



CUSTOM[®]

STONEPEAK
high tech porcelain

Installing Thin (3-6mm) Porcelain Tile

A new form of porcelain tile is gaining acceptance, particularly in the remodeling of tile installation. Because these tiles are only 3-6mm thick (1/8"-1/4") they add very little height to the installation. They are ideal for installation over well bonded existing ceramic tile. They are also available in very large panels for ease of maintenance of the tiled surface; these panels are as large as 60" X 120".

These thin porcelain tile or panels are recommended for both interior and exterior walls over existing tile or smooth masonry surfaces. These thin porcelain tiles can also be used for interior floor applications over existing tile or smooth concrete. Some of the larger wall panels may require the use of mechanical fasteners. Consult tile manufacturer for specific areas of use and any special installation needs.

A key to a successful installation of these thin porcelain tiles is the preparation of the surface. The surface must be flat and true. In most cases, TCNA guidelines for installing large format tile (one side greater than 15") surface tolerance are acceptable. Custom recommends maximum allowable variation can not be more than 1/8" in 10' and no more than 1/16" in 3', with no abrupt irregularities greater than 1/32".

Lippage is another concern as the current TCNA guidelines allow up to 1/16" lippage between adjacent tiles. Because these tiles are so thin this can amount to 50% of the tiles thickness. A simple impact to the edge of a tile may cause it to break. Therefore Custom recommends minimizing lippage to less than 1/32" to prevent damage to the tile. The use of a mechanical leveling system may aid in reducing lippage between tiles.

Surface Preparation:

Custom Building Products offers several products to assist in preparing the surface:

- **CustomFloat® Bedding Mortar** allows for thick bed applications. This lightweight formula can be screed to a smooth flat surface with minimal effort.
- **Custom Tech Silk and GenPatch** are trowel applied patching and smoothing compounds that should be used to eliminate imperfections in walls and floors. It can be used to bring the surface into the acceptable tolerance.
- **LevelQuik RS Rapid Setting Self-Leveling Underlayment** is ideal for smoothing floors to acceptable tolerance with the least amount of effort.

Once the surface is properly smoothed, it may be necessary to waterproof or treat cracks in the substrate before the installation of the tile.

- **RedGard Waterproofing and Crack Prevention Membrane** can be applied to a dry thickness of 30 mils for general waterproofing.

Performance-driven Installation Systems and Support

www.custombuildingproducts.com

Custom Building Products
13001 Seal Beach Blvd.,
Seal Beach, CA 90740
(562) 598-8808

6/12

Thin Tile Bonding:

It is important to follow all TCNA recommendations for the installation of porcelain tile. To assure that the tiles do not crack from point load or impact, it is mandatory that the mortar coverage is greater than 95%, with no voids greater than 1 square inch and all corners and edges must be fully supported. It is recommended that the mortar is spread onto the substrate with a ½” U-notched trowel and it is also spread onto the back of the tile or panel with a 1/8” Square-notched trowel. You may want to consider one of the specialty notched trowels that will aid in maximizing the coverage with less effort. Carefully monitor the open time of the mortar. If the mortar skins over before the two surfaces can be brought into contact, re-comb the surfaces with fresh mortar. To achieve continuous contact between the substrate and tiles, a paint roller or a rubber flooring roller may be useful. Tile should be checked regularly to assure full coverage, with particular attention to the edges and corners. Exercise caution when checking these thin porcelain tiles for coverage as removing the thin tile can cause them to crack. The mortar installation instructions must be followed for cure time and traffic.

Custom Building Products recommends several mortars for the installation of these thin porcelain tiles.

- **ProLite Tile & Stone Mortar** is ideal for installation on walls. Its non-sag formula will support these large tiles without mechanical assistance.
- **MegaLite Crack Prevention Mortar** is a high strength bonding mortar with exceptional non-sag characteristics. MegaLite’s long working time makes it ideal for applications in hot, dry or windy conditions.
- **Complete Contact Fortified Mortar** is best to assure full coverage of the back of the tile with minimal effort in floor applications of porcelain backed tile.
- **EBM-Lite Epoxy Bonding Mortar or CEG-Lite 100% Solids Commercial Epoxy Grout and Setting Mortar** should be used when installing fiber mesh reinforced resin back thin porcelain tile.

Grouting:

Since these tiles are very thin, it is important that the mortar is completely removed from the grout joint; it is recommended that the grout joints be tooled/struck to the substrate to maximize the joint depth. Mortar left in the grout joint will reduce the grout thickness to less than 1/8” thick and can result in grout cracking. The following grouts are acceptable for use with the thin porcelain tile.

- **Prism SureColor Grout** is a fast setting, high strength grout that reduces efflorescence and grout shading for joints greater than 1/16”
- **Polyblend Grout** is available in 48 colors for joints greater than 1/8” wide
- **Fusion Pro Single Component Grout** is a ready to use grout that offers uniform color and stain resistance. The flexibility of this grout resists cracking from movement.
- **CEG-Lite 100% Solids Commercial Epoxy Grout** produces the strongest joint and should be used where stain and chemical resistance is important

It is important to observe all building codes and TCNA requirements in the tile installation. In particular, all movement joints should be properly placed and filled with the appropriate soft jointing material, such as **Custom’s Commercial 100% Silicone Caulk**. See TCNA EJ171 Detail for proper placement and additional information.

Performance-driven Installation Systems and Support

www.custombuildingproducts.com