TEC
Skill Set ™

TEC® Skill Set™ How-To Project Guide

Floor Tile

3 Simple Steps to a Beautiful Tile Surface

1. PREPARE THE SURFACE

2. SET THE TILE

3. GROUT AND CAULK

LOWE'S®

BEFORE YOU GET STARTED

Tools You May Need:

Chalk Line Tool	**Tape Measure**	**Framing Square**
Pencil	**Carpenter's Level**	**Tile Nippers**
Rubbing Brick		**Tile Cutter**
Straight Edge	**Tile Spacers**	**Buckets**
Towels for Clean-up	**Grout Sponge**	**Rubber Gloves**
Mixing Paddle	**Drill**	**Notched Trowel** that corresponds to tile size
Grout Float	**Access to Clean Water**	

Choosing your setting materials:

- **Select the mortar (thin-set) that corresponds with your tile type.**

  TEC® Skill Set™ offers options for a wide variety of tile types including porcelains, ceramics, glass, quarry, stone, and other tiles. We also offer mortars that specialize in large tile applications.

- **Select the grout that goes with your application.**
  - Sanded grouts are typically used for floor applications for grout joints 1/8" to 1/2".

  - Superior grout products for any floor application include Power Grout™ or DesignColor™ Grout with Grout Boost® grout additive. Available in a wide array of designer colors, these products provide stain resistance, high performance and ease of use.
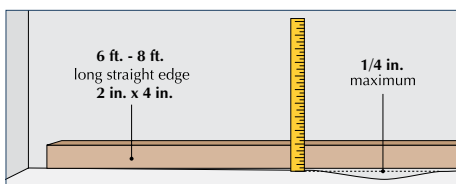
  OR +

1. Prepare the Surface

Surface preparation is one of the most important steps in the tile installation process. Remove anything that will be in your way. Cover all surfaces that you are not tiling to protect them.

Basic Substrate Preparation:

- **Substrate (tiling surface) must be free of contaminants.**
  - Clean and dry.
  - No grease, sealers, dirt, dust, debris, wallpaper, etc.
  - Roughen (abrade) all latex based painted surfaces, existing ceramic tile or laminates (if you are tiling over them).

- **Ensure there are no holes or voids in the substrate.**
  - Use an appropriate patching product such as TEC® Skill Set™ Fast Setting Patch to repair voids.

- **Substrate must be structurally sound and solid.**
  - No loose areas or "bouncy" floors. Loose or "squeaky" floors should be glued, nailed or screwed down tightly.

- **Substrate must be flat and even before tiling.**
  - Use a 6' or 8' long straight edge (2" x 4") making sure there are no gaps greater than 1/4" when straight edge is placed across the tiling surface. Use an appropriate patching or leveling product, such as TEC® Skill Set™ Self Leveling Underlayment.

- **If you are tiling over concrete:** new slabs must be cured at least 28 days. Patch holes, dips and cracks.

- **If you are tiling over plywood:** plywood should be APA Grade Trademarked Exposure I (Underlayment grade or better). You must have 2 layers of plywood with a minimum total thickness of 1-1/8" over floor joists that are spaced 16" apart. These two layers must be fastened with adhesive and screws or nails per manufacturer's instructions.

- **If you are tiling over old tile or vinyl linoleum:** any loose tiles must be secured. Linoleum should be stripped and cleaned of any waxes or dirt. Linoleum must be noncushioned and fully adhered to substrate.

- **Any section of wallboard or other surface that has been damaged by moisture must be replaced.** If installing new backerboard be sure to follow manufacturer's instructions.

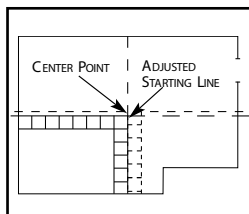6 ft. - 8 ft. long straight edge 2 in. x 4 in. — 1/4 in. maximum

2. Set the Tile
Layout & Cutting Tile

The best layouts minimize the number of cut tiles, avoid using cuts that are less than 1/2 the width of the tile, and position cut tiles symmetrically (the same on both sides of the wall). Typically it is difficult to achieve all of these goals, therefore you will end up making compromises that yield the best results.

> **NOTE**
>
> **Expansion Joints**: All tile installations must allow for "expansion joints." These are 1/8 in. to 1/4 in. spaces along the length where tile meets adjacent walls (room corners), floors, etc.
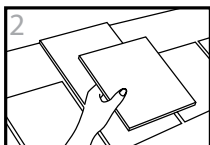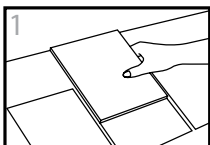
1. Find the area center point and, using a Chalk Line Tool, snap perpendicular lines through it to divide into quarters. Check the intersection of the angles using a Framing Square; make sure they are square.

2. Before using adhesive, dry lay out one vertical row and one horizontal row in a quarter (see picture) allow for even grout lines and for "expansion joints".

3. Adjust the starting line to find the best layout. Pieces less than half a tile wide are hard to cut and are less visually appealing. If end tiles are less than half a tile wide, reposition the vertical center line. If the problem is unavoidable, try to position them in an inconspicuous area.
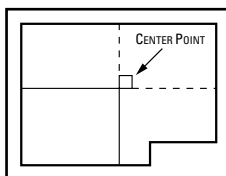
CENTER POINT | ADJUSTED STARTING LINE

Cutting

1. Place a loose tile atop the last full tile and position it to butt against the wall or corner, or edge where tile stops.

2. Lay a second loose tile over the first and align it with the last full tile.

3. Mark the cut line on the "sandwiched" tile. Remember to allow for grout lines and a gap of 1/8 in. to 1/4 in. where the tile butts walls and other surfaces. Due to variations in wall runs, each tile should be butted, measured and cut individually (rather than taking a single measurement and cutting a number of tiles at once). For straight cuts, use a tile cutter. "Polish" the edges with a rubbing brick.
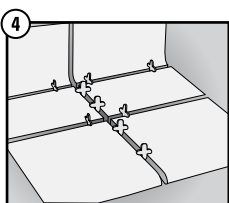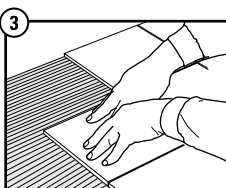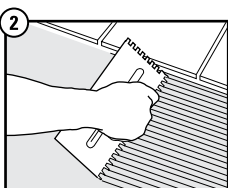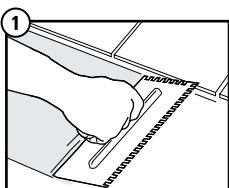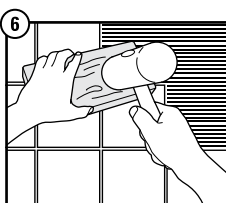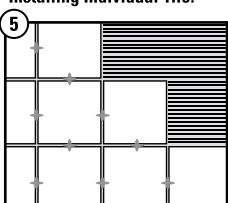

Applying the Mortar & Installing Tile

Begin installing at the center point of the surface and move outward, one quarter at a time. For floors, work toward the exit to avoid stepping over freshly-laid tile. When this is unavoidable, kneel on a plywood sheet.

1. With the flat edge of the trowel, apply adhesive or thin-set at the intersection of the guidelines. Be sure to apply an even coat. Work only a three sq. ft. area at a time, or the area that can be covered with tiles before thin-set or adhesive loses tackiness to the touch (see picture 1).

2. Now go back and "comb" the material with the notched section of the trowel, forming ridges for better adhesion (see picture 2).

3. Press the tile into position at the intersection of the lines, with a slight twisting motion. (see picture 3). Do not slide the tile into place. Use spacers between tiles (see picture 4) to maintain joint width. Install tile in a step-like fashion, working upward and outward. This permits easier adjustment of tiles if there is an error (see picture 5).

Installing Individual Tile:

Complete one quarter first before going to the next. If the mortar or adhesive starts to "skin-over" on the surface before you lay the tile on it, scrape it off and apply new adhesive.

4. Periodically check to see that joints are straight and even. Once aligned, tamp down tiles with a beating block and mallet to ensure tiles are level (see picture 6). If adhesive or thin-set oozes from joints, wipe with warm, soapy water. 2/3 of tile thickness in the grout joints should be clean to allow for grout.

5. Clean tools with warm, soapy water while adhesive is still wet.

6. Let tile sit before grouting; see product packaging for details on wait times.

3.Grout and Caulk

Before you start:

1. After you have waited the appropriate amount of time as per mortar instructions, make sure mortar is dry and tile is firmly set.

2. Remove all tile spacers.

3. Tile should be clean and dry.

4. Expansion joints (where tile meets adjacent walls, floors, or fixtures) should not be grouted. Instead, use Caulk (see Caulking Section).

Installing Grout

TEC® Power Grout™ or DesignColor™ Grout mixed with Grout Boost® stain resistant additive are highly recommended. Both of these solutions come in a wide array of designer colors and provide stain resistance, high performance and ease of use.

Refer to grout packaging for product capabilities, instructions and limitations.

SPECIAL GROUTING TIPS:

- Many people find it easiest to pack the grout into the joints using the small end of the grout float (rather than the long end). This is an appropriate method, however, you should still use the long end to scrape excess grout off of the tile.

- After you have applied the grout, be sure to wait the appropriate amount of time before you start sponge clean-up. Touch grout after 30-60 minutes. Grout should be firm, not soft. If there is no residue on your finger, grout is ready to clean.

- Use as dry a sponge as possible for the clean-up steps, otherwise you will likely just be pulling pigment out of the grout joints. The goal is to not disturb the grout lines. First, use a circular motion to loosen grout haze and tool the joints.

- For a second clean up, use the sponge to wipe the surface diagonally across the tiles and grout joints holding sponge flat to the surface. This should also help to smooth out the grout joints. Do not leave excess water pooled on the joints.

- Clean the sponge frequently, and wring out as much water as possible each time.

- Replace the bucket of clean-up water frequently.

Caulking

Once grout has cured, fill gaps at walls and flooring transitions with caulk. The use of TEC® Invision® Ready To Use Caulk is highly recommended. Refer to caulk packaging for product capabilities, instructions and limitations.