

# INSTALLATION GUIDELINES:

## THE FOLLOWING SECTION OUTLINES THE PREPARATION REQUIRED PRIOR TO INSTALLING THE HEATING FILM.

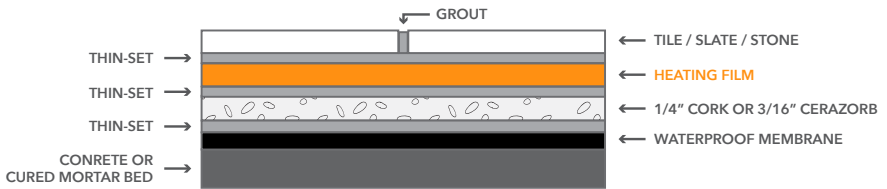
### FLOOR PREPARATION

1. Ensure slab or wood sub-floor is structurally sound (follow TCNA installation guidelines for sub-floor rigidity).
2. Concrete slab must be free of waxy or oily films and curing compounds (when present, mechanical scarifying is necessary). If these chemicals are present, water will bead. If the sealer is left on the floor, the mortar for the tiles won't adhere. Remove sealer with a floor sander using medium-grit sandpaper.
3. There should not be any protrusions sticking up from the sub-floor that could impact or cause damage to the Heating Film such as nails, rebar, or any other potentially damaging material.
4. Level the floor per TCNA guidelines. Allow the compound to dry following manufacturer's recommendations.
5. Mop or sponge the floor with clean water to remove any traces of dust.
6. Make sure the floor is completely dry before installing Carbonic Heat Film.

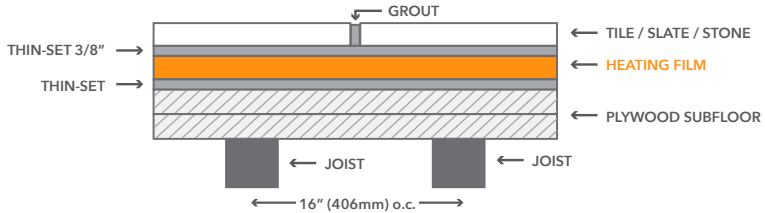
# TILE INSTALLATION

## INSULATED CONCRETE AND WOOD SUBFLOOR

**RH115 A** FLOORS, INTERIOR: RADIANT HEAT ON INSULATED CONCRETE, THIN-SET



**RH130** FLOORS, INTERIOR: RADIANT HEAT ON WOOD SUBFLOOR, THIN-SET



1. Prepare the Heating Film according to the steps in the General Installation Instructions beginning on page #24.
2. Apply the waterproof membrane to the slab according to the manufacturer's specifications.
3. Install the tile on top of the Heating Film using an unmodified thin-set mortar meeting the requirements of ANSI A118.1 to install ceramic and stone tile. (See notes).

**NOTE: CARBONIC HEAT PRODUCTS, LLC DOES NOT RECOMMEND THE USE OF MODIFIED THIN-SET MORTARS TO SET TILE OVER THE HEATING FILM BECAUSE THESE MORTARS MUST AIR-DRY TO CURE PROPERLY. WHEN "SANDWICHED" BETWEEN TWO IMPERVIOUS LAYERS SUCH AS CARBONIC HEAT AND PORCELAIN TILE, DRYING TAKES PLACE VERY SLOWLY THROUGH THE OPEN GROUT JOINTS.**

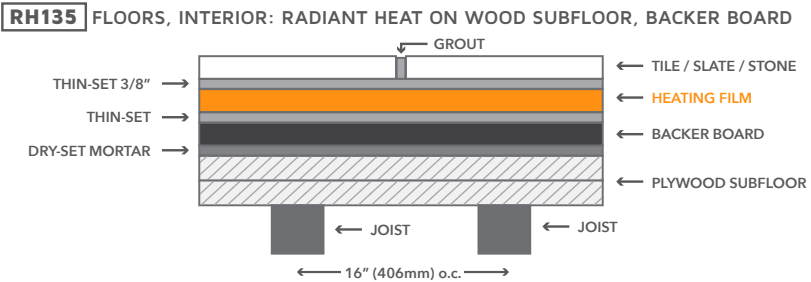
\*Exception: Certain moisture-sensitive stones, (e.g., green marble or resin-backed tiles) may require special setting materials. Please consult the stone supplier for more information. For an acid-resistant covering, use an epoxy adhesive to set and grout the tile.

**NOTE: FOR ANY "WET" ENVIRONMENT INSTALLATION, A SEPARATE LIQUID WATERPROOFING MEMBRANE MUST BE APPLIED BOTH BELOW AND ABOVE CARBONIC HEAT FILM PRIOR TO FLOORING INSTALLATION. THERE ARE NO EXCEPTIONS TO THIS REQUIREMENT.**

**FLOOR SENSOR (INCLUDED WITH ALL THERMOSTATS) MUST BE PROPERLY INSTALLED.**

# TILE INSTALLATION

## WOOD SUBFLOOR WITH BACKER BOARD



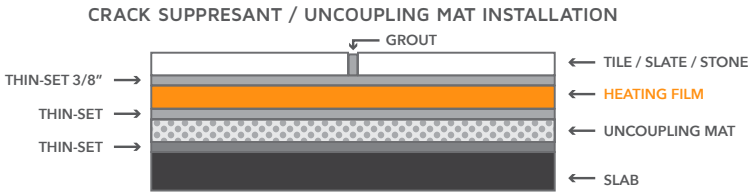
1. Install the backer board per the manufacturer's instructions.
2. There should be no items or protrusions sticking up from the sub-floor that could impact or cause damage to the Heating Film such as nails, rebar, or other potential damaging objects.
3. Prepare the Heating Film according to the steps in the General Installation Instructions beginning on page #24.
4. While rolling back  $\frac{1}{2}$  of the Heating Film at a time, use a  $\frac{3}{16}$ "- $\frac{1}{4}$ " (5-6mm) V-notch trowel to apply thin-set to the floor. Set the Heating Film onto the thin-set and, using a roller, apply a continuous, even pressure with overlapping strokes.
5. Install the tile on top of the Heating Film using an unmodified thin-set mortar meeting the requirements of ANSI A118.1 to install ceramic and stone tile.(See notes)

**NOTE: ACCORDING TO THE TCNA HANDBOOK FOR CERAMIC, GLASS, AND STONE TILE INSTALLATION. THIS DRYING PERIOD CAN FLUCTUATE FROM 14 DAYS TO OVER 60 DAYS, DEPENDING ON GEOGRAPHIC LOCATION, AND THE CLIMATE CONDITIONS, SUCH AS HUMIDITY AND AMBIENT AIR TEMPERATURE.**

**FLOOR SENSOR (INCLUDED WITH ALL THERMOSTATS)  
MUST BE PROPERLY INSTALLED.**

# TILE INSTALLATION

## CRACK SUPPRESSANT / UNCOUPLING MAT OR WATERPROOF MEMBRANE INSTALLATION



1. Install the crack suppressant/uncoupling mat per the manufacturer's guidelines.
2. Prepare the Heating Film according to the steps in the General Installation Instructions beginning on page #24.
3. Apply Heating Film to the crack suppressant/uncoupling mat using an un-modified thin set that meets ANSI A118.1. While rolling back  $\frac{1}{2}$  sheet at a time, use a notch trowel to apply thin-set to the crack suppressant/uncoupling mat set the Heating Film onto the thin-set and, using a roller, apply a continuous, even pressure with overlapping strokes.
4. Install the tile on top of the Heating Film using an unmodified thin-set mortar meeting the requirements of ANSI A118.1 to install ceramic and stone tile. (See notes)

**FLOOR SENSOR (INCLUDED WITH ALL THERMOSTATS)  
MUST BE PROPERLY INSTALLED.**