



Installation - Porcelain Tile

The following are provided for general guidance only. Crossville Inc. recommends that all industry standards, guidelines, and best practices for installation are followed, including but not limited to the TCNA Handbook and the ANSI A108/118/137 series.

Installation Procedures.

- **Backing Material (Substrate):** The surface to be tiled must be clean, dry, flat and structurally sound (does not flex when weight is applied), secure, and free from any type of contamination that can act as a bond breaker or bond inhibitor. If there is any substance present that could inhibit the bond of the mortars used, it must be completely removed. Suitable substrates include, but are not limited to, exterior grade plywood, cement backer board, concrete, mortar beds, cement plaster, and existing ceramic tile/stone. Refer to industry information for a complete list of approved substrates. When using the double plywood or plywood/cement backer-board scheme, check to ensure that the proper types and thickness of plywood are used.
- **Mortar:** Depending on the application and conditions present, the use of a modified cement mortar, improved modified cement mortar, LHT mortar, or epoxy mortar is recommended for the installation of Porcelain Stone® tile. It can also be installed on a mortar bed (i.e. thick bed) applications. Consult the installation materials manufacturer for additional information and installation instructions. Ensure that adequate coverage of mortar is present under the tiles to provide proper bedding coverage and problem-free performance.
- **Grouting:** A modified cement grout (sanded or unsanded), or epoxy grout should be used with porcelain stone tiles. While grout-staining problems are extremely rare when using Crossville products, a small test patch is recommended when using a dark grout over a light-colored tile, or vice versa. The test patch will also verify cleanability of the grout with heavily textured tile surfaces.

Cleaning Procedures. Please consult our “Care & Maintenance” brochure for proper cleaning procedures after grouting as well as for routine maintenance. For routine maintenance, please refer to the procedures under “Daily Maintenance,” “CROSS-SHEEN®,” or “Polished,” depending on the type of cleaning required.

Installation - 48"x48" Porcelain Tile

Additional Installation Procedures for 48"x48" size

All of the above applies, with the following additions:

- Follow all the steps described in the TCNA Handbook and ANSI A108 standards with the following additional instructions:
- Check the flatness of the surface. Irregularities greater than 1/8" in 10' and more than 1/16" in 2' from the required plane must be corrected before installation.
- It is essential to use the double-spreading (notched back-troweling) technique (keying-in and then adding additional mortar and troweling for both the substrate and back of the tile), and the mortar ridges on the tile and substrate are in parallel directions. *If rectangular tile, best practice is to comb the ridges on the back of the tile perpendicular to the long side, and then in a parallel direction on the substrate (do not do the two surfaces in opposite directions, this will trap air in the cross-hatched grid created).*
- Use a minimum 3/8" (10mm) notch trowel or larger, as necessary to facilitate maximum/required coverage per ANSI A108.

- The open time of mortars may be only a few minutes, so we recommend working in smaller areas no more than 16 sqft (1.5m²) at a time to ensure the mortar does not skin over.
- To achieve acceptable results, use lippage control devices spaced per the manufacturer's directions.
- Required grout joint width is minimum 1/8" (3mm).

Installation - Porcelain Tile Panels 3+, 5+, and 5.6mm

Refer to Crossville's Technical Manual / Guidelines for Porcelain Tile Panels and ANSI A108.19 and ANSI A108.20

Crossville Inc.
Technical Services
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