

EASYMAT® PROVIDES A THERMAL BREAK OVER RADIANT HEAT

A concrete slab and the ground beneath it are generally 20 to 30°F cooler than the occupied room above. Because of the large mass of the slab and the ground below, this temperature differential remains constant most of the time. Many ceramic tile floors and the rooms they occupy are heated by electrical floor heating systems installed underneath the tile. As the electrical system heats up, the temperature of the ceramic tile and room will increase. However, some of heat generated will transfer to the colder concrete slab below, reducing the efficiency of the electrical floor heating system. To minimize this loss, it is necessary to install a thermal break between the electrical heating system and the cold concrete slab.

There are many ways to engineer a thermal break into a concrete slab. Once the decision is made to install ceramic tile, it is not easy to re-engineer the slab. Custom Building Products provides a simple solution with EasyMat® Tile & Stone Underlayment. EasyMat is a bonded polypropylene foam beaded mat used to prepare the floor surface for the installation of ceramic and natural stone tile. This easy to install underlayment creates a thermal break between the electrical floor heating system and the concrete slab below. EasyMat will help protect the tile flooring from cracks that may move in the substrate below. As an added bonus, it will also isolate sound produced when walking on a tile floor from a living space below the floor.

The 5 mm thick EasyMat has an R-value of 0.75 and the 12 mm thick EasyMat has an R-value of 1.8. Either is sufficient to isolate the heating system from the concrete slab and direct more of the heat into the ceramic tile above. EasyMat meets the high performance requirements of ANSI A118.12 for crack isolation membrane and the sound isolation requirements of ANSI A118.13 with a Δ IIC of 20 dB.

EasyMat is easy to install. Just peel and stick to the prepared substrate, utilizing its pressure sensitive adhesive backing. (It is also available without the adhesive for installation to the substrate with a polymer modified thin-set mortar.) Once installed, EasyMat produces a smooth uniform surface that is ready to accept the installation of most electrical heating systems and ceramic tile. It is important to follow manufacturer's directions with all ceramic tile installation products.

Typically, the heating system mat/wire is embedded in thin-set mortar, such as CUSTOM's ProLite® Tile & Stone Mortar, directly on top of EasyMat. The same mortar is used to install the tile over the surface of the heating mat. ProLite is a high flexibility and bond strength medium bed mortar that is ideal for the installation of all types of tile, including popular large format tile.

Some manufacturers of heating systems permit the use of self-leveling underlayment for encapsulating the heating mat/wire. We do not recommend the use of self-leveling underlayment for the installation of a heating system mat/wire over EasyMat. The fluid leveler can fill the voids between the polypropylene foam beads and reduce the efficiency of the thermal break. If the floor needs to be leveled, we recommend the use of a self-leveling underlayment, such as CUSTOM's LevelQuik® Self-Leveling Underlayment, prior to the installation of the EasyMat, heating mat/wire and tile. By placing the self-leveling underlayment under the thermal break created by EasyMat, you redirect the energy that would heat the self-leveling underlayment into the room you wish heated.

EasyMat can also be used to install ceramic tile with a heating system on suspended wood sub-flooring. The wood sub-floor must meet industry requirements and be suitable for the installation of ceramic tile. The EasyMat is installed directly to the wood sub-floor per manufacturer's directions before the heating system and ceramic tile can be installed to the bonded EasyMat.

Once the tiles have been properly installed and the mortar has cured, the tile installation can be grouted with any one of CUSTOM's premium grout products. Depending on the needs of the project, consider the following stain-resistant grouts - Fusion Pro® Single Component® Grout, CEG-Lite™ 100% Solids Epoxy Grout or Prism® SureColor® Grout. Regular use of Aqua Mix® non-acidic cleaning products will maintain the appearance of any tile or stone installation. When used to create a thermal break, EasyMat not only controls the flow of heat from the heating system and helps protect the tile from cracks in the substrate, but it also reduces sound transmission to the rooms below.

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Technical Services 800-282-8786
 custombuildingproducts.com