

## Project

## Tile Installation

Tile is an extremely versatile surface covering that can be used over floors, ceilings, countertops, hearths, and shower and bath enclosures. Used in combination with QUIKRETE® Thin-Set mixes and grouts, it provides an attractive and durable covering both indoors and out.

### Required Tools & Materials

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- QUIKRETE® Multi-Purpose Thin-Set (for setting tile on a variety of surfaces, including exterior-grade plywood and other hard-to-bond surfaces)
- QUIKRETE® This-Set Sanded (For setting tile on concrete, plaster, gypsum wallboard, old tile surfaces, marble, gypsum plaster brown coat, and gypsum block)
- QUIKRETE® Polymer-Modified Tile Grouts (for use with both highly absorptive and vitreous tile)
- QUIKRETE® Tile and Grout Cleaner (for cleaning cement grout residue buildup from tile surfaces)
- QUIKRETE® Tile and Grout Sealer (For sealing tile from dirt buildup) Tiles
- Spacers
- Glass cutter
- Pliers or nippers
- Notched trowel
- Chalk line
- Plumb bob
- Rubber float or squeegee
- Towels or cheesecloth
- Level

### Step by Step

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#### Tiling Floors

When installing tile over a concrete floor, make sure that the slab is level, properly cured, and free of any dirt, wax, or curing compounds. If it is cracked or damaged in any way, repair it before laying the tile.

When installing tile over wooden subflooring, the bonding surface must be exterior-grade plywood. The plywood should bring the finish floor thickness to a minimum of 1"; it must be solid, with minimal deflection. To apply exterior-grade-plywood, first glue plywood backing in place, then fasten 5d coated nails 8" apart in every direction. Leave a 1/8" space between sheets of plywood to allow for expansion.

For installing over wooden subflooring in wet areas, either cement backer boards or a cement plaster coat reinforced with metal lath must be applied prior to tiling. To apply cement backer board, mix QUIKRETE® Multi-Purpose Thin-Set and apply it to the subflooring. Immediately lay the backer board over the subflooring, allowing 1/7"

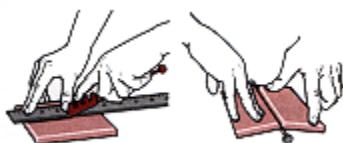
space between boards. Fasten with 1-1/2" galvanized roof nails every 6".

When installing tile over a minimum 1" thick plywood floor that is sound and shows no sign of deflection, first apply minimum 1/4" exterior-grade plywood. Fasten the plywood as described previously. For installation over vinyl flooring with a concrete base, first remove the vinyl covering. Then use the liquid stripper and scrapper to remove all mastic residue.

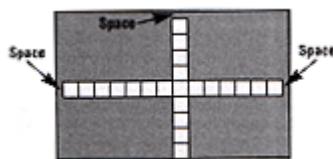
### **Setting Floor Tile**

The following method is particularly effective for rooms with large doorways that make the floor visible from other parts of the house.

- 1.** Snap a chalk line down the center of the room perpendicular to the doorway. Now snap another chalk line perpendicular to the first.
- 2.** Starting at the doorway, dry-lay tiles along the first chalk line. Use appropriately size tile spacers between each tile sized tile spacers between each tile so that the grout spaces will be uniform.
- 3.** If you do not have enough room for a full tile at the end of the line, use a cut tile at each end so that the spaces are equal. To cut a tile, score it with a glass cutter, then lay it over a nail or piece of metal and press down on both sides. Use pliers or nippers to remove any rough edges.



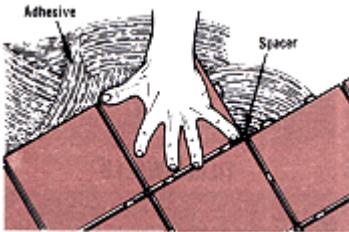
- 4.** Dry-lay tiles along the second chalk line, again using spacers. If necessary, adjust the line so that they intersect at a tile corner as shown in the illustration.



- 5.** Draw a line on the floor to mark the outside edge of the last full tile at the doorway. Make sure the line is straight and extend it along the entire length of the wall. Repeat this procedure on one of the adjacent walls.

- 6.** Place long 1 x 2s or 1 x 3s on the outside of each line. Make sure that they are perfectly square, then nail them in place.

7. Beginning in the corner where the boards intersect, spread approximately 3 square feet of Thin-Set mix with a notched trowel. Hold the trowel at a 45° angle to achieve maximum coverage. Set the corner tile into the mix with a firm, twisting motion.



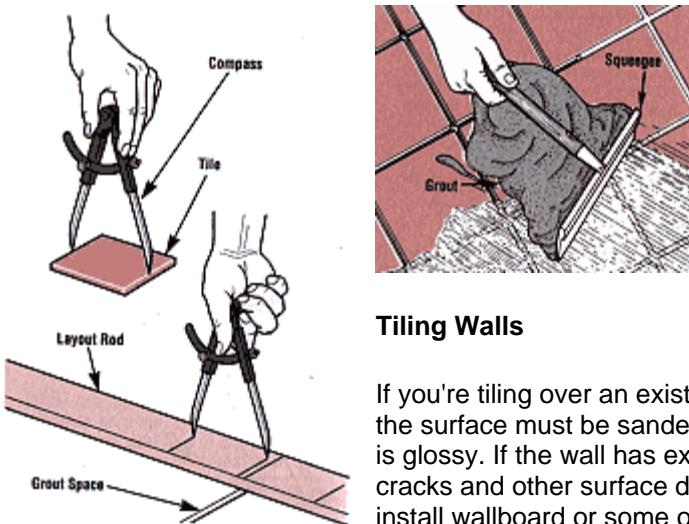
8. Continue setting the tiles according to the order shown in the illustration. Always use spacers between the tiles to keep the alignment straight. Use a rubber mallet to tamp down any uneven tiles and wipe all excess mortar off the surface immediately. When the mortar has set, remove the boards. Lay cut tiles along the edges, leaving an 1/8" gap along the wall.

9. Remove the spacers and wait at least 48 hours before grouting.



### **Grouting**

1. Use QUIKRETE® Tile and Grout Sealer before grouting over unglazed tile to avoid staining the tile during the application.
2. Mix the QUIKRETE® Polymer-Modified Tile Grout thoroughly to insure color uniformly.
3. Use a hard rubber float to work the grout diagonally across the joints until they are packed full and are flush with the surface. Turn the float perpendicular to the tile, and remove excess grout with a squeegee.
4. When the grout reaches its initial set, clean the tile with a slightly damp towel or cheesecloth. Use a circular rubbing motion.
5. Wait at least 10 days, then clean the new tile with QUIKRETE® Tile and Grout Cleaner.



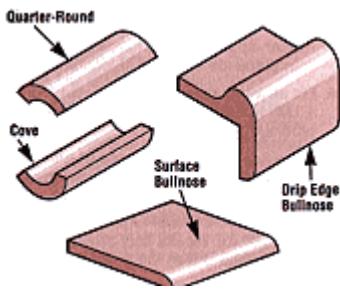
## Tiling Walls

If you're tiling over an existing wall, the surface must be sanded down if it is glossy. If the wall has extensive cracks and other surface defects, install wallboard or some other new backing material over it. If working over cement, drywall, plaster, use QUIKRETE® Multi-Purpose Thin-Set. In wet areas, use cement backer board or moisture-resistant gypsum board. Fill all corners and cracks with Multi-Purpose Thin-Set, followed by a surface coat. If working over ceramic wall tile, clean and abrade the surface first, then use Multi-Purpose Thin-Set for the bonding application.

### Setting Wall Tile

This procedure makes use of a layout rod, a special tool that enables you to simulate a dry run for the installation.

- 1.** Find the center point of the wall and snap a plumb line from the ceiling to the floor. Snap two more plumb lines close to the edges of the wall.
- 2.** Snap a horizontal chalk line across the exact center of the wall, then snap two more horizontal lines as close to the floor and ceiling as possible. These six lines will provide the centerlines for beginning the tile installation. They also point out where your walls and floors are uneven; in such cases, the tiles must be tapered so that they will fit snugly against the wall.
- 3.** To make the layout rods, cut two 1 x 2s to the height and width of the wall. Use a compass to mark a tile layout along each rod, adjusting the grout spacing tile or trim pieces as a border, be sure to include them on the proper ends of the rods.
- 4.** To transfer the marks from the rods to the wall, hold each rode against two of the plumb lines or horizontal lines.
- 5.** Begin installing tile on the bottom row, starting at the centerline. Apply enough Multi-Purpose Thin-Set for the first few tiles, but leave

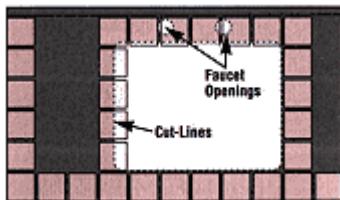


the baseline and centerline visible for accurate alignment.

**6.** Set the first tiles in place, and insert spacers between them. Many wall tiles have nubs on the sides to provide the desired space between tiles.

**7.** Continue setting the tiles, working your way up the wall. Use a level to ensure accurate alignment and squareness.

**8.** Remove the spacers and allow the Multi-Purpose Thin-Set to cure at least 48 hours before grouting.



### Tile Countertops

Because a countertop is subject to a good deal of moisture, impact, and other abuse, it is important that high-quality tile is used. Install glazed tile around sinks and food preparation areas because unglazed tile tends to stain. Leave a 1/8" gap between plywood pieces for expansion.

If working over existing Formica, remove all residue from the surface. Rough up the surface with a coarse sanding disc to ensure a good bond. Be sure to remove all sanding dust.

Various trim tile pieces are available for the tricky areas of a countertop, including the edges, corners, backsplash, and sink opening. They include surface bullnose, drip-edge bullnose, cove, and quarter-round pieces. For the neatest and most attractive look, a countertop should be covered only with whole tiles. However, since this is not always possible, you might want to install a self-rimming sink instead of mounting the sink below the tile; the rim does a nice job of covering the cut edges.

### Setting Countertop Tile

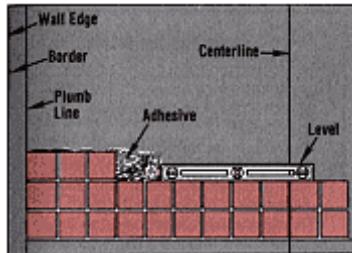
While tiling a countertop involves a good deal of careful planning, it is not as difficult as many people believe. Use the following procedure:

**1.** Starting with trim pieces or bullnose tiles and continuing with full tiles, make a dry run of the entire sink. If the counter is L-shaped, start the run at the inside corner and work outward both ways. Use a full tile for the corner piece; all trim pieces should be laid out with the

grout lines following those of the rest of the tiles.

**2.** When the front and back edges are in position, make a dry run of the tiles around the sink. If the sink is self-trimming, lay the tiles in place and mark the cutlines from underneath. If the sink has a recessed basin, cut and trim the tile to fit around it.

**3.** Mark and cut tiles for faucet holes and any other openings as shown in the illustration.



**4.** When you are satisfied with the entire layout, mark the tiles and/or the countertop with the necessary cut marks. Do all cutting before beginning tile installation.

**5.** The procedure for cutting, setting, and grouting countertop tiles are identical to those outlined earlier. To prevent mildew, apply QUIKRETE® Tile and Grout Sealer about two weeks after the installation.