

# CERAMIC & PORCELAIN TILE INSTALLATION GUIDE

**Disclaimer:** Please note that installations can vary based on the product type, size and scope of the installation, as well as the installation site, this guide is only intended to provide a basic guideline for installation. Always consult a professional before starting.

\*For other useful information please refer to the Tile Council of North America site, <https://www.tcnatile.com>

## Step 1: Check & Clean Subfloor

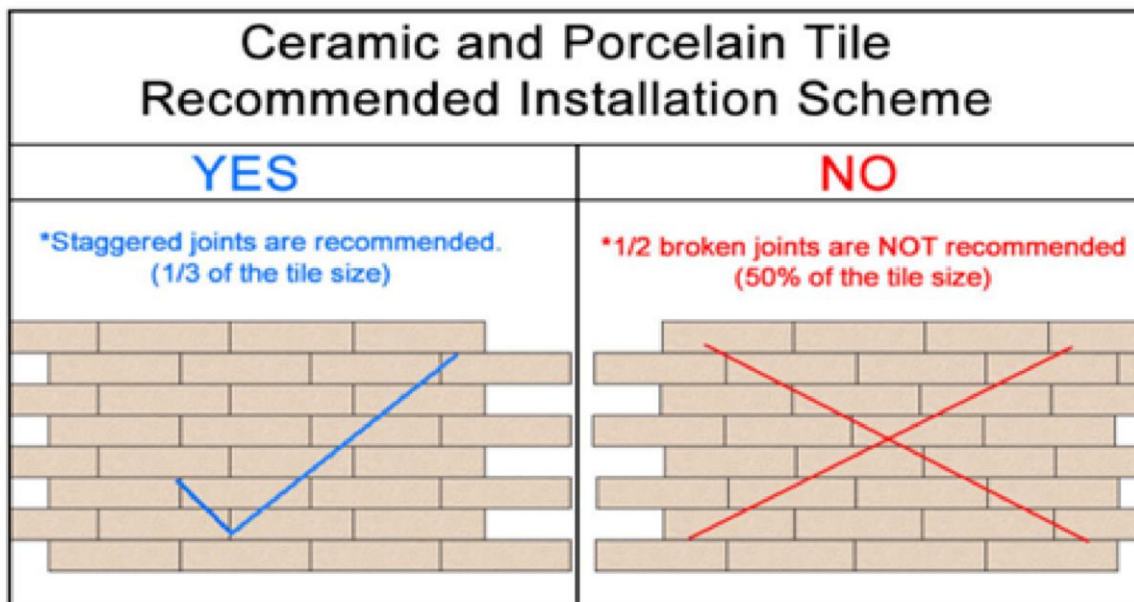
Ensure subfloor is flat and structurally sound, the quality of your installation will depend on this. Take your time to repair, patch, and level any damaged or uneven areas. Also for best results, make sure your subfloors are clean, smooth, dry and properly adhered to the substrate.

## Step 2: Layout & Chalk lines

Plan your layout to ensure you've dealt with all layout challenges beforehand, sketch and dry lay your tile. For an efficient layout, start by marking the center point in the room. Next, snap chalk lines between the center points to pinpoint the center of the room.

Starting at the center point, lay a row of loose tiles along the center lines in both directions, using tile spacers as you go to for even, uniform joints. Once you reach the walls, you'll need to cut tiles for a proper fit. If the cuts needed are smaller than half of a tile, you can adjust the center line by snapping a new line a half-tile size closer to the wall. If necessary, repeat this step along the intersecting or perpendicular center line for a precise design. You may need to adjust your starting point in order to ensure at least one half of a tile is present on the outside edge of the room (this will give a more professional appearance). To do this, simply adjust your starting point after dry-laying your tile in all four directions.

To make a large room more manageable, divide each section into smaller 2' x 3' grids by snapping additional lines parallel to the centerlines. For rectangular sized tiles, we recommend installation with staggered joints (1/3 of the tile size) to minimize lippage or a bowing effect.



**Tip:** For best results, the temperature of all tiling materials, room and adhesives should be at 50 (°F) to 70 (°F) degrees for 24 hours before, and 48 hours after, installation.

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## Step 3: Cutting the Tile

Start by marking carefully measured cuts-to-be with a pencil or felt-tip pen on the tile surface. You can use a tile cutter or wet-saw to achieve pinpoint straight or diagonal cuts. Make curved cuts with a nipper or micro-cutter. Chipping away small pieces for best results. After your cuts are made, smooth out any sharp edges with a carborundum stone to give a soft finish to your tile.

## Step 4: Mix & Apply Mortar

Only mix enough of the mortar to be used within 30 minutes. Thoroughly mix the appropriate thin set for your project to a toothpaste consistency. Pay special attention to the thin-set being used, as larger tiles should be installed with a "large format thin-set".

Using the appropriately notched trowel for your tile and your installation, apply your thin-set working out from your intersecting lines.

After doing so, hold the trowel at a 45-degree angle and use the notched side to comb the mortar into standing ridges. When you remove the excess mortar, you leave behind a uniform, ridged setting bed for your tile. As another rule of thumb, do not spread a larger area of your mortar than can be set in 15 minutes. Note: If the mortar has slaked over, please discard and start over as the tile may not properly adhere.

Using the flat side of the trowel, apply a scratch coat to the back of the tile in order to ensure getting a proper bond

## Step 5: Set Tile

Now that you've primed the surface, created the layout, cut the tile and applied the mortar, you are fully prepared for the actual installation of your tile. Begin by installing tiles in the center of the room, one grid at a time, finishing each grid before moving to the next. Within each grid, it will help to start with the first tile in the corner and work outward.

Using a slight twisting motion, set tiles one at a time and avoid sliding them into place. Be sure to either insert spacers as each tile is set or leave equal joints between tiles. Save the perimeter tiles in each grid for last, leaving a ¼" gap between the tile and wall. Note: Periodically pull up the tile in order to ensure that 95% or greater coverage is being attained.

Once a grid is completely installed, tap in all tiles with a rubber mallet or hammer and wood block to ensure a solid bond and level plane. Remove excess adhesive from joints with a putty knife and from tile with a damp sponge to prevent an uneven appearance. Note: Use a 36" or longer level in order to try and maintain a level floor. You can lift a tile up and apply additional thin-set mortar to try and achieve your level floor.

**Tip:** Do not attempt to set tile into mortar which has dried. Set tile that must be cut last.

**Tip:** Sprinkle dry grout over the newly grouted area, as this will cause the grout to get a more uniform appearance. Dry grout also operates as an abrasive that can aid in the removal of grout haze

## Step 6: Dry for at least 24 hours

**Keep all traffic off of your hard work for at least 24 hours, allowing the thin-set mortar time to securely adhere the tile to the subfloor.** Avoid high traffic for 72 hours.

## Step 7: Grout & Polish

After reading and following all instructions and precautions on the grout package, make only enough to use in a 30-minute period. As you remove the tile spacers and spread grout on the tile surface, use a rubber grout float to force it down into the joints.

Tilt the float at a 45-degree angle and with the edge of the float, pack the grout into each of the joints using a diagonal motion along the tiles, scraping away un-needed grout as you go.

Once you've let the grout set to manufacturer's instructed time, use a damp sponge in a circular motion to clean any residue from the surface. Once the majority of the grout has been removed, take the dampened sponge to do a finish cleanup, lightly dragging the sponge along the tile in a horizontal fashion. Note: your sponge should be rinsed after every pass, and remain damp (not wet).

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Polish with a soft cloth when the grout has dried and haze forms on the tile surface, and rinse again with sponge and clean water if necessary.

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