



## Installation Guide - Stained Glass Tiles

### GENERAL INFORMATION

Diamond Tech's glass tile may be used for interior and exterior wall and in some cases floor applications. Glass tiles are manufactured to satisfy industry specifications for glazed wall tile and are recommended for residential and commercial use. Glass tiles are impervious to water and stains, highly resistant to chemical attack, resistant to fading and discoloration. Variations in color, shade and size are inherent in all fired glass products. The glass tiles should not be exposed to high abrasion, or extremely heavy impact.

The following recommendations comply with the TCNA (Tile Council of North America) Handbook Guidelines.

### RECOMMENDED SUBSTRATES

Well cured mortar beds-ANSI A108.1B (cured a minimum of 7 days). Cementitious backer units (CBU)-ANSI A118.9 (Note: An ANSI A108A-2.1.8 membrane is required behind all CBU installations in wet areas. Concrete slabs (on grade) cured for 28 days minimum. Gypsum board (dry areas only)-ASTM C1396 or ASTM C1396M-04.

**Note:** Directly bonding glass tiles to wood substrates is not recommended. All surfaces to receive tile shall be left clean and free of dust, oil, grease, paint, tar, wax, curing agent, primer, sealer, adhesive residue, form release agent or any other deleterious substance and debris which may prevent or reduce adhesion.

Glass tile expands and contracts more than ceramic and porcelain tile. This movement needs to be accommodated in the installation, particularly where temperature changes may occur. Be sure to use caulked joints on all inside corners where walls intersect, especially in showers, backsplashes and cook top areas. This recommendation is standard installation procedure though frequently ignored with ceramic tile. It is critical with glass tile installation.

### SETTING MATERIALS

We recommend a high grade flexible mortar system (latex modified) as a setting material for glass tiles. For grouts, a premium polymer-modified sanded or unsanded grout for joints 1/16" (1.5mm) to 1/8" (3mm) wide. For grout joints larger than 1/8" (3mm) use a polymer-modified sanded grout.

### INSTALLATION

**IMPORTANT TO NOTE:** This product has a directional grain. It is important to make sure that the grain of the glass is facing in the same direction when installing this product.

#### *Clear Adhesive Faced Tile*

1. Mix setting materials according to manufacturer's instructions.
2. Apply setting materials to the substrate using the notched side of a 3/16" x 1/4" V-notched trowel.
3. Using the flat side of the trowel, lightly smooth out all ridges to achieve a consistent, and voidless coverage.
4. Work in 6-8 sq/ft sections at a time. Apply tiles to troweled setting material with the CLEAR FILM-FRONT FACING THE INSTALLER.
5. After tile application, use a rubber float or equivalent tool to gently press the tile into the adhesive and flatten sheets to each other to insure complete contact. Do not push the sheets too deeply into the setting materials, as this will cause the setting materials to ooze too far up between the spaces in the tile.
6. Adjust tile sheets for correct alignment and even spacing between sheets. To adjust individual tile within a sheet, use a utility knife and cut through the clear film surrounding the misaligned tile and adjust. Do not allow setting material to dry or skin over before completing this process. Clear adhesive face mounting will help insure proper alignment.
7. Allow setting materials 1 hour to set (see manufacturer's instructions) before removing film.

8. Gently peel back the film at a low angle. Should tiles lift out of the bed, discontinue pulling and allow additional setting time before continuing. To reinstall tile that may have pulled out, apply a small amount of thin set to the back of the tile and reinsert into position.

### *Individual Tiles*

**IMPORTANT TO NOTE:** When setting individual Stained Glass tiles, insert so the waffle side of the tile is positioned down into the setting materials. If the product has a beveled edge and two flat surfaces, insert the tiles so that the beveled edge is positioned into the setting materials. The side with the largest surface area should be facing the installer.

1. Mix setting materials according to manufacturer's instructions.
2. Use a 3/16" x 1/4" square-notched trowel to apply setting materials.
3. Smooth the trowel ridges in the setting material using the flat edge of the trowel before setting the tile or the setting material ridges may show through.
4. Additionally, each piece should be "back-buttered" with a thin, continuous layer of the setting material.
5. Insert, so the waffle side of the tile is positioned down into the setting materials. If the product has a beveled edge with two flat surfaces, insert the tiles so that the beveled edge is positioned down into the setting materials. The side with the largest surface area should be facing the installer in this instance. Leave approximately 1/16"-1/8" between each tile and note the tile grain when installing.
6. After tile application, use a rubber float or equivalent tool, gently press the tile into the adhesive and flatten to insure complete contact. Do not push the tiles too deeply into the setting materials, as this will cause the setting materials to ooze up between the spaces in the tile.
7. Adjust tile for correct alignment and even spacing between. Do not allow setting material to dry or skin over before completing this process.

### **GENERAL INSTALLATION FOR ALL TILES**

- Allow setting materials sufficient time to set (see manufacturer's instructions).
- Clean all excess setting materials with a damp sponge. Wipe away any haze that may have remained behind.
- After 24 hours, mix grout, following manufacturer's instructions.
- Grout openings between tiles.
- Clean all excess grout immediately with a damp sponge.
- Polish off any remaining haze with a dry cloth or towel.
- After grouting, protect area from light foot traffic and light water exposure for at least 72 hours. Protect area from heavy traffic and regular use for at least 7 days.

### **CUTTING AND DRILLING**

**Eye protection should always be worn when cutting or drilling glass tiles.**

We highly recommend that cuts be made with a wet saw and a NEW diamond rimmed blade designed SPECIFICALLY to cut glass (we recommend the MK-215GL). Slowly push the tile into the blade. Pushing too hard or cutting too fast may cause the glass to chip. Ceramic tile blades are NOT recommended; their cuts are too coarse and tend to chip tile surface of the glass. To finish the edge, smooth with a diamond hand pad, tile blade or dressing stone.

Drilling holes through glass tile can be accomplished with a diamond core bit using a drill with low speed (250 to 300 rpm). Continually misting the tile and drill bit during cutting is imperative to prevent glass from cracking. If partitions or fixtures are to be attached with anchoring bolts, drill hole 1/8" larger to avoid stress transfer to the tile. If tiles have not been installed, drilling from both sides will minimize chipping and cracking.

### **TILE CARE AND MAINTENANCE:**

Clean the glass tile with mild soap and warm water. Wipe surface completely dry with a clean, lint free soft cloth.

Excessively dirty glass tile, use a non-abrasive cleaning compound recommended for glass (such as Windex, ammonia and water, vinegar and water). Rinse according to the manufacturer's instruction.