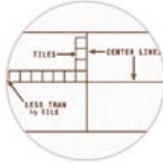# daltile®

Information   Installing Floor Tile

» FLOOR TILE CALCULATOR

Step 1: Surface Preparation

Tile may be installed over most structurally sound substrates, if they are clean, smooth, dry and free of wax, soap scum and grease. Any damaged, loose or uneven areas must be repaired, patched and leveled. Remove any moldings, trim, appliances, etc., which could interfere with installation. Door jambs may be undercut for tile to slip under.

Step 2: Layout

Begin by marking the center point of all four walls. Snap chalk lines between the center points of opposite walls, which will intersect at the center of room. Make sure they're perfectly square, and adjust if necessary. Next, lay out a row of loose tiles along the center lines in both directions, leaving spaces for uniform joints (use tile spacers). If this layout leaves cuts smaller than 1/2 tile at walls, adjust the center line by snapping a new line 1/2 tile closer to the wall. Repeat along other center line if necessary. Now divide the room into smaller grids (approx. 2' x 3') by snapping additional lines parallel to center lines.

Step 3: Applying Adhesive

Select the right adhesive for the substrate you're using. Carefully read and follow all instructions and precautions on the adhesive or mortar package. Mix only enough to be used within 30 minutes. Using the type trowel recommended on the adhesive package, spread a 1/4" coat on the surface of one grid area, using the flat side of the trowel. Do not cover guidelines. Next, use the notched side of trowel to comb adhesive into standing ridges by holding trowel at a 45-degree angle. Then remove excess adhesive, leaving a uniform, ridged setting bed. Don't spread a larger area than can be set in 15 minutes.

Step 4: Cutting Tile

Measure tiles to be cut carefully and mark with a pencil or felt-tip pen. Make straight or diagonal cuts with a tile cutter, curved cuts with a nipper (chipping away small pieces for best results), full-length curved cuts with a rod saw. Sharp-cut edges may be smoothed with a carborundum stone.

Step 5: Setting Tile

Variation of shades is an inherent characteristic of ceramic tile -- mix tiles from several cartons as you set, for a blended effect. Begin installing tiles in the center of the room, one grid at a time. Finish each grid before moving to the next. Start with the first tile in the corner of the grid and work outward. Set tiles one at a time using a slight twisting motion. Don't slide tiles into place. Insert tile spacers as each tile is set, or leave equal joints between tiles. Fit perimeter tiles in each grid last, leaving 1/4" gap between tile and wall. Any rectangle porcelain should never be set in a running bond pattern, rather no more than a 1/3 overlap, the joint should be widened to 3/16" and use of a large unit porcelain mortar should be employed. When grid is completely installed, tap in all tiles with a rubber mallet or hammer and wood block, to ensure a good bond and level plane. Remove excess adhesive from joints with a putty knife, and from tile with a damp sponge. Do not walk on tiles until they are set (usually in 24 hours).

Step 6: Grouting Joints

Generally, you should wait about 24 hours before grouting (refer to the adhesive package for specifics). Carefully read and follow all instructions and precautions on the grout package. Make only enough to use in about 30 minutes. Remove tile spacers and spread grout on the tile surface, forcing down into joints with a rubber grout float or squeegee. Tilt the float at a 45-degree angle. Remove excess grout from surface immediately with the edge of float. Tilt it at a 90-degree angle and scrape it diagonally across tiles. Wait 15-20 minutes for grout to set slightly, then use a damp sponge to clean grout residue from surface and smooth the grout joints. Rinse sponge frequently and change water as needed. Let dry until grout is hard and haze forms on tile surface, then polish with a soft cloth. Rinse again with sponge and clean water if necessary. Wait 72 hours for heavy use. Don't apply sealers or polishes for three weeks, and then only in accordance with manufacturer's recommendations.