA-C22.2 No. 130-16 «Requirements for Electrical wResistance Trace Heating and Heating Device Sets». Where peg spacings of 3, 3-4 and 4 are used, the UL certification applies to the entire system, including the membrane.

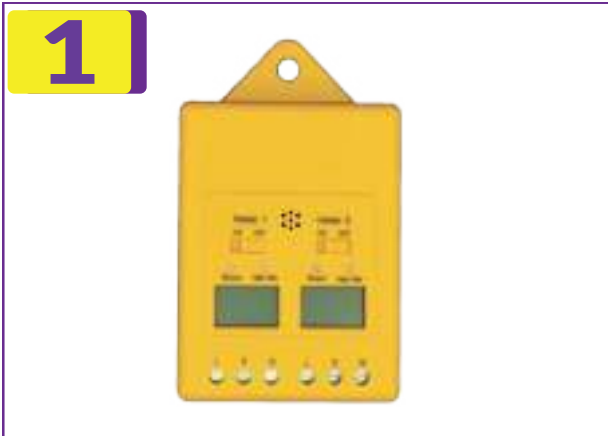
Drexmat - 120 Volt Spacing Guide

| Model | Length | | DrexMat-Heat | | | | Watt | Amp | Ohms |
|-----------------|--------|--------|----------------------------|---------|-------------|---------|------|------|-------|
| | | | Spacing (ft ²) | | | | | | |
| | | | 2 & 3 Slots | 3 Slots | 3 & 4 Slots | 4 Slots | | | |
| | 3.03" | 3.63" | 4.24" | 4.84" | | | | | |
| Ft. | M | 14.7 W | 12.2 W | 10.5 W | 9.2 W | | | | |
| 3,7CWC-120V-05 | 16.5 | 5.05 | 4.2 | 5.0 | 5.8 | 6.7 | 60 | 0.5 | 240.0 |
| 3,7CWC-120V-10 | 33 | 10.1 | 8.3 | 10.0 | 11.7 | 13.3 | 120 | 1.0 | 120.0 |
| 3,7CWC-120V-14 | 49.5 | 15.1 | 12.5 | 15.0 | 17.5 | 20.0 | 180 | 1.5 | 80.0 |
| 3,7CWC-120V-19 | 66 | 20.1 | 16.6 | 20.0 | 23.3 | 26.6 | 240 | 2.0 | 60.0 |
| 3,7CWC-120V-24 | 82.5 | 25.1 | 20.8 | 25.0 | 29.1 | 33.3 | 300 | 2.5 | 48.0 |
| 3,7CWC-120V-29 | 99 | 30.2 | 25.0 | 30.0 | 35.0 | 40.0 | 360 | 3.0 | 40.0 |
| 3,7CWC-120V-34 | 115.5 | 35.2 | 29.1 | 35.0 | 40.8 | 46.6 | 420 | 3.5 | 34.3 |
| 3,7CWC-120V-38 | 132 | 40.2 | 33.3 | 40.0 | 46.6 | 53.3 | 480 | 4.0 | 30.0 |
| 3,7CWC-120V-43 | 148.5 | 45.3 | 37.5 | 44.9 | 52.4 | 59.9 | 540 | 4.5 | 26.7 |
| 3,7CWC-120V-48 | 165 | 50.3 | 41.6 | 49.9 | 58.3 | 66.6 | 600 | 5.0 | 24.0 |
| 3,7CWC-120V-58 | 198 | 60.4 | 49.9 | 59.9 | 69.9 | 79.9 | 720 | 6.0 | 20.0 |
| 3,7CWC-120V-67 | 231 | 70.4 | 58.3 | 69.9 | 81.6 | 93.2 | 840 | 7.0 | 17.1 |
| 3,7CWC-120V-77 | 264 | 80.5 | 66.6 | 79.9 | 93.2 | 106.5 | 960 | 8.0 | 15.0 |
| 3,7CWC-120V-87 | 297 | 90.5 | 74.9 | 89.9 | 104.9 | 119.9 | 1080 | 9.0 | 13.3 |
| 3,7CWC-120V-96 | 330 | 100.6 | 83.2 | 99.9 | 116.5 | 133.2 | 1200 | 10.0 | 12.0 |
| 3,7CWC-120V-106 | 363 | 110.6 | 91.6 | 109.9 | 128.2 | 146.5 | 1320 | 11.0 | 10.9 |
| 3,7CWC-120V-115 | 396 | 120.7 | 99.9 | 119.9 | 139.8 | 159.8 | 1440 | 12.0 | 10.0 |
| 3,7CWC-120V-125 | 429 | 130.8 | 108.2 | 129.8 | 151.5 | 173.1 | 1560 | 13.0 | 9.2 |
| 3,7CWC-120V-135 | 462 | 140.8 | 116.5 | 139.8 | 163.1 | 186.4 | 1680 | 14.0 | 8.6 |
| 3,7CWC-120V-144 | 495 | 150.9 | 124.8 | 149.8 | 174.8 | 199.8 | 1800 | 15.0 | 8.0 |

Drexmat - 240 Volt Spacing Guide

| Model | Length | | DrexMat-Heat | | | | Watt | Amp | Ohms |
|-----------------|--------|--------|----------------------------|---------|-------------|---------|------|------|-------|
| | | | Spacing (ft ²) | | | | | | |
| | | | 2 & 3 Slots | 3 Slots | 3 & 4 Slots | 4 Slots | | | |
| | 3.03" | 3.63" | 4.24" | 4.84" | | | | | |
| Ft. | M | 14.7 W | 12.2 W | 10.5 W | 9.2 W | | | | |
| 3,7CWC-240V-10 | 33.0 | 10.1 | 8.3 | 10.0 | 11.7 | 13.3 | 120 | 0.5 | 480.0 |
| 3,7CWC-240V-14 | 49.5 | 15.1 | 12.5 | 15.0 | 17.5 | 20.0 | 180 | 0.8 | 320.0 |
| 3,7CWC-240V-19 | 66.0 | 20.2 | 16.6 | 20.0 | 23.3 | 26.6 | 240 | 1.0 | 240.0 |
| 3,7CWC-240V-24 | 82.5 | 25.1 | 20.8 | 25.0 | 29.1 | 33.3 | 300 | 1.3 | 192.0 |
| 3,7CWC-240V-29 | 99.0 | 30.2 | 25.0 | 30.0 | 35.0 | 40.0 | 360 | 1.5 | 160.0 |
| 3,7CWC-240V-34 | 115.5 | 35.2 | 29.1 | 35.0 | 40.8 | 46.6 | 420 | 1.8 | 137.1 |
| 3,7CWC-240V-38 | 132.0 | 40.2 | 33.3 | 40.0 | 46.6 | 53.3 | 480 | 2.0 | 120.0 |
| 3,7CWC-240V-43 | 148.5 | 45.3 | 37.5 | 44.9 | 52.4 | 59.9 | 540 | 2.3 | 106.7 |
| 3,7CWC-240V-48 | 165.0 | 50.2 | 41.6 | 49.9 | 58.3 | 66.6 | 600 | 2.5 | 96.0 |
| 3,7CWC-240V-53 | 175.0 | 53.3 | 44.1 | 53.0 | 61.8 | 70.6 | 650 | 2.7 | 88.6 |
| 3,7CWC-240V-58 | 198.0 | 60.4 | 49.9 | 59.9 | 69.9 | 79.9 | 720 | 3.0 | 80.0 |
| 3,7CWC-240V-63 | 208.0 | 63.4 | 52.5 | 63.0 | 73.4 | 83.9 | 770 | 3.2 | 74.8 |
| 3,7CWC-240V-67 | 231.0 | 70.4 | 58.3 | 69.9 | 81.6 | 93.2 | 840 | 3.5 | 68.6 |
| 3,7CWC-240V-72 | 238.0 | 72.5 | 60.0 | 72.0 | 84.0 | 96.0 | 880 | 3.7 | 65.5 |
| 3,7CWC-240V-77 | 264.0 | 80.4 | 66.6 | 79.9 | 93.2 | 106.5 | 960 | 4.0 | 60.0 |
| 3,7CWC-240V-82 | 271.0 | 82.6 | 68.4 | 82.0 | 95.7 | 109.4 | 1000 | 4.2 | 57.6 |
| 3,7CWC-240V-87 | 297.0 | 90.6 | 74.9 | 89.9 | 104.9 | 119.9 | 1080 | 4.5 | 53.3 |
| 3,7CWC-240V-96 | 330.0 | 100.6 | 83.2 | 99.9 | 116.5 | 133.2 | 1200 | 5.0 | 48.0 |
| 3,7CWC-240V-106 | 363.0 | 110.6 | 91.6 | 109.9 | 128.2 | 146.5 | 1320 | 5.5 | 43.6 |
| 3,7CWC-240V-115 | 396.0 | 120.8 | 99.9 | 119.9 | 139.8 | 159.8 | 1440 | 6.0 | 40.0 |
| 3,7CWC-240V-126 | 429.0 | 130.8 | 108.2 | 129.8 | 151.5 | 173.1 | 1560 | 6.5 | 36.9 |
| 3,7CWC-240V-135 | 462.0 | 140.8 | 116.5 | 139.8 | 163.1 | 186.4 | 1680 | 7.0 | 34.3 |
| 3,7CWC-240V-145 | 479.0 | 146.0 | 120.8 | 145.0 | 169.1 | 193.3 | 1770 | 7.4 | 32.5 |
| 3,7CWC-240V-154 | 528.0 | 161.0 | 133.2 | 159.8 | 186.4 | 213.1 | 1920 | 8.0 | 30.0 |
| 3,7CWC-240V-173 | 594.0 | 181.0 | 149.8 | 179.8 | 209.7 | 239.7 | 2160 | 9.0 | 26.7 |
| 3,7CWC-240V-192 | 660.0 | 201.2 | 166.5 | 199.8 | 233.0 | 266.3 | 2400 | 10.0 | 24.0 |
| 3,7CWC-240V-212 | 726.0 | 221.2 | 183.1 | 219.7 | 256.4 | 293.0 | 2640 | 11.0 | 21.8 |
| 3,7CWC-240V-231 | 792.0 | 241.4 | 199.8 | 239.7 | 279.7 | 319.6 | 2880 | 12.0 | 20.0 |
| 3,7CWC-240V-250 | 858.0 | 261.5 | 216.4 | 259.7 | 303.0 | 346.2 | 3120 | 13.0 | 18.5 |
| 3,7CWC-240V-270 | 924.0 | 281.6 | 233.0 | 279.7 | 326.3 | 372.9 | 3360 | 14.0 | 17.1 |
| 3,7CWC-240V-289 | 990.0 | 301.8 | 249.7 | 299.6 | 349.6 | 399.5 | 3600 | 15.0 | 16.0 |

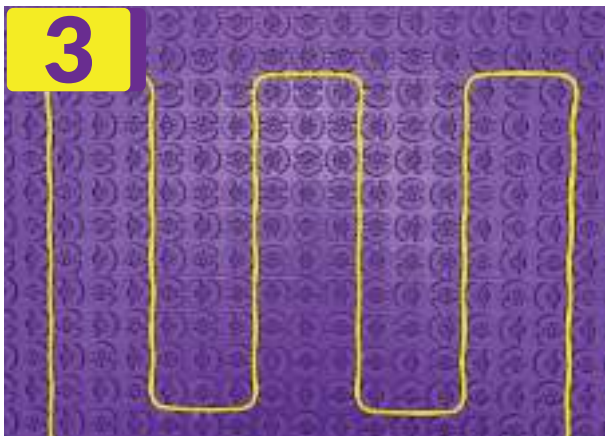
Install Drexmat Cable



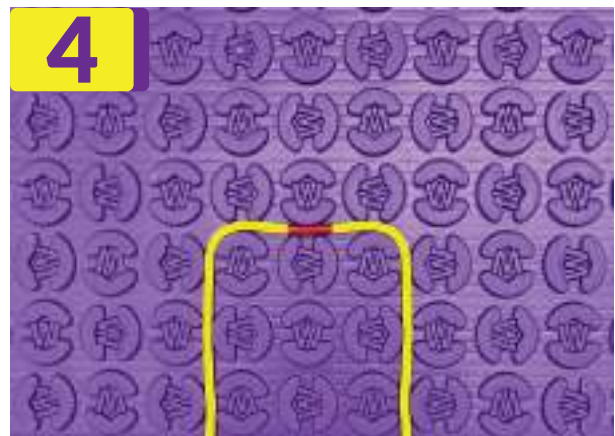
- * Take a measurement of the resistance of the heating cable and record it in the «Resistance Before» column of the test log sheet, which is provided as part of this installation guide.
- * If the resistance falls outside the range specified in the Reference Resistance table, immediately halt the installation and get in touch with Drexma.



- * Position the cold lead connection on the floor. Cut a section in the membrane for the manufactured joint so that it aligns at the same height as the heater.
- * Secure the cold tail using tabs of electrical tape as necessary.
- DO NOT** tape over the manufactured joint or heating cable. These elements must be fully embedded within the thinset or levelling compound that's being laid over them.



- * Start laying the heating cable, pressing it in between the pegs.
- * To complete the cable placement, follow the installation layout created in Step 5.
- * **DO NOT** Do not install the heater if the ambient temperature is less than 5 °F (-15 °C).



- * The DrexMat-Heat cable has a marker at its midpoint. When you reach this marker, review your progress up to that point and verify that you're correctly spacing the cable. This ensures that the entire heated area will be covered when you reach the end of the cable.

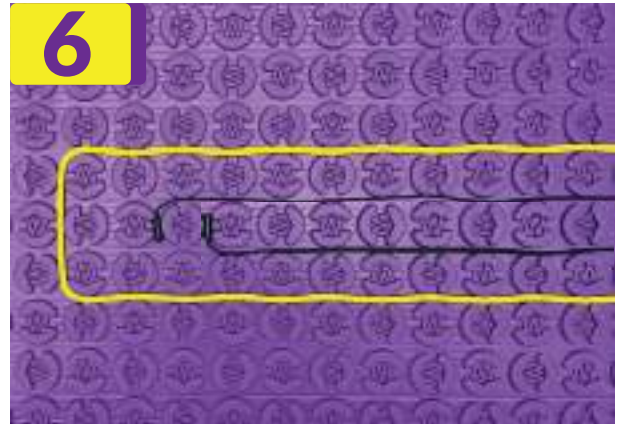
Note: The red marker is for illustration purpose, the actual marker on the cable is **WHITE**

Install Drexmat Cable



* At the end of the heating cable, you will find a termination joint. Similar to the manufactured joint at the beginning of the heating cable, this joint needs to be cut into the membrane so that it is positioned at the same height as the heater.

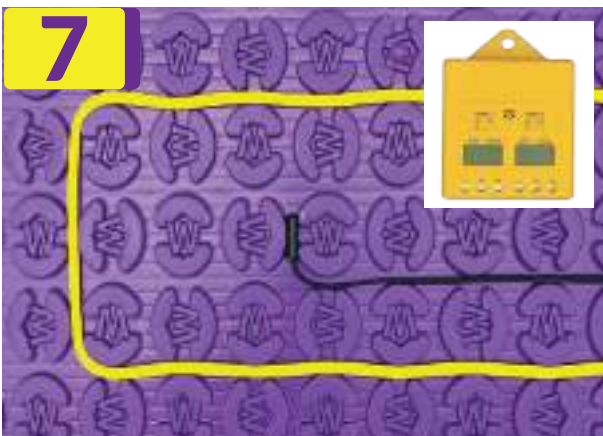
* **DO NOT** tape over the termination joint. Instead, it must have direct contact and be completely embedded within the thinset or levelling compound that is laid over the heating cable.



* Install the floor sensor at least 6" into the heated area it will be controlling. The sensor should be positioned centrally between parallel runs of the heating cable and not in an area affected by other heat sources.

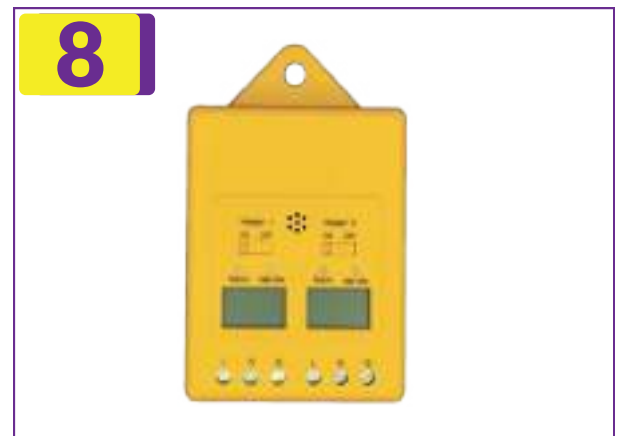
* If the heating cable is installed at multiple spacings, then the sensor should be positioned centrally between the narrowest parallel run.

* Image shows the installation When 2 sensors are installed.



* Measure the resistance of the floor sensor and record it on the control card. If its resistance is outside the prescribed range contact Drexma.

* **DO NOT** tape over the floor sensor tip it must be in full contact with the heated thinset or levelling compound.



* If the resistance falls outside the range specified in the Reference Resistance table, immediately halt the installation and get in touch with Drexma.

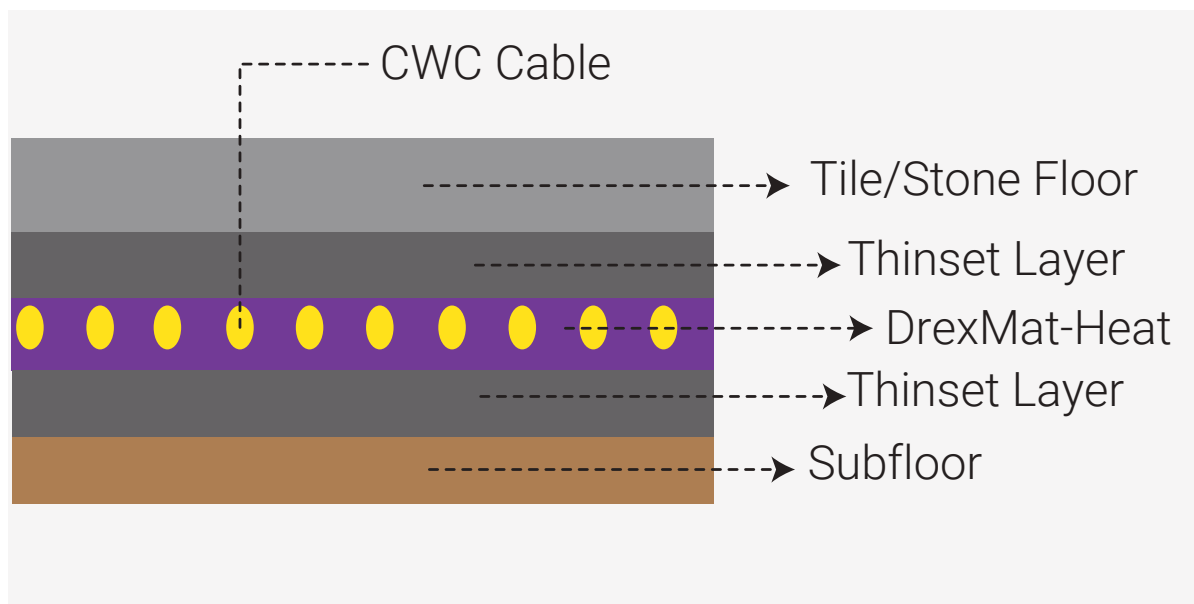
* If the resistance falls outside the range specified in the Reference Resistance table, immediately halt the installation and get in touch with Drexma.

Select Floor Covering

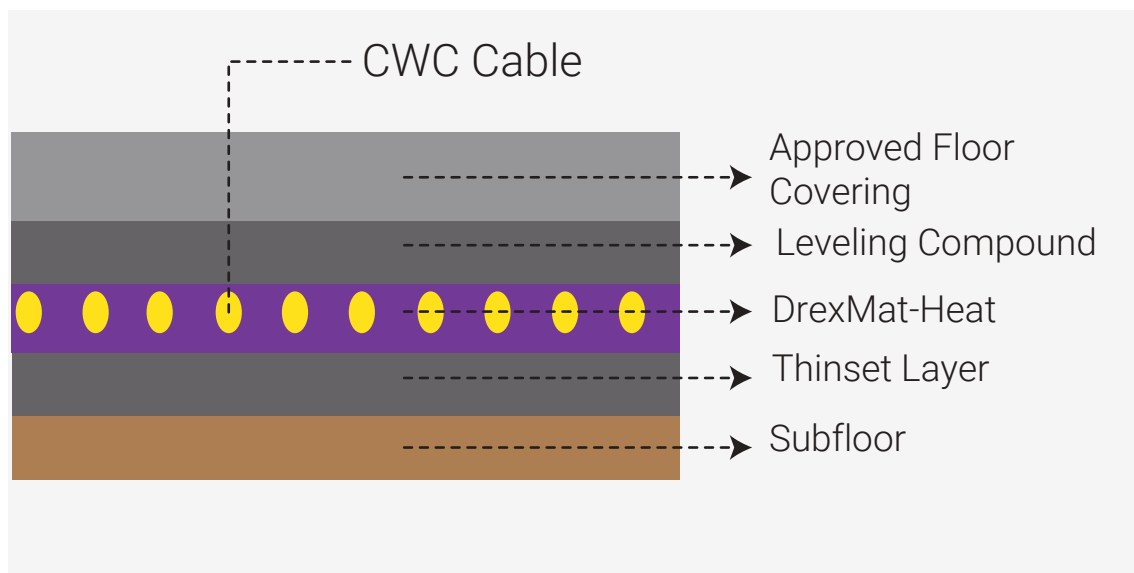
For floor finishes other than tiles, a single layer of self-levelling compound (minimum thickness: 3/8» above the membrane) is required over the heater. This compound should be suitable for use with underfloor heating and plastic underlayments. You must ensure the entire heater, including the manufactured joints, is encased in the levelling compound.

NOTE: Before installing the floor finish, ensure its compatibility with underfloor heating and check its maximum operating temperature against the required operating conditions.

Tiled / Stone Floor Finish



All Floor Finishes - With 3/8" Self Levelling Compound

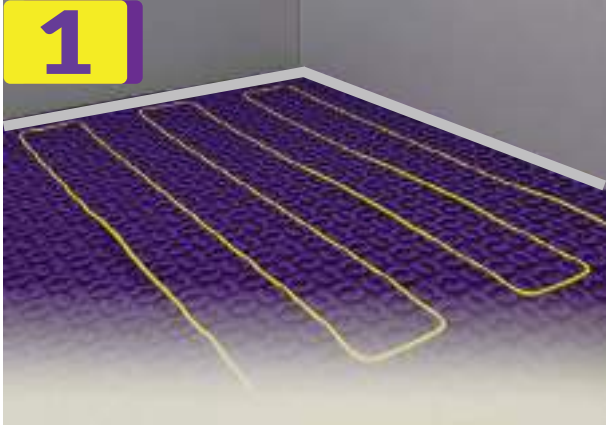


* If needed, prime the exposed surface according to the instructions provided with the thinset. When installing the DrexMat Peel and Stick membrane, the surface where the membrane will be applied must be primed and smooth so a clean and continuous bond can be made. If necessary, apply an appropriate 1/8» levelling compound. Coarse and/or loose subfloor surfaces will prevent the membrane from forming a continuous bond. For instance, cement-coated insulation boards with a raised pattern must have a levelling compound applied over them.

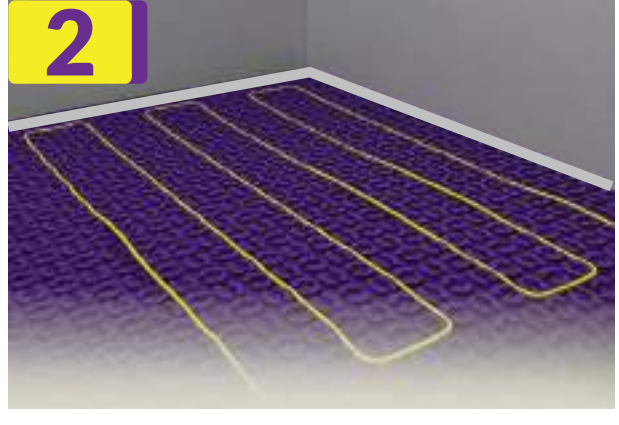
** This method can be utilized to create a floor surface suitable for most floor finishes and for forming a drainage slope within a wetroom.

Waterproofing

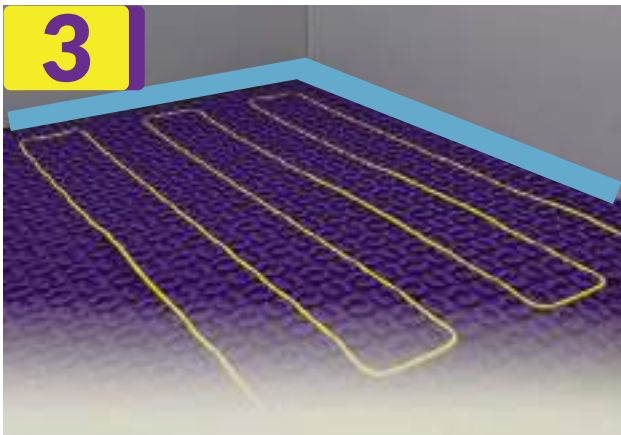
There are situations, such as in wetrooms, where waterproofing will be necessary due to significant exposure to water. If you're using a proprietary waterproofing system, you should first lay a levelling compound over the DrexMat system to provide a finished surface to install over. Follow the steps below when using the DrexMat waterproofing products to waterproof the installation.



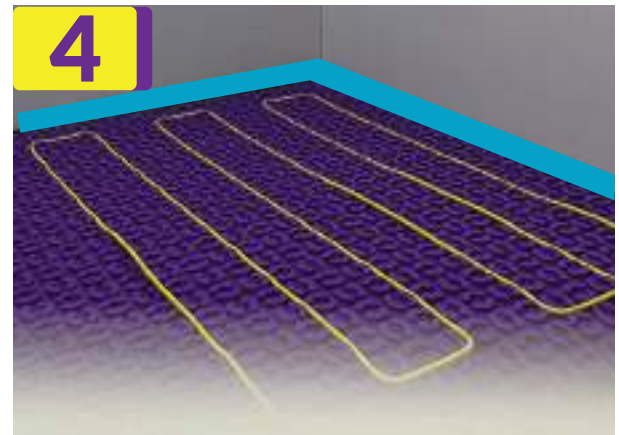
* Trim the perimeter strip so that it's level with the DrexMat membrane.



* Apply an appropriate waterproof 3/8" layer of thinset to the membrane, walls, and areas where the membrane is penetrated. This should be done 4" on either side of the joint, making sure there are no gaps or voids.

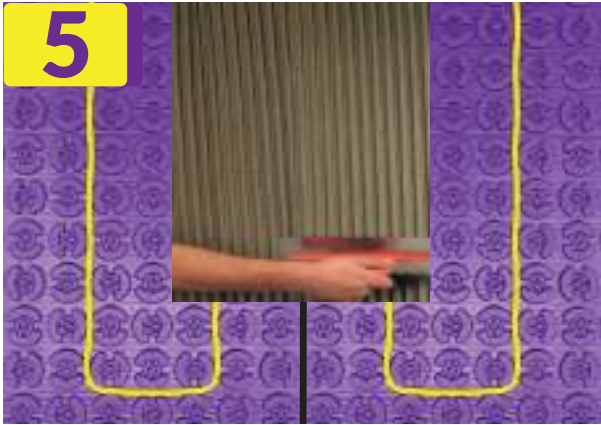


* Cut a length of waterproof tape that fits the space and press it into the thinset along the wall perimeter using a trowel, making sure to remove any air gaps or creases.

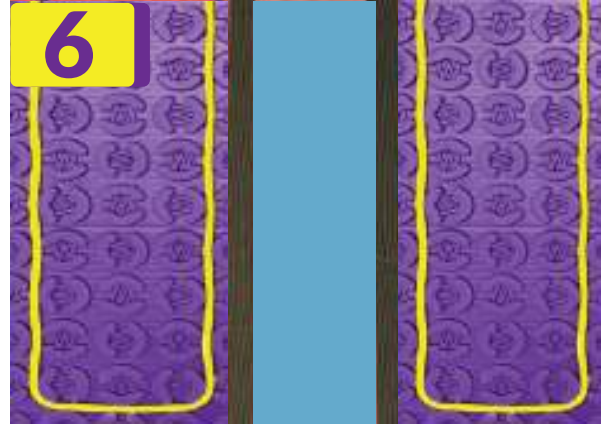


* Re attach the previously removed portion of the perimeter strip over the top of the waterproof tape so it's flush with the floor.

Waterproofing



* To make the joints between membrane runs and over the cable joints waterproof, apply a 3/8" layer of waterproof thinset, extending 4" on both sides of the joint, ensuring all cavities are completely filled.



* Cut a suitable length of waterproof tape and press it into the thinset using a trowel, ensuring to eliminate any air gaps or creases. Be careful not to damage or displace the cable in the process.

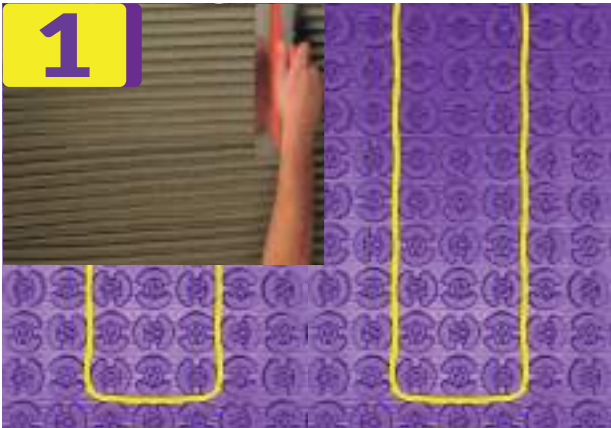
NOTE: When joints are needed, ensure the tape overlaps by 4", and fuse the two lengths together using a layer of thinset.

NOTE: If the membrane has been damaged or pierced, whether at the manufactured joint, termination joint, or any other area, seal the penetration with a 3/8" layer of thinset and cover it with waterproof tape.

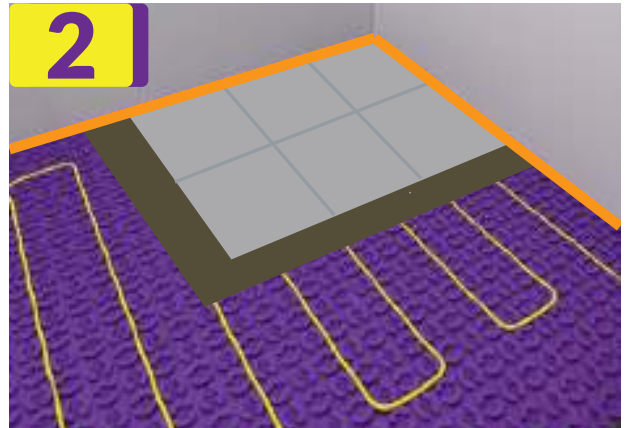
Lay Floor Covering

Underfloor heating operates most effectively with conductive, low-resistance floor finishes like stone and tiles. The thermal resistance of the floor should not exceed a thermal insulation «R» value of $1\text{ft}^2 \cdot ^\circ\text{F} \cdot \text{h}/\text{Btu}$ for maximum efficiency.

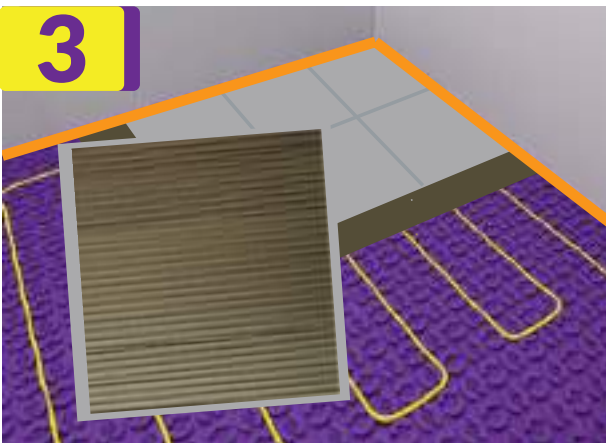
Tiled Floor



* Cover the installation with a full bed of modified thinset, with a minimum thickness of $1/4"$. Be careful not to damage or displace the heating cable. If you're using tiles smaller than $3\ 1/2"$ in either length or width, first cover the installation with a levelling compound.



* Gently arrange the tiles and press them into the thinset.



* After placing the first tile, remove it to make sure it's fully covered with thinset from your application.
* Make sure the grout line's width adheres to the manufacturer's guidelines for the specific size and type of tile you're using. Do not remove tiles once the thinset has hardened as it could damage the heater.



* As per the ceramic thinset manufacturer's guidelines, grout the floor at the earliest opportunity.

DO NOT turn on the heater until the thinset and grout have completely cured.

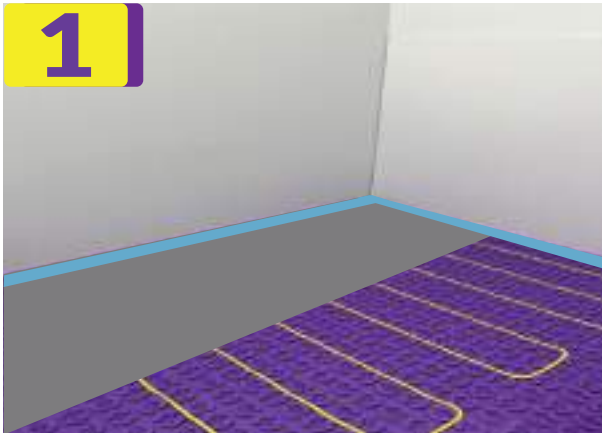
DO NOT use the heater to hasten the drying process of the thinset or leveling compound.

NOTE: Should you opt for tiles smaller than $3\ 1/2"$ in either length or width, it's mandatory to first apply a leveling compound over the installation.

NOTE: Make sure the thinset you're using is compatible with underfloor heating and can be applied to non-porous materials, like the DrexMat-Heat membrane.

Lay Floor Covering

Tiled Floor



* If your plan involves installing wood, carpet, or vinyl over the heater, a single layer of self-leveling compound (minimum thickness: 3/8" above the membrane) is necessary over the heater. It's crucial to ensure that all heating cables are entirely covered. Make sure that the leveling compound is compatible with the DCMP system.

NOTE: Before proceeding with the floor finish installation, verify its compatibility with under-floor heating and check its maximum operating temperature against the necessary operating conditions.

Typical "R" Values:

Carpet 1/2" thick = 1.0 * Please check actual values with manufacturer

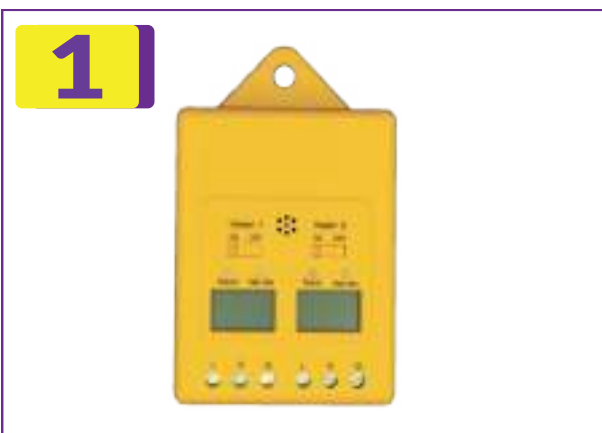
Stone & Ceramic 1/2" = 0.04 ,

Laminate 1/4" = 0.3

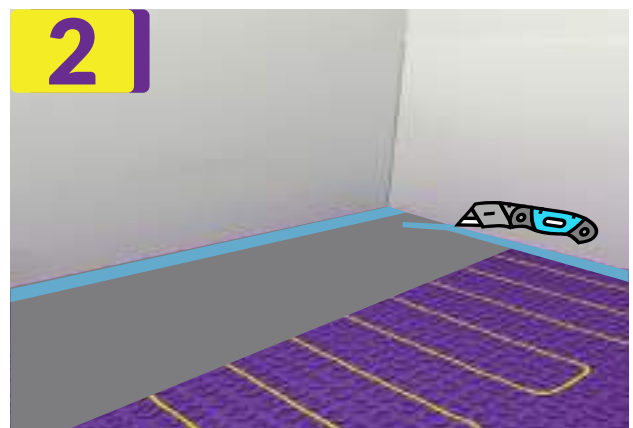
Engineered wood 3/4" = 0.75

Vinyl 1/8" = 0.1

Final Steps



* Once the tiles or leveling compound have been installed, carry out another resistance test to confirm that the sensor and heater have not incurred any damage, and note this in the control card.



* The perimeter strips should be cut level with the tiles or leveling compound using a utility knife.

Warranty

Drexma warranty for underfloor heating cable 3.7 Watts

1-25-year non-transferable limited warranty on 3.7GCWC cable and 5-year limited warranty on thermostats

2-Flexible Limited Lifetime Warranty

Lifetime on 3.7GCWC cable installation and approved and used heating cable uncoupling membranes (see appendix 1), with approved and used cement glue (see appendix 1) and 5 years on thermostats.

1) 25-year non-transferable limited warranty

25 years on 3.7GCWC heating cables, 5 years on thermostats

Drexma, the Company, offers a 25-year Limited Warranty for floor heating cables (3.7GCWC), hereinafter referred to as «the Product», against defects in material and workmanship to the original owner or original purchaser of the Product. This warranty is not transferable.

Floor heating thermostats (WiCommand, Mysa, and OJ Electronics) sold by Drexma have a 5-year Limited Warranty. Under this warranty Drexma will only replace the product and no other charges or fees will be allowed.

Under this 25-Year Limited Warranty for the 3.7GCWC floor heating cable, Drexma will, if Drexma determines that the Product is defective in material or workmanship and that the Product has not been damaged through misuse and/or abuse or through alteration or improper installation, refund in full or replace the Product at the price indicated on Drexma's authorized price list for said Product at the date of purchase. Drexma's sole remedy and liability shall be the replacement of the defective section of the heating system.

Only Drexma Industries plastic templates are permitted with cables (3.7GCWC).

If Drexma repairs or replaces all or part of the system, the warranty will not be extended.

The Customer must :

- Install the cable sold by Drexma (3.7GCWC), the DrexMat membrane or another approved membrane (see Appendix 1) with approved cement-glue (see Appendix 2) and one of the thermostats listed in the «Connecting to the power supply» section, according to Drexma's approved installation guide or the installation guide approved by one of the approved products in Appendix 1.
- Connect the cable and thermostat to the power supply and install the cable and thermostat according to the electrical standards in force in the region where the thermostat and/or heating system will be installed.
- Install cable and thermostat according to the National Building Code (NBC) or building code standards in effect in the region of installation.

To benefit from this Limited Lifetime Warranty, the Owner must provide Drexma, within 90 days of completion of the cable installation:

Drexma Industries Inc ; 119A Sir Wilfrid Laurier, Saint-Basile, Québec, J3V 6J7, info@drexma.com

1. Proof of cable purchase
2. Proof of purchase of approved cement glue with 10-year manufacturer's warranty
3. Proof of purchase of thermostats
4. Proof of membrane purchase
5. Proof of professional installation of membrane, thermostats, cables, and adhesive cement
6. Register of Megger tests carried out by a qualified electrician, with contact details.
7. The Drexma warranty register form available at www.drexma.com
8. Provide 4 photos of the installation, 1) either before installation 2) after installation of the cable, 3) after installation of the floor covering and 4) after installation of the electrical box and connection to the electrical network. Electrical connections and tests must be carried out by a qualified electrician only.

It is mandatory to install an extra wide (2 ½» min.) and extra deep (2 ½» min.) electrical wall box to accommodate the ground fault circuit interrupter (GFCI), behind the thermostat. Acceptable product is Iberville #3004LH-RT or larger (or any equivalent product). Furthermore, it is strictly forbidden to make multiple connections in this electrical box. In other words, only one electrical connection is permitted. The electrical line supplying power to the thermostat and no other electrical lines are permitted. No connections to other electrical products are permitted. The load limit per cable and per thermostat must be 15 Amperes.

Warranty

Drexma warranty for 3.7CWC underfloor heating cable

2) Limited flexible lifetime warranty

Lifetime on 3.7CWC cable installation and approved heating cable uncoupling membranes (see appendix 1) and used with approved cement glue (see appendix 1) and 5 years on thermostats.

Drexma Industries Inc. (the Company), offers a Limited Lifetime Flexible Installation Warranty for floor heating cables (3.7CWC) with uncoupling membranes (see Appendix 1), approved thin-set mortars (see Appendix 1), 5 years on floor heating thermostats (WiCommand, Mysa, and OJ Electronics) sold by Drexma against defects in material and workmanship, to the original owner or original purchaser of the product only (hereinafter Customer).

To benefit from the flexible lifetime warranty, the customer must also follow and comply with the demanding 25-year warranty 1 for 3.7GCWC cables.

This Limited Flexible Lifetime Warranty is limited to products sold by Drexma or an authorized reseller and covers parts, material and labor according to the terms set forth below.

Under this Limited Lifetime Warranty for the 3.7GCWC floor heating cable, Drexma will, if Drexma determines that the Product is defective in material or workmanship and that the Product has not been damaged through abuse and/or misuse or through alteration or improper installation, refund in full or replace the Product at the price indicated on Drexma's authorized price list for said Product on the date of purchase. Drexma's sole remedy and liability shall be the replacement of the defective section of the heating system.

To benefit from this Limited Lifetime Warranty, the Owner must provide Drexma, within 90 days of completion of the cable installation:

Drexma Industries Inc; 119A Sir Wilfrid Laurier, Saint-Basile, Québec, J3V 6J7, info@drexma.com

1. Proof of cable purchase
2. Proof of purchase of approved cement glue with 10-year manufacturer's warranty
3. Proof of purchase of thermostats
4. Proof of membrane purchase
5. Proof of professional installation of membrane, thermostats, cables and adhesive cement
6. Register of Megger tests carried out by a qualified electrician, with contact details.
7. Drexma warranty registration form available at: drexma.com. Fournir 4 photos of the installation, 1) either before installation 2) after installation of the cable, 3) after installation of the floor covering and 4) after installation of the electrical box and connection to the electrical network.

Electrical connections and tests must be carried out by a qualified electrician only.

It is mandatory to install an extra wide (2 ½» min.) and extra deep (2 ½» min.) electrical wall box to accommodate the ground fault circuit interrupter (GFCI), behind the thermostat. An acceptable product is: Iberville #3004LH-RT or larger (or any equivalent product). Furthermore, it is strictly forbidden to make multiple connections in this electrical box. In other words, only one electrical connection is permitted. The electrical line that brings power to the thermostat and no other electrical line is permitted. No junction to any other electrical product may be made.

The load limit per cable and per thermostat must be 15 Amperes. To benefit from the 25-year Limited Full Warranty, the customer must :

This warranty is only valid for the following installation combinations:

- One or more cables not exceeding the 15 Amp limit per thermostat.

Warranty

INFORMATION AND OBLIGATIONS COMMON TO BOTH WARRANTIES

To make a claim, you must:

- (a) Provide Drexma with a description of the problem, photos of the installation problem, and a description of the repairs to be made carried out prior to the work being carried out;
- (b) At your expense, if Drexma deems it necessary, ship the product to Drexma, the local representative or distributor;
- (c) Send proof that the installation has been carried out in accordance with the product installation guide or a specific drawing, or in accordance with Drexma's installation guidelines for this project;
- (d) Provide proof that the product has been installed in accordance with the Canadian Electrical Code (CEC), the National Building Code (NBC) or local building and electrical codes;
- (e) Provide the purchase invoice for the Product;
- (f) Have the electrician's bill for connecting the system;
- (g) Provide the completed Cable Test Record form, installation photos and completed warranty.

NOT COVERED BY WARRANTY

Not covered by warranty:

- (a) Any incidental or consequential damages, including inconvenience, loss of time or loss of money;
- (b) Any material or labor required for the repair or replacement of the Product or accessories, which has not been previously authorized in writing by Drexma;
- (c) Any material or labor required for the removal, repair or replacement of the floor covering that has not been previously authorized in writing by Drexma;
- (d) Any cost related to the shipment of the product, the inspection or any product concerning electrical or flooring products.
- (e) Submerged outdoor shower and steam shower installations.
- (f) The following products must not be installed: glass tiles, resin-backed (ceramic) tiles, natural stone or moisture-sensitive (porous) ceramics, and carpet.
- (g) All commercial use;

Drexma warranty for 3.7W underfloor heating cable

Drexma cannot be held responsible for any consequential damage caused by a skilled worker, visitor to the work site or damage resulting from work carried out after installation.

Drexma disclaims all warranties with respect to matters not covered herein, including any implied warranty of merchantability or any implied warranty of fitness for a particular purpose. Drexma assumes no liability for special, indirect, incidental, consequential or incidental damages in connection with the ownership or use of this product, including inconvenience or loss of use. The warranty offered by Drexma appears exclusively in this document.

No agent or representative of Drexma is authorized to extend/modify this warranty unless such extended/modified warranty is presented in writing by an officer of Drexma. Due to differences in building and floor insulation, climate and floor coverings, Drexma makes no warranty that the floor will reach any particular temperature or that the floor temperature will increase. It is therefore possible that users may be satisfied or dissatisfied with the level of heat generated by the floor heating system.

Drexma does not guarantee that cables will produce the level of heat specified on the cable nameplate, in technical documents or installation manuals when operating at the specified rated voltage.

Applicable Law

These Warranties shall be governed by and construed exclusively in accordance with the laws of the Province of Quebec, Canada. Any dispute between Drexma and the warranty holder shall be governed by the laws in force at the time of the dispute.

Terms and conditions

You must check boxes and packaging immediately on delivery to confirm that all components have been delivered and to identify any components that may have been damaged in transit. Any visible damage or missing components must be brought to the attention of Drexma personnel before accepting the Product. Once delivery has been accepted, the Company and delivery personnel are released from all liability. Any non-conformity in the quantity or type of component delivered must be brought to Drexma's attention within 15 days of the delivery date indicated on the package order form.

These guarantees are effective for eligible customers from January 01, 2018.

Warranty

Drexma customer details (duly completed)

| | |
|---|--|
| Buyer's name : | |
| Buyer's email : | |
| Place of purchase (store, contractor, other): | |
| Date of purchase : | |
| Name of electrician : | |
| Electrician's contact details : | |
| Cable number(s) : | |
| Membrane name and color : | |
| Membrane name and color : | |
| Thermostat name and/or number: | |
| Installation by : | |
| Name and number of cement-glue used: | |
| Product checked on receipt and before installation: | |

Appendix 1

Cementitious adhesive accepted for fixing the membrane to the subfloor and levelling compound accepted for placing on the membrane:

- Mapei;
Thin-set / Cement-glue: LFT, LHT, Kera Flex Plus
Leveler / Nivelant : Novoplan 2, Ultraplan 1, Autolissant Plus
- Proma
Thin-set / Ciment-Colle: Pro Flex Select, Pro p-151 all versions
Leveler / Nivelant: ProPlan CG or ProPlan
- Laticrete:
Thin-set / Ciment-Colle: 254 Platinum modified Leveler / Nivelant: NXT Level Plus
- Flexile
Thin-set / Ciment-Colle: Flextile 5100 (Porcelaine Bond) grey only
Leveler / Nivelant: FlexFlow (¾ inch) and FlexFlow Plus (½ inch)
- Ardex :
Thin-set / Ciment-colle: X5
Nivellant Leveler / Nivelant : LBB, K6a0
- Custom :
Thin-set / Cement-glue: Prolite, Megalite Leveler: LevelQuick RS
- TEC : Centura distribution
Thin-set / Ciment-glue: Ultimate 6 Plus Leveler: TA200 (Level Set 200)
- Quikrete
Thin-set / Ciment-colle: Quikrete Thins Set Multi-Purpose N° 1550
Leveler : QUIKRETE® (N° 1249-50)
- Schluter:
Thin-set / Ciment-colle: All-set & Fast-set
Leveler: ASTM-F2873 from ASTM International (ASTM)
- Henry :
Thin-set / Ciment-glue: Ardex X5 or Ardex X 77
Leveler: Henry 555 LevelPro
- Kiesel:
Thin-set / Ciment-glue: Trio Superflex Leveler: Ki1

Uncoupling membrane accepted :

- Ardex: Flexbone
- Mapei: Mapeheat - prodesso-Heat
- Nuheat : Prodesso-Heat
- Laticrete : Strata_MAT XT - Prodesso-Heat
- Flextherm; Prodesso-Heat
- Stelpro : Prodesso-Heat
- Ouellet: Warmup - DCM-PRO
- Warmup :DCM-PRO
- Prova : Prova flex-Heat
- Progress Profiles: Prodesso-Heat
- SunTouch : HeatMatrix
- Drexma DrexMat
- Schluter Ditra-Heat & Duo

Primer accepted :

- Pro Prime LP From Proma
- Or equivalent High concentrated acrylic primer

Technical Specifications

| TECHNICAL SPECIFICATIONS - DREXMAT-HEAT | |
|---|---|
| THICKNESS | 0.25 INCH |
| COMPOSITION | DREXMAT-HEAT Fleece membrane: POLYPROPYLENE MEMBRANE WITH FLEECE BACKING |
| COLOR | PURPLE |
| SPACING | 3 5/8" & 4 7/8" |
| SIZE | 2'6" x 3'3" sheet 46'7" x 3'3" roll |

| TECHNICAL SPECIFICATIONS - DREXMA CABLE | |
|---|--|
| OPERATING VOLTAGE | 120V & 240 V 60 Hz |
| COLOR | YELLOW |
| THICKNESS | 3/16 INCH |
| OUTPUT RATING | ~13 W/ft ² (3 PEG - 3 5/8") |
| INNER INSULATION | FLUOROPOLYMERE |
| OUTER INSULATION | FLUOROPOLYMWERE, TPE |
| MIN. TEMPERATURE INSTALLATION | 40°F (5°C) |
| CONNECTION | COLD LEAD 16 AWG 10FT. (3M) |
| DREXMA Cable is suitable for wet locations «Type W» | |

Certifications

Drexma CWC cable and Drexma GCWC heating cables are UL certified or listed to the following standards and usage:

- UL 1683 «Electric Heating Products For Installation Under Floor Coverings».
- CAN/CSA-C22.2 No. 130 «Requirements for Electrical Resistance Trace Heating and Heating Device Sets».

Where peg spacings of 3, 3-4 and 4 are used, the UL certification applies to the entire system, including the membrane. For UL-Approved manual please visit drexma.com

The only UL-Approved Membrane System in North America

DrexMat-Heat membrane is tested to the following standards:

Tile Council of North America

- ANSI A118.12: «Specification for Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installation»
- ASTM C627: "A Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester"

Floors, Interior - Ceramic or Porcelain Tile

16" (406 mm) o.c. joist spacing, single layer OSB or plywood subfloor

Application Zones

- over any uniform and structurally stable OSB or plywood subfloor with 16" (406 mm) on-center joist spacing.
- Interior areas, whether dry or wet.

Constraints

- tiles of at least 2" x 2" (50 mm x 50 mm) size
- for natural stone see page 30

Necessities

- The maximum spacing for joists, I-joists, or floor trusses is 16" (406 mm) on-center.
- The minimum thickness for the subfloor is 19/32" or 5/8" nominal (16 mm) tongue-and-groove, with a 1/8" (3 mm) gap between sheets.

Preparing the Base

- Ensure that the subfloor panels are correctly attached to the framing members.
- Any leveling of the subfloor must be completed before the installation of DrexMat-Heat.

Expansion Joints

- The use of DrexMat-Heat does not negate the need for expansion joints, including those at the perimeter, within the tiled surface. Expansion joints must be installed in line with industry standards and norms.

Materials for Laying and Grouting

- modified thin-set mortar - ANSI A118.11
- unmodified thin-set mortar – ANSI A118.1
- grout – ANSI A118.3, A118.6, A118.7, A118.8

Specifications for Laying and Grouting

- tile – ANSI A108.5
- grout – ANSI A108.6, A108.9, A108.10

Additional Factors

- Any tightly butted and/or tented plywood or OSB seams must be resolved before the installation of DrexMat-Heat
- Install a vapor barrier on crawl space floors as per regional building codes.
- In situations requiring a waterproof floor, all DrexMat-Heat seams and floor-to-wall transitions must be sealed with BANDs using unmodified thin-set mortar.

SubFloor Structure

Floors, Interior - Ceramic or Porcelain Tile

19.2" (488 mm) o.c. joist spacing, single layer OSB or plywood subfloor

Application Zones

- over any uniform and structurally stable OSB or plywood subfloor with 19.2" (488 mm) on-center joist spacing.

- interior dry or wet areas

Constraints

- tiles of at least 2" x 2" (50 mm x 50 mm) size

- for natural stone see page 30

Necessities

- The maximum spacing for joists, I-joists, or floor trusses is 19.2" (488 mm) on-center.

- The minimum thickness for the subfloor is 23/32", 3/4" nom. (19 mm) tongue-and-groove with 1/8" (3 mm) gap between sheets

Preparing the Base

- Ensure that the subfloor panels are correctly attached to the framing members.

- Any leveling of the subfloor must be completed before the installation of DrexMat-Heat.

Expansion Joints

- The use of DrexMat-Heat does not negate the need for expansion joints, including those at the perimeter, within the tiled surface. Expansion joints must be installed in line with industry standards and norms.

Materials for Laying and Grouting

- modified thin-set mortar - ANSI A118.11

- unmodified thin-set mortar – ANSI A118.1

- grout – ANSI A118.3, A118.6, A118.7, A118.8

Specifications for Laying and Grouting

- tile – ANSI A108.5

- grout – ANSI A108.6, A108.9, A108.10

Additional Factors

- Any tightly butted and/or tented plywood or OSB seams must be resolved before the installation of DrexMat-Heat

- Install a vapor barrier on crawl space floors as per regional building codes.

- In situations requiring a waterproof floor, all DrexMat-Heat seams and floor-to-wall transitions must be sealed with BANDs using unmodified thin-set mortar.

SubFloor Structure

Floors, Interior - Ceramic or Porcelain Tile

24" (610 mm) o.c. joist spacing, double layer OSB or plywood subfloor

Application Zones

- over any even and structurally sound double layer OSB or plywood floor
- interior dry or wet areas

Constraints

- tiles of at least 2" x 2" (50 mm x 50 mm) size

Necessities

- The maximum spacing for joists, I-joists, or floor trusses is 24" (610 mm) o.c.
- double layer wood floor consisting of:
- The minimum thickness for the subfloor is – 23/32", 3/4" nom. (19 mm) tongue-and-groove
- minimum underlayment thickness – 11/32", 3/8" nom. (10 mm)

Preparing the Base

- Ensure that the subfloor panels are correctly attached to the framing members.
- underlayment – minimum 11/32", 3/8" nom. (10 mm)-thick Exposure 1, pluggedface plywood or OSB with 1/8" (3 mm) gap between sheets

Expansion Joints

- The use of DrexMat-Heat does not negate the need for expansion joints, including those at the perimeter, within the tiled surface. Expansion joints must be installed in line with industry standards and norms.

Materials for Laying and Grouting

- modified thin-set mortar - ANSI A118.11
- unmodified thin-set mortar – ANSI A118.1
- grout – ANSI A118.3, A118.6, A118.7, A118.8

Specifications for Laying and Grouting

- tile – ANSI A108.5
- grout – ANSI A108.6, A108.9, A108.10

Additional Factors

- Any tightly butted and/or tented plywood or OSB seams must be resolved before the installation of DrexMat-Heat
- Install a vapor barrier on crawl space floors as per regional building codes.
- In situations requiring a waterproof floor, all DrexMat-Heat seams and floor-to-wall transitions must be sealed with BANDs using unmodified thin-set mortar.

Floors, Interior - Natural Stone Tile

Double layer OSB or plywood subfloor

Application Zones

- over any even and structurally sound double layer OSB or plywood floor
- interior dry or wet areas

Constraints

- A double-layered wood floor is necessary, irrespective of the joist spacing.
- tiles of at least 2" x 2" (50 mm x 50 mm) size

Necessities

- The maximum spacing for joists, I-joists, or floor trusses is 24" (610 mm) o.c.
- 2 layer of wood floor consisting of:
 - minimum subfloor thickness – 23/32", 3/4" nom. (19 mm) tongue-and-groove
 - minimum underlayment thickness – 11/32", 3/8" nom. (10 mm)

Preparing the Base

- Ensure that the subfloor panels are correctly attached to the framing members.
- underlayment – minimum 11/32", 3/8" nom. (10 mm)-thick Exposure 1, pluggedface plywood or OSB with 1/8" (3 mm) gap between sheets
- Any leveling of the subfloor must be completed before the installation of DrexMat-Heat.

Expansion Joints

- The use of DrexMat-Heat does not negate the need for expansion joints, including those at the perimeter, within the tiled surface. Expansion joints must be installed in line with industry standards and norms.

Materials for Laying and Grouting

- modified thin-set mortar - ANSI A118.11
- unmodified thin-set mortar – ANSI A118.1
- grout – ANSI A118.3, A118.6, A118.7, A118.8

Specifications for Laying and Grouting

- tile – ANSI A108.5
- grout – ANSI A108.6, A108.9, A108.10

Additional Factors

- Some moisture-sensitive stones like green marble, or resin-backed tiles may need specific setting materials. For more information, consult both your stone supplier and Schluter-Systems.
- Before installing DrexMat-Heat, any tightly joined or tented plywood or OSB seams must be dealt with.
- Adhere to regional building codes when installing a vapor barrier on crawl space floors.
- In situations requiring a waterproof floor, all DrexMat-Heat seams and floor-to-wall transitions must be sealed with BANDs using unmodified thin-set mortar.

Floors, Interior - Existing Vinyl Floors

Application Zones

- over any even and structurally sound substrate with existing vinyl flooring
- interior dry or wet areas

Constraints

- tiles of at least 2" x 2" (50 mm x 50 mm) size
- cushioned vinyl is not suitable.
- Perimeter bonded vinyl flooring is not suitable.
- Multiple layers of vinyl are not acceptable.
- Lauan plywood and particle board underlayments are not suitable substrates directly under DrexMat-Heat and must be either removed or replaced with plywood or OSB before membrane installation. However, Lauan and particle board are acceptable when situated directly beneath the existing vinyl.

Preparing the Base

- Verify that the structure under the vinyl is both sturdy and sufficient.
- ensure that vinyl is well adhered
- Eliminate any wax and cleanse the vinyl.
- or wood substrates, secure the floor with ring shank flooring nails every 4» (102 mm) on-center – the fasteners must pass through the entire thickness of the assembly with minimal penetration into the joists.
- Any leveling of the subfloor needs to be completed before the installation of DrexMat-Heat.
- For optimal performance with substrates that are challenging to adhere to, use a primer that's suitable for the application.

Expansion Joints

- DrexMat-Heat do not eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms

Materials for Laying and Grouting

- Fast-setting modified thin-set mortar - ANSI A118.4F or ANSI A118.15F
- unmodified thin-set mortar – ANSI A118.1
- grout – ANSI A118.3, A118.6, A118.7, A118.8

Specifications for Laying and Grouting

- tile – ANSI A108.5
- grout – ANSI A108.6, A108.9, A108.10

Additional Factors

- DrexMat-Heat is affixed to the vinyl flooring using fast-setting modified thin-set mortar suitable for bonding to vinyl. Alternatively, a suitable cement-based embossing leveler or a suitable modified thin-set mortar can be used to skim coat the vinyl, thereby providing a bonding surface. Once the skim coat has cured, DrexMat-Heat can be adhered to it using SET or an unmodified thin-set mortar. For a discussion on latex-modified thin-set mortars sandwiched between two impervious layers, refer to the appropriate section.
- In situations where a water line break from an ice maker or dishwasher could damage pre-existing moisture-sensitive substrates and underlayments, seaming DrexMat-Heat, including floor/wall connections, with BANDS may be suitable. BANDS floor/wall connections can be concealed with wood base as easily as with tile. BANDS floor/wall connections in dishwasher alcoves are coated with thin-set mortar.
- Adhere to regional building codes when installing a vapor barrier on crawl space floors.
- Certain moisture-sensitive stones, such as green marble, or resin-backed tiles may necessitate the use of specialized setting materials.

Floors, Interior - Ceramic or Stone Tile

Concrete Subfloor

Application Zones

- Over any structurally stable and flat concrete subfloor.
- Fresh concrete (concrete that has cured for less than 28 days). Note: when installing the peel-and-stick membranes over fresh concrete, the maximum permitted surface moisture is 75% RH.
- Concrete on or below ground level that is susceptible to moisture migration.
- Post-tensioned or pre-stressed concrete floors.
- cracked concrete

Constraints

- tiles of at least 2" x 2" (50 mm x 50 mm) size
- Concrete slabs prone to moisture migration must have all seams in the DrexMat-Heat sealed with BANDS, using unmodified thin-set mortar.
- Any cracks in the concrete subfloor must only show in-plane movement; tile assemblies with thin-set, including those incorporating DrexMat-Heat, cannot tolerate differential vertical displacement.

Necessities

- The slab should be free of waxy or oily films and curing compounds. If these are present, mechanical scarifying is required.
- The installation of DrexMat-Heat and tile can commence as soon as the slab is walkable.
- The slab should be devoid of any standing water.

Preparing the Base

- any leveling of the subfloor must be done prior to installing DrexMat-Heat
- For optimal performance with substrates that are hard to adhere to, use an application-appropriate primer.

Expansion Joints

- DrexMat-Heat do not eliminate the need for movement joints, including perimeter joints, within the tiled surface. Movement joints must be installed in accordance with industry standards and norms.

Materials for Laying and Grouting

- unmodified thin-set mortar – ANSI A118.1
- grout – ANSI A118.3, A118.6, A118.7, A118.8

Specifications for Laying and Grouting

- tile – ANSI A108.5
- grout – ANSI A108.6, A108.9, A108.10

Additional Factors

- In situations requiring a waterproof floor, all DrexMat-Heat seams and floor-to-wall transitions must be sealed with BANDs using unmodified thin-set mortar.
- Certain moisture-sensitive stones, such as green marble, or resin-backed tiles may necessitate the use of specialized setting materials.

Floors, Interior - Gauged Porcelain Tiles and Tile Panels

Application Zones

- over any structurally sound and even concrete subfloor
- Over gypsum concrete underlayment installed over structurally stable concrete subfloors.
- Fresh concrete (concrete that has cured for less than 28 days). Note: when installing the peel-and-stick membranes over fresh concrete, the maximum permitted surface moisture is 75% RH.

moisture migration

- Post-tensioned or pre-stressed concrete structures.
- cracked concrete
- interior dry or wet areas

Constraints

- The minimum thickness required for gauged porcelain tiles and tile panels 7/32" (5.5 mm) DrexMat-Heat is recommended for installations in standard commercial and light institutional areas like public spaces in restaurants and hospitals. Applications in commercial kitchens are not approved.
- DrexMat-Heat membrane and gauged porcelain tile panels must be installed
- concrete subfloors and gypsum concrete underlayment over concrete subfloors only; no wood subfloors
- Concrete slabs prone to moisture movement must have all the seams in DrexMat-Heat sealed using BANDS.
- Any cracks in the concrete subfloor should only demonstrate in-plane movement. Thin-set tile assemblies, including those that incorporate DrexMat-Heat, cannot accommodate any differential vertical displacement.

Requirements

- The slab should be free of waxy or oily films and curing compounds. If these are present, mechanical scarifying is required.

- The slab should be devoid of any standing water.
- For gypsum - when radiant heat tubes are laid over the subfloor, gypsum should be poured to a height that is 3/4" (19 mm) above the top of the tubes before the installation of DrexMat-Heat.
- Before installing DrexMat-Heat, ensure that the residual moisture in the gypsum screed is 2.0% (by volume) or less.
- The installation must comply with ANSI A108.19, including, but not limited to, requirements for mortar coverage, expansion joints, grout joint size, and lippage.

Preparing the Base

- Any leveling or sloping of the slab or assembly must be completed before the installation of DrexMat-Heat.
- For gypsum - adhere to the manufacturer's instructions.

Expansion Joints

- DrexMat-Heat does not negate the requirement for movement joints, including perimeter movement joints, within the tile surface. Movement joints must be installed in line with industry standards and norms.
- Concrete floors may feature various types of movement.
- gauged porcelain tiles and tile panels – ANSI A137.3
- grout – ANSI A118.3, A118.7 Setting and Grouting Specifications
- tile – ANSI A108.19 • grout – ANSI A108.6, A108.10

Other Considerations

- Since DrexMat-Heat needs to adhere to the gypsum concrete, follow the gypsum manufacturer's recommendations.
- When a waterproof floor is required, all DrexMat-Heat seams and floor-to-wall transitions must be sealed with BANDS.

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