



Installing Tile Over Warmboard

Warmboard is a nominal 1-1/8" thick, 4' x 8' sheet of structural tongue and groove subfloor that is rated Exposure 1. Tile set to Warmboard panels is subject to all of the tile setting requirements of any ordinary unheated wooden subfloor.

Warmboard recommends installing tile over Warmboard subfloor panels according to the Tile Council of America (TCA), as set forth in the Industry's Guide for Installation Practices and as referenced in the American National Standard Specifications for the Installation of Ceramic Tile, which have been approved by the American National Standards Institute, Inc. (ANSI).

Note: Failure to follow these requirements may result in tile installation failure. Under ordinary circumstances, and as referenced in the Industry's Guide for Installation Practices, the TCA does not consider a plywood subfloor firm enough to tile directly over it without the use of one of the methods described below. Please reference the section on Tile over Wood Subfloor, referenced in The TCA Handbook for Ceramic Tile Installation.

Important - The TCA specifies that tile should never be installed directly over a subfloor panel without the use of one of the methods listed below; either a mortar bed or a backer board installed between the subfloor and the tile.

Installation methods recommended by the TCA:

Method 1 - Mortar Beds

Mortar beds have been the traditional method of addressing the expansion, contraction and deflection properties of wooden subfloors. They have the advantage that by their very nature they provide a thick, continuous, stable surface to which tile readily adheres. They have the disadvantage that they tend to be expensive, add significant mass to a system, and due to their thickness, often cause the elevation of tile areas to not match up well with adjacent carpeted or hardwood areas. When applying mortar beds, either a 15-lb. felt, or a 4-mil polyethylene membrane preparation can be used. Fasten down a metal lath over the membrane and finish with a minimum 3/4" mortar bed. After the mortar bed has cured, thin set and tile may then be applied.

Note: Care should be taken to avoid tubing damage.

Method 2 - Backer Boards

There are a variety of cementitious backer boards available that range in thickness from 1/4" to 1/2". Because all subfloors fail to be perfectly flat, these backer boards will provide a more stable surface when they are thin set to the Warmboard. Prior to installation, apply thin set to the bottom side of the backer board using a 1/4" square-notched trowel.

Immediately fasten the backer board before the thin set dries, following recommendations of the backer board manufacturer (typically, fasten using special screws). Please note that backer board panels should run perpendicular to Warmboard panels and seams should be staggered so as not to line up with the Warmboard seams. Care should be taken during fastening to note tubing positions and avoid them. Backer boards have the advantage that they have low mass, are quick and relatively inexpensive to install, and that because of the thicknesses available, provide a base for tiled areas to match up well with adjacent floor coverings.



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Method 3 - Schluter - DITRA

Ditra is a polyethylene membrane with a grid structure of square cut cavities and an anchoring fleece laminated to its underside. Apply a layer of Mapei –“Granirapid”, a Premium Rapid-Setting, Flexible- Polymer Modified Mortar directly to the Warmboard, using a 1/4” or 5/16” V-notch trowel, and then install the Ditra grid. (An equivalent brand of a Rapid-Setting, Polymer Modified Mortar that meets and exceeds ANSI A118.4 can be used) Wait until the mortar is completely dry below the Ditra. Then trowel on an unmodified thin set mortar that meets and exceeds ANSI A118.1 on the topside of the Ditra, and immediately install tile or stone. There have been hundreds of successful tile installations installed by this method with no reports of problems or failure.

However, Schluter does not warranty this installation pending further testing. The tile floor covering warranty may be invalidated by the assembly mentioned above. If

this is the case, installation of Ditra does require a tile backer board installed or a 1/4” or 1/2” APA listed plywood underlayment between the Ditra and the Warmboard. For complete installation details, refer to the “Engineered Wood Construction Guide” at www.apawood.org.

Important - Do not let surface temperatures of tile exceed 85°

Please note: Warmboard is not an agent for the manufacturers listed below, and gives no actual or implied warranty of fitness for any of these products or manufacturers.

A word of caution: Whatever method you use, make sure that the product meets the standards set forth and accepted by the TCA, ANSI, and the ICC (formerly ICBO). Be sure to follow each manufacturer’s specific recommendations when using these products.

Resources:

American National Standards Institute (ANSI) <http://www.ansi.org>

Tile Council of America (TCA) <http://www.tileusa.com>

National Tile Contractors Association (NTCA) <http://www.tile-assn.com>

Ceramic Tile Backer Board Resources:

Durock <http://www.usg.com/brands/drck.asp>

Fiberock <http://www.usg.com/brands/fbrck.asp>

Hardibacker <http://www.jameshardie.com/backerboard/default.php>

Mapei <http://www.mapei.us/>

Wonderboard <http://www.custombuildingproducts.com/onlyproducts/WonderBoard12.htm>

