



**EASYHEAT® Warm Tiles®
Floor Warming Cable System
Crack Suppression Systems
over Suitable Substrates**

EASYHEAT has developed a revolutionary new way to view installation details for crack suppression, anti-fracture and waterproofing systems. Suitable substrates such as double layer plywood, cement backerboard over plywood and concrete slabs are represented in a generic sequence. Additionally, crack suppression, anti-fracture and waterproofing systems are available in many different configurations, so the installation sequences are also presented generically. These animated tutorials are for reference purposes only. Always follow the manufacturer installation instructions included in every Floor Warming kit and the crack suppression, anti-fracture and waterproofing system you purchase to ensure a professional quality installation.

1 SUBFLOOR:

All surfaces should be between 40° F (4° C) and 90° F (32° C) and structurally sound, clean and free of all dirt, oil, grease, paint, concrete sealers or curing compounds. Expansion joints shall be provided through the tile work from all construction or expansion joints in the substrate. Follow ANSI Specification AN – 3.8 “Requirements for Expansion joints” or TCA Detail EJ171 “Expansion Joints”. Do not cover expansion joints with mortar.

PLYWOOD:

Double layer 5/8” (15.85 mm) exterior grade plywood substrate 16” (40.64 cm) o.c

When installing Warm Tiles Floor Warming Mat System over a plywood surface, be sure that the substrate is strong enough to support a tile or stone floor finish. Installer must verify that deflection under all live, dead and impact loads of interior plywood floors does not exceed industry standards of L/360 for ceramic tile and brick or L/720 for stone installation where L = span length .

BACKERBOARD:

1/2” (12.70 mm) cement backerboard over single layer 5/8” (15.85 mm) exterior grade plywood 16” (40.64 cm) o.c.

Install cement backerboard per installation instructions provided by manufacturer. Be sure that the substrate is strong enough to support a tile or stone floor finish. Installer must verify that deflection under all live, dead and impact loads of interior plywood floors does not exceed industry standards of L/360 for ceramic tile and brick or L/720 for stone installation where L = span length .

CONCRETE:

Cured concrete slab

Rough or uneven concrete surfaces should be made smooth with a Portland cement underlayment to provide a wood float (or better) finish. Dry, dusty concrete slabs or masonry should be dampened and excess water swept off. Installation may be made on a damp surface. New concrete slabs must be plum and true to within ¼” (6 mm) in 10’ (3 m). Latex Portland cement mortars do not require a minimum cure time for concrete slabs.

② **CRACK SUPPRESSION SYSTEM:**

Your floor warming system must be installed above the crack suppression system to achieve protection from stress cracks from the substrate below. Follow manufacturers installation instructions for the crack suppression system you have purchased.

③ **STRAPPING:**

Cable strapping adhered to substrate

Install the strapping onto the floor by following your preplanned sketch. Strapping is positioned so the tab clips close towards the outside of all cable turns. **Do not staple or screw the strapping through the previously installed crack suppression system. Use Warm Tiles® CKT Tape Kit or glue to adhere the strapping in the areas where you have installed a crack suppression system.**

Over plywood: Begin stapling the strapping at one end by sliding the staple gun along the strapping length. Insure the strapping is snug against the floor. Staples should be spaced no more than 6" (15 cm) apart.

Install strapping on all perimeter runs of the room first. Then install subsequent runs of strapping at 30" to 36" (76 cm to 91 cm) intervals between the perimeter runs.

Over backerboard: Secure strapping to backerboard with wood screws or staples following manufacturer recommendations. Fasten the first end of the strapping to backerboard. Angle a screw to the opposing end of the cable to pull strapping tight to floor. Insure the strapping is snug against the floor. Install strapping on all perimeter runs of the room first. Then install subsequent runs of strapping at 30" to 36" (76 cm to 91 cm) intervals between the perimeter runs. Install extra screws every 12" - 18" (30 cm - 45 cm) for center runs of strapping and every 5" - 8" (12.7 cm - 20.3 cm) in outside runs.

Over concrete: Fasten the first end of the strapping to concrete substrates using the Warm Tiles CKT tape kit. Alternative installation methods include hot melt glue guns or tapcons. Ensure the strapping is adhered tightly to the floor. Install strapping on all perimeter runs of the room first. Install subsequent runs of strapping at 18" to 24" (45.7 cm to 60.9 cm) intervals between the perimeter runs.

④ **CABLE:**

EASYHEAT® Warm Tiles® Floor Warming Cable attaches to substrates in two methods:

STANDARD SPACING: 3" (7.62 cm) intervals over plywood, cement backerboard substrates or over heated spaces.

ALTERNATING SPACING: 3" (7.62 cm), 1 1/2" (3.81 cm), 3" (7.62 cm) intervals over concrete slabs or over unheated spaces.

When routing heating cable to the beginning of the strapping, use clips to attach heating cable to the subfloor.

Wind the cable at appropriate intervals and snap into the strapping slots. Then carefully turn the cable and snap into the next appropriate slot. Do not extend cable beyond the edge of the strapping. Close the first one or two hinged clips on strapping in order to hold the cable secure before proceeding to the next strapping run. Subsequent clips should be left open until cable placement is completed. Once the cable layout is completed, close all hinged clips, including the hinged clips not used, to securely fasten the cable to the floor, and flatten the height of the system prior to application of the thin-set. Use additional clips provided to fasten down any part of the cable that is not snug to floor.

⑤ **SCRATCH COAT:**

EASYHEAT® Warm Tiles® Floor Warming Cable imbedded in thin-set mortar or self-leveling underlayment

Comb on mortar with the flat side of the trowel, taking care not to nick the heating cables. Completely cover cables and strapping with thin-set mortar. Let thin-set dry following recommended times on thin-set package. If using self-leveling underlayment, follow directions on manufacturer package.

⑥ **THIN-SET:**

Thin-set mortar

Once the mortar has cured, install your tile or stone using standard tiling procedures for concrete and plywood sub-floors according to the Tile Council of America for the United States or by the Terrazzo, Tile and Marble Association of Canada.

⑦ **FINISH:**

Final Floor Finish

Grout floor finish at 70° F (21° C) following a minimum cure time of thin-set by referring to the manufacturer package.