

# CERAMIC

## INSTALLATION BULLETIN

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These are general recommendations. Specific instructions should be obtained from the manufacturer or the Tile Council of America Handbook of Ceramic Tile Installation.

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### SUBSTRATE PREPARATION

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Each subfloor should be inspected to determine any special care required to make it a suitable foundation for ceramic.

**Concrete:** Floor surface should be cured, dry, structurally sound, clean and free of wax, curing compounds or other coatings. Surface alkalinity and extremely porous concrete floors should be prepared with Taylor Envirotec #2000 Alka Prime Pre-Coat, which neutralizes surface alkalinity and also primes the concrete reducing absorption of adhesive solids into the concrete and promotes adhesion when using organic adhesives.

**Wood:** Subfloors should be installed over 16" on center joists. Live load deflection should not exceed 1/360 of the span. Exposure 1 or exterior plywood conforming to provisions of Product Standard PS 1-83 for Construction and Industrial Plywood or plywood APA rated Sheathing or APA rated Sturd-I-Floor conforming to provisions of *Manufacturing and Performance Standards for APA Rated Sheathing* or 1" nominal boards. Plywood subfloor should have a minimum thickness of 19/32".

**Underlayment:** Plywood underlayment, Exposure 1 of C-C plugged exterior, or sanded plywood grades special inner-ply construction conforming to underlayment provisions of Product Standard 1-83 for Construction and Plywood or Plywood APA Rated Sturd-I-Floor conforming to provisions of *Manufacturing and Performance Standard for APA Rated Sturd-I-Floor panels*. Each panel of subfloor and underlayment should be identified with a trademark of the approved testing agency.

Plywood underlayment should have a minimum thickness of 11/32" when tile installation is to be performed with a ceramic adhesive such as Taylor Envirobond #901 (#801 in California) Multi-Purpose Ceramic Tile Adhesive. Plywood underlayment should have a thickness of 7/16" minimum when tile installation is to be performed with Mortar.

Be sure to allow 1/8" between panels and 1/4" between panel and wall for expansion. Floor surfaces along adjacent edges of sheets should not be more than 1/32" above or below each other.

**Gypsum Board:** In dry areas, install standard gypsum wallboard in accordance with GA-216-89. Treat all joints with tape and one coat of joint compound. Cover heads of all fasteners with two coats of joint compound.

In wet areas, install water-resistant gypsum backing board in accordance with GA-216-89 except that joints shall be filled with a water-resistant joint compound and tape. CAUTION: Gypsum board or gypsum plaster should not be used in wet areas.

Water-resistant gypsum backing board used in wet areas should be installed over framing not to exceed 16" on centers. A 1/4" gap should be left between the paper edge and tub and shower receptor. The gap should be caulked with a flexible sealant. CAUTION: Water-resistant gypsum backing board should not be used on ceilings or in extremely critical exposure areas such as saunas, steam rooms, or gang showers.

## INSTALLATION

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Determine the focal point of the room and draw guidelines that intersect at that point. Starting from this intersection point, lay out a row of tile along one floor guideline. Be sure to leave the proper spacing needed for grout lines if the space left at the end of the row is less than 1/2 a tile wide, draw a new guide line 1/2 a tile's width from the intersection point. Repeat these steps in other direction to find the new intersection point.

Apply a skin coat of the setting material using Taylor Envirobond #901 (#801 in California) Multi-Purpose Ceramic Tile Adhesive over the substrate with the flat side of the trowel. Then, comb the setting material in one direction with the proper notch trowel. The recommended trowel notches are as follows:

- ◆ Glazed Wall Tile: 3/16"x5/32" saw-tooth
- ◆ Heavy Tile & Pavers: 1/4"x1/4"x3/8" sq. notch
- ◆ Ceramic Mosaics and Gauged Slate: 1/8"x1/8"x1/8" v-notch
- ◆ Quarry Tile: 1/4"x1/4"x1/4" sq. notch
- ◆ Marble: 1/4"x1/4"x1/4" sq. notch

Start setting tiles at the intersection point determined earlier and continue setting tiles along both guidelines. Set all full tiles first and leave space at each end for cut tiles. Set tiles in one quadrant at a time, starting at the intersection and working towards the walls. Place tiles into the troweled ridges of setting material and move the tile back and forth in a direction perpendicular to the direction of the combed ridges. This will force the ridges of setting material to collapse and increase the coverage or transfer to the back of the tile.

Mark cut lines on the tiles that need to be cut and with the use of a tile saw or tile cutter, make the required cuts. After determining that the tile is cut properly, set them with the same methods as used for setting full tiles.

Using a slow speed mixer (150 RPM or less) to avoid entrapment of air bubbles, mix the grout in a bucket. Be sure to follow manufacturers' instructions for mix ratios and the use of additives.

Pour enough mixed grout to form a pool on the tiles. Using a rubber grout float held at a 45° angle, work the grout diagonally across the tiles and push the grout into the joints between the tiles. After the joints are packed with grout, hold the float at a 90° angle and use it as a squeegee to remove excess grout.

Allow the grout to set according to manufacturers' recommendations before cleaning the remaining grout residue from the tile face. Wipe the face of the tile diagonally with a damp terrycloth towel. Wipe all tiles until grout lines are even, joints are smooth and the face of the tile is clean. Be sure to rinse the towel often, but keep it as dry as possible. Wipe lightly with a damp sponge to remove any film or residue left on the tile.