Installation Guide

Profile handcrafted art glass by

Ann Sacks

Installation Guide

Substrate Preparation
Acceptable Setting Materials
Paper-Faced Mosaic Installation
Large Format Installation
Pool & Submerged Applications
These instructions are provided as a general guideline for installing Profile glass tile; some installations require different or more detailed specifications. An experienced, professional tile installer who is familiar with the following procedures should perform the work. Please read and understand these instructions before beginning any work.

**Verifying Dye Lot Consistency**

The owner or end user is responsible for determining the acceptability of the product. Due to the handcrafted, artistic nature of Profile glass tile, variation in color, shade, tone, and size is normal.

1. Upon delivery, open and inspect each box of tile.
2. Verify dye lot consistency in the following manner. To establish color control samples, randomly select from your order:
   - A. five sheets of paper-faced mosaics
   - B. five pieces of field tile

3. To ensure shade variations are acceptable check the remaining sheets or field tile in your order against the control samples, prior to installation.
4. If ordering additional materials, samples shall be sent to help attempt to match previously ordered material.

**Substrates**

The performance of a properly installed thin-set tile application is dependent upon the durability and dimensional stability of the substrate to which it is bonded. The following recommendations are from the Tile Council of North America’s “2007 TCA Handbook for Ceramic Tile Installation” and are general in nature (www.tileusa.com).

- **Substrate Variations**
  - When installing Profile glass tile adjacent to thicker materials, the substrate must be brought up to a level such that the tile can be installed with the recommended amount of setting material and be flush with surrounding surfaces. This should be accomplished in one of three ways depending on the variation of depth.
  - For variations between 1/8” to 1/4” use one of the required setting systems and a notch trowel size that will render the desired depth of setting material.
  - For variations between 1/4” to 3/4” build up 1/4” or 1/2” cementitious board units (CBU) using the recommended setting material and cure 48 hours prior to installing the glass tile.
  - For variations between 1/4” to 3/4” build up 1/4” or 1/2” cementitious board units (CBU) using the recommended setting material and cure 24 hours prior to installing the glass tile.

5. **Unacceptable Substrates**
   - Single-float mortar bed walls not employing cured scratch coats
   - Plywood, Low-Density Fibreboard (MDF), press board or composites

6. **Material Inspection and Substrate Preparation**
   - When installing glass tile adjacent to the substrate, the substrate should perform the work. Please read and understand these instructions before beginning any work.

7. **Verification of Dye Lot Consistency**
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Acceptable Setting Systems

NOTE: When mixing setting and grouting materials do not exceed 300 RPM or the manufacturer’s recommendations. Most setting and grouting materials need to slake (sit) 10-15 minutes after mixing and be remixed before use.

• Custom Building Products: Premium Plus Thin-Set Mortar (white) mixed with Custom Flex Ultra-Strength Thin-Set Additive
• Custom Building Products: MegaFlex Ultimate Thin-Set Mortar (white)
• Custom Building Products: MegaLite Crack Prevention Mortar
• Flexite: 52 Versatile Floor Mortar
• Hydroment: Reflex Ultra-Pressure-Latex Modified Thin Set Mortar
• Kerakoll: H40 Tanx Single Component Thin-set White
• Laticrete: 254 Platinum Multipurpose Thin-Set Mortar
• MAPEI: Kerabond Dry-Mortar Mortar (KER 102) mixed with Keracolor Additive (KER 310)
• MAPEI: Adesilex P10 mixed with Keraxy mortor additive.
• Tec (H.B Fuller): Super Flex Premium Performance Universal Latex Modified Thin-set Mortar.

Unacceptable Setting Systems

• Organic adhesive (mastic) - due to yellowing and low bond strengths.
• Epoxy - due to low flexibility, as well as degradation in UV sunlight.

Movement Joints

Movement joints are essential for the success of most tile installations. Follow the recommendations on Movement Joints EJ 171-07 in the “2007 TCA Handbook for Ceramic Tile Installation”. Movement joint requirements will vary depending on substrata, climate and size of installation. An architect or design professional should be consulted when specifying the exact number and location of each movement joint. Certain applications may require a different type of sealant.

ACCEPTABLE FLEXIBLE JOINT FILLERS

• Hydroment: Chem-Calk 900 One-Part Urethane Sealant
• Kerakoll: Sigibuild PU Poly-Urethane Sealant
• Laticrete: Latal 90% Silicone
• Sikaflex: IA or 2C Polyurethane-based Sealant

Grout

Install grout mix according to manufacturer’s instructions. Grout joints shall be full and uniformly finished. Due to the imperious quality of glass, the grout will take longer to begin setting-up. For initial cleaning of grout from the tile face, use clean, dry cheesecloth. This wicks additional moisture from the grout and avoids washing out the joints. Use only a clean, damp sponge for the final cleaning and smoothing of the joints. For final polishing of excess grout haze use a soft, clean cloth.

ACCEPTABLE GROUTS

We recommend standard sanded grout products.

• Custom Building Products: Polyblend Sanded Tile Grout
• Flexite: 600 Polymer Sanded Floor Grout
• Hydroment: Sanded Ceramic Tile Grout
• Kerakoll: Fugabella 2-12
• Laticrete: 1500 Series Tile Grout or equivalent
• MAPEI: Ker 200 Series and Ker 700 Series Ultra/Color
• TEC: AccuColor Premium Sanded Tile Grout

NOTE: An acrylic grout admix can improve freeze-thaw resistance. Check with the manufacturer for recommendations on specific applications.

Unacceptable Grout

• Epoxy grout due to low flexibility, as well as degradation in UV sunlight.
• Non-sanded grout due to shrinkage.
• Consult grout manufacturers before considering blue, green or red grout in submerged applications.

Anti-Fracture/Waterproofing Membranes

Custom Building Products: Redgard Waterproofing and Crack Prevention Membrane

• Hydroment: Gold Anti-fracture and Waterproofing Membrane
• Laticrete: 9325 waterproof & anti-fracture membrane
• TEC: TA-324 Triple-Flex waterproofing/crack isolation membrane

Oceanside GlassTile, manufacturer of Profile glass tile, does not recommend membranes directly behind the setting material when installing light translucent or transparent glass tile (glass tile you can see through).

CUTTING

Profile glass tile products can be cut to meet job site dimensions with the use of a high-quality wet tile saw. We recommend a continuous, smooth-rim diamond blade designed for cutting glass, such as the 10” Alpha Vetra or the 10” MK - 20G. Special glass mosaic tile nippers (available from stained glass supply shops) work well when cutting our mosaic tile.

NOTE: Cut tile face up.

To dress smooth the cut edges of the glass tile use a #20 lapidary (tile rub stone) or 220 thru 600 grit FFA polishing pads available from Alpha Professional Products or Moen. Do not contact the face of the tile during dressing as this will damage the tile surface.

Drilling

Solid blocking for the anchoring of fixtures such as shower doors, towel bars, etc, shall be installed prior to installing the substrate.

The diameter of all drilled holes shall be 1/4” larger than the diameter of the fastener to allow the fastener to pass through the glass tile and substrate without making contact.

To successfully drill the glass tile, a water swell and fractional core bit work best. Prior to using a fractional core bit, mark and drill a shallow pilot hole using a carbide or diamond tipped masonry drill bit. Start pilot holes slowly to avoid excess heat. Connect water source and open water control valve on swivel until water trickles out. Hold firmly and begin drilling slowly. Gradually increase the speed. Continue with steady pressure until desired depth is achieved.

TEST RESULTS & RECOMMENDED APPLICATIONS

The following use chart is a general guideline listing laboratory test results and typical applications; however, an architect should be consulted when specifying Profile glass tile. Additionally, the environment, climate, maintenance, and wear can affect the performance of all tile installations; therefore the manufacturer, Oceanside GlassTile, suggests the end user verify the performance of all specified materials using a testing facility familiar with the tests necessary to satisfy the specification.

ASTM TEST RESULTS

<table>
<thead>
<tr>
<th>TEST #</th>
<th>TYPE OF TEST</th>
<th>Intraslab</th>
<th>Non-intraslab</th>
<th>Non-intraslab</th>
</tr>
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<tbody>
<tr>
<td>C1028</td>
<td>Static Coefficient of Friction</td>
<td>&gt;10</td>
<td>&gt;10</td>
<td>9-16</td>
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<tr>
<td>C648</td>
<td>Bonding Strength</td>
<td>&gt;200 Pounds - Force</td>
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<td>N/A</td>
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<tr>
<td>C674</td>
<td>Modulus of Rapture</td>
<td>&gt;1000 PSI</td>
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<td>N/A</td>
</tr>
<tr>
<td>C424*</td>
<td>Creasing Resistance (Steam)</td>
<td>No Affect, 1 Cycle (90 PSI)</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>C373*</td>
<td>Water Absorption</td>
<td>None, &lt;0.5%, Impervious</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>G650*</td>
<td>Chemical Resistance</td>
<td>No Affect</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>C1264*</td>
<td>Freeze-/thaw Resistance</td>
<td>No Affect</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Data from Profile glass tile RA Cosa California

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>GLASS MATERIAL</th>
<th>POSSIBLE APPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WALLS</td>
<td>Profile Glass</td>
<td>Residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heavy Residential</td>
</tr>
<tr>
<td>FLOORING</td>
<td>Profile Glass</td>
<td>Residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heavy Residential</td>
</tr>
<tr>
<td>COUNTERTOPS</td>
<td>Profile Glass</td>
<td>Residential</td>
</tr>
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<td></td>
<td></td>
<td>Heavy Residential</td>
</tr>
<tr>
<td>SUBMERGED</td>
<td>Profile Glass</td>
<td>Residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heavy Residential</td>
</tr>
</tbody>
</table>

* Not Recommended for public or residential areas showing to meet ADA requirements for glass areas.

Heavy Residential: Residential flooring areas that are subject to normal footwear traffic with occasional amounts of abrasive soil. Some examples would be halls, kitchens and corridors.
INSTALLATION INSTRUCTIONS AND SPECIFICATIONS

STEP 1
Using the flat side of a trowel to initiate the bond coat, firmly apply the setting material to the substrate.

STEP 2
With additional setting material, using a 3/16” x 1/4” V-Notch trowel, comb horizontal, full notches in one direction to establish the proper depth of the setting bed.

STEP 3
Using the flat side of the trowel, flatten the notches to achieve a smooth, consistent setting bed approximately 1/8” thick.

STEP 4
Apply sheets into the setting bed (paper side towards you), using light even pressure to establish contact and eliminate any voids.

STEP 5
To achieve a uniform surface, tap lightly using a wooden beating block and a hammer. Apply each subsequent sheet so that grout joints line up and a consistent field is maintained. Prior to setting each sheet, check the setting bed for skinning (slight drying of the thin set surface). If skinning occurs, remove thin set and repeat steps 2 & 3.

STEP 6
Using a wooden beating block and hammer, again lightly tapping from one sheet to the next.

STEP 7
After 15-30 minutes (floors can be removed sooner) lightly wet paper several times over a 5-10 minute period.

STEP 8
After water has absorbed into paper, the glue will release from the mosaics. Peel paper starting at the corner. Removing paper while the setting material is still in a semi-fresh/flexible state allows for necessary adjustments and reinspection of dye lot color consistency.

STEP 9
Straighten individual tiles prior to final set with the goal of creating a consistent, overall field of mosaics. Pay particular attention to the joints between sheets to eliminate the sheet pattern. Cure a minimum of 48 hours prior to cleaning and grouting.

STEP 10
After at least 48 hours, using a nylon brush and water, scrub residual paper and glue from the tile, followed by wiping clean with a damp sponge. Allow to dry prior to grouting.

STEP 11
Use sanded grout mixed per manufacturer’s instructions. Apply grout with a rubber float, forcing grout into joints until full. Due to the impervious quality of glass, the grout will take longer to set than with more porous materials.

STEP 12
Allow grout joints to take initial set (turn dull). For initial cleaning use clean, dry cheesecloth. This method wicks additional moisture from the grout and avoids washing out the grout joints.

STEP 13
Allow grout joints to set up a second time (turn dull) and smooth finish with a lightly damp sponge.

STEP 14
For final polishing of excess grout haze, use a clean, soft cloth.

MOSAIC INSTALLATION TIPS
➤ After 48 hours of curing, a cleaning solution such as liquid dish soap and warm water or stone and tile stripper can be used for final cleaning.
➤ ANSI Method A108.15-2005 (The Alternate Method) may also be used for installing paper-faced mosaics. When installing transparent or light translucent glass using the Alternate Method, the setting material and grout must be the same color.

Shown: 3/4” x 3/4” Mosaic Blend in Dune and 3” x 9” Field in Prairie Iridescent.

Caution: Do not use rubber floats or steel trowels for this step.

General Information 800-278-8453 | Edition # 07/07  Item #69527
Toll Free Tech Support 866-642-6169

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INSTALLATION INSTRUCTIONS AND SPECIFICATIONS

LARGE FORMAT INSTALLATION

STEP 1
Using the flat side of a trowel to initiate the bond coat, firmly apply the setting material to the substrate.

STEP 2
With additional setting material, using a 1/4” x 1/4” square-notch trowel, comb horizontal, full notches to establish the proper depth of the setting bed.

STEP 3
Using the flat side of the trowel, flatten the notches to achieve a smooth, consistent setting bed approximately 3/16” thick.

STEP 4
Thoroughly clean the back of each tile using a dry cloth. Never wet the tile prior to setting.

STEP 5
Back butter each tile using additional setting material.

STEP 6
Verify that 100% coverage has been achieved by checking the face of transparent tile before setting.

STEP 7
Apply the tile into the setting bed using firm, even pressure.

STEP 8
Remove excess setting material from the edges and space a minimum of 1/8” between tiles.

STEP 9
After at least 48 hours, apply grout with a rubber float, forcing grout into joints until full. Use sanded grout mixed per manufacturer’s instructions. Due to the impervious quality of glass, the grout may take longer to set than with more porous tile.

STEP 10
Allow grout joints to set up (turn dull). For initial cleaning use clean, dry cheesecloth. This method wicks additional moisture from the grout and avoids washing out the grout joints.

STEP 11
Allow grout joints to set up a second time and smooth finish with a lightly damp sponge.

STEP 12
For final polishing of excess grout haze, use a clean, soft cloth. Remove the masking tape and complete polishing.

POOL INSTALLATIONS

The following information relates to proper installation materials and techniques for pools installed over concrete tanks with Profile glass tile products.

Follow the TCNA’s specification for Swimming Pools TCA P601-07.

• Concrete tanks shall be watertight. Cementitious sealers are recommended for this purpose.
• Cure mortar beds a minimum of 7 days prior to setting the glass tile with one of the acceptable setting systems found on page 4 of this guide.
• The ideal setting temperature range for latex modified setting material is 50º - 90ºF. Always shade the installation from direct sunlight and wind using awnings or umbrellas.

Caution: Soil and corresponding engineering reports are mandatory for all glass tile pools.

Movement Provisions
ASTM C-920, a flexible sealant that is recommended for submerged applications, is required for pools between the tile and the decking or coping, at all inside corners and every 12'-16' on center in the grout joint.

TIPS
➤ After 48 hours of curing, a cleaning solution such as liquid dish soap and warm water or stone and tile stripper can be used for final cleaning.
➤ For liners and deco with detailed surface designs, cover with masking tape to avoid the need for excessive cleaning. Keep tape above the plane of desired grout height.

Cure mortar beds a minimum of 7 days prior to setting the glass tile with one of the acceptable setting systems found on page 4 of this guide.
**CLEANING AND MAINTENANCE**

When using cleaning products, always follow manufacturer’s directions and use personal protection equipment.

**New Installations**
- Wait to clean new installations for a minimum of 24 hours after completing the grouting process.
- After 24 hours remove loose dirt by vacuuming or sweeping.
- Prepare a cleaning solution using warm water and a liquid dish soap or a neutral pH cleaner. Thoroughly clean the glass tile, including the grout joints, using a nylon scrub brush or nylon scrub pad.
- Rinse with clean water and towel dry. A second rinsing may be needed.

**Cement-Based Grout or Setting Material Hazes**

Wait at least 10 days after grouting prior to applying the recommendations below.

1. **Wait 10 days after the grout has been installed then use a Sulfamic Acid cleaner such as C-Clean or Custom Clean. Follow the manufacturer’s directions using a nylon scrub brush or nylon scrub pad.**
2. **Rinse thoroughly with clean water and towel dry. A second rinsing may be needed to completely remove the cleaning solution.**

**Latex-Based Smears**

1. **Stone and tile strippers will work to clean latex smears not removed by acid-based cleaners. Follow grout manufacturer’s cure times and directions prior to use.**
2. **Rinse thoroughly with clean water and towel dry. A second rinsing may be needed.**

**Sealing Recommendations**

- Sealers are beneficial for grout; however, they will not penetrate the glass tile due to the impervious nature of glass. Consult grout manufacturer for their sealing recommendations.
- To reduce the possibility of sealer smears, buff sealer off glass tile with dry, clean towels before it dries.
- Always test a product on your tile installation in an inconspicuous area before treating the entire tile installation.
- **Protect surrounding non-tiled surfaces when using products recommended for tiled areas.**
- **Tile cleaning and maintenance products can adversely affect some materials such as metals, woods, and other surfaces.**
- **When choosing cleaning products, always follow manufacturer’s directions and use personal protection equipment.**

**GENERAL CLEANING**

- Warm water and liquid dish soap or a neutral pH cleaner.
- Tubs and showers: DESCUM Soap Scum Remover & Renovator.
- Pools and water features: Descala-it Pool & Spa Cleaner.

**FREQUENTLY ASKED QUESTIONS**

### Substrates

**Q:** Is plywood a good setting surface for glass tile?

**A:** No, although it is believed by some tile installers to be an acceptable substrate, plywood’s high degree of expansion and contraction makes it a poor choice with Profile Oceanside Glassstile products.

**Q:** Are drywall, sheet rock, green board or blue board acceptable setting surfaces in DRY areas?

**A:** Yes, the manufacturer, Oceanside Glassstile, traditionally recommends cementitious board units (CBU, Wonder Board, Hardi Backer) and wire-reinforced mortar beds, cured 7 days prior to installation, for most applications. For wall installations in interior DRY AREAS, drywall is widely accepted as a substrate, however, a professional evaluation should be made to ensure that the substrate is acceptable and the installation will not be subjected to moisture.

**Q:** How long should concrete cure prior to installing Profile Oceanside Glassstile?

**A:** The tile industry minimum standard for concrete is 28 days. For cold outdoor and high altitude climates the cure times can extend to 60 days or more.

### Setting Materials

**Q:** Can the setting material be tinted to change the overall color of dye lot color consistency?

**A:** Yes, however this recommendation must come from the setting material manufacturer as Oceanside Glasstile, manufacturer of Profile glass tile, does not recommend altering another manufacturer’s products.

**Q:** What are the advantages of flattening the notch lines in the thin-set bed as part of the setting process?

**A:** Flattening the notch lines will reduce the possibility of visible voids or powder pockets in the setting bed behind the tile, and increase the overall bond strength.

### To locate the required setting materials and recommended products please contact the manufacturers:

- **Alpha Professional Tools**
  - 800-649-7229
  - www.alpha-tools.com
- **Custom Building Products**
  - 800-272-8786
  - www.custombuildingproducts.com
- **Descala-it**
  - 520-294-5676
  - www.descala-it.com
- **Flexitile**
  - 800-699-3623
  - www.flexitile.net
- **Hydroment Bostik**
  - 888-592-8558
  - www.bostik-us.com
- **KeraKol**
  - 395/0536-816-511
  - www.kerakol.com
- **Laticrete**
  - 800-243-4788
  - www.laticrete.com
- **MAPEI**
  - 888-626-2734
  - www.mapei.com
- **MK Diamond**
  - 800-845-3729
  - www.mkdiamond.com
- **National Chemical Laboratories (DESCUM)**
  - 800-628-2436
  - www.nclonline.com
- **Silka**
  - 800-933-7452
  - www.sikaconstruction.com
- **TEC**
  - 800-323-7407
  - www.hfbuilder.com

**Caution:** Waiting to remove the paper until the next day prohibits making desired adjustments. Removing paper while the setting material is still in semi-fresh/flexible state allows for necessary adjustments and repositioning of dye lot color consistency.

### Large Format Installation

**Q:** What is the minimum acceptable spacing between large format glass tile?

**A:** The minimum spacing is 1/8” between tiles and all abutting surfaces.

**Q:** What is the minimum acceptable spacing between large format glass tile?

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