OceanScapes

Installation Guide

These instructions are provided as a general guideline for the installation of OceanScapes glass tile; some installations require a more detailed specification. 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.

Material Inspection

The owner or owner's representative is responsible for determining the acceptability of the product prior to installation. Due to the handmade, artistic nature of our products, variation in color, shade, tone and size is normal. In many cases, there will also be folds, wrinkles and bubbles in the glass. These surface characteristics are inherent to our cast glass manufacturing process and should be expected. Upon delivery of your order, open and inspect each box of tile.

Verify sheet-to-sheet color consistency by first comparing each sheet to one another from the backside. Next, compare the face of the sheets by laying them adjacent to one another and comparing the visible portion (edge) of the mosaic tiles.

No adjustments will be made after installation.

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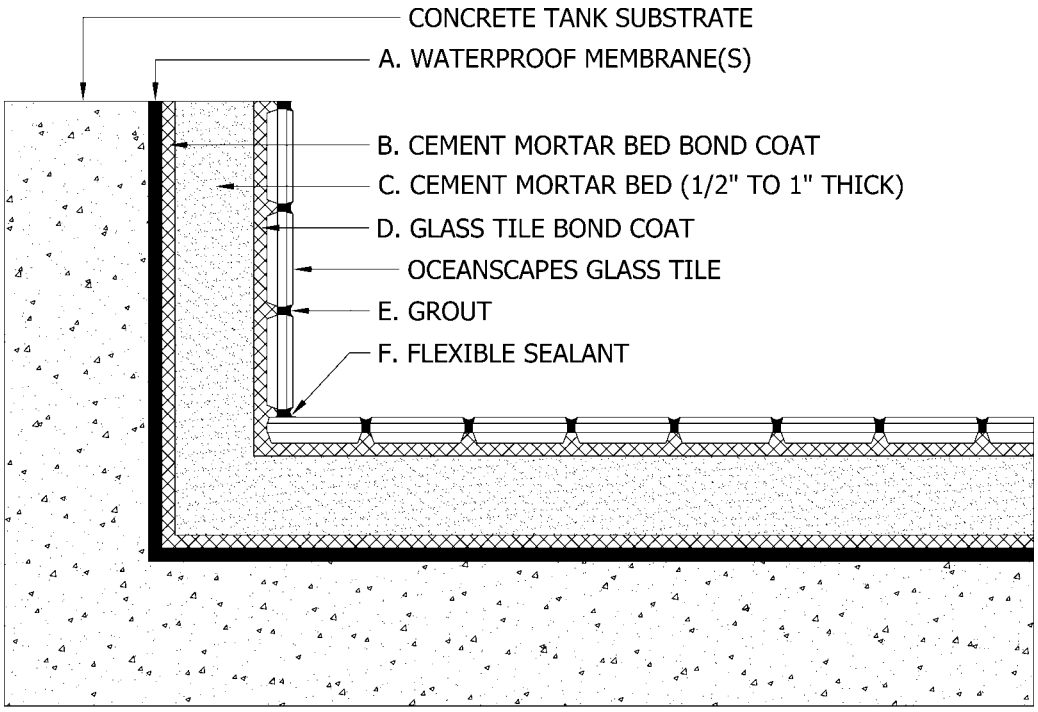
Substrate Preparation

The performance of a properly installed thin-set tile application is dependant upon the durability and dimensional stability of the substrate to which it is bonded. The following information details the recommended pool and water feature substrate preparation method for OceanScapes glass tile.



Drawing not to scale

Substrate Requirements

- Based on the soil report, pool tanks must be engineered and constructed to support a glass tile installation
- Pool tank construction must be reinforced concrete
- Defects in the concrete tank must be repaired prior to the commencement of tile work
- Concrete tank surface must be free of grease, oil, wax or other coatings; pressure wash if necessary
- Concrete tank must be watertight
- Materials:
  - A. Waterproof Membrane(s) - See “Anti-Fracture/Waterproofing Membranes” on page 4
  - B. Cement Mortar Bed Bond Coat - See “Acceptable Thin-Sets” on page 3
  - C. Cement Mortar bed (1/2” to 1” thick) - Mix at a ratio of 1 part portland cement (ASTM C-150) to 4 parts damp sand (ASTM C-144) by volume
  - D. Glass Tile Bond Coat - See “Acceptable Thin-Sets” on page 3
  - E. Grout - See “Acceptable Grout” on page 3
  - F. Flexible Sealant - See “Movement Joints” on page 3
- Cement mortar beds must be cured a minimum of 7 days prior to glass tile installation.

NOTES:

- *The ideal working temperature for most thin-set and grout products is between 50° and 90°F. Exterior installations must be protected from direct sunlight and wind.*
- *All submerged applications must be cured a minimum of 21 days prior to submersion or heavy water use, unless otherwise specified by the thin-set and grout manufacturer.*

Installation Materials

Due to the translucent nature of glass tile, the color of the adhesive will affect the final appearance of the installation. We recommend the use of specific white thin-sets, some mixed with a specific latex admix (see list below). However, these products will vary in their degree of whiteness and color consistency. Confirm the thin-set color is acceptable prior to installation. For projects that require multiple units of thin-set, dry-batching (pre-mixing) the units of thin-set powder may be necessary to avoid bag-to-bag color variations. All submerged applications must be cured a minimum of 21 days prior to submersion or heavy water use.

When mixing thin-set or grout:

1. measure liquid and powder per the manufacturer's recommendations,
2. machine mix at a maximum of 300rpm,
3. allow the thin-set or grout to slake (sit) 10-15 minutes,
4. re-mix (repeat step 2) and do not add more liquid or powder.

Acceptable Thin-Sets (white)

- CUSTOM BUILDING PRODUCTS: Glass Tile Thin-Set Mortar
- CUSTOM BUILDING PRODUCTS: MegaFlex Crack Prevention Mortar
- CUSTOM BUILDING PRODUCTS: MegaLite Crack Prevention Mortar
- DURABOND: D70 ProFlex High Performance Extremely Flexible Mortar
- FLEXTILE: 52 Versatile Floor Mortar
- HYDROMENT: ReFlex Ultra-Premium Latex Modified Thin-Set mortar
- LATICRETE: 254 Platinum Multipurpose Thin-Set Mortar
- MAPEI: Adesilex P10 Bright White Thin-set mortar* mixed with Keraply Mortar Additive.
- MAPEI: Kerabond Premium Dry-Set Mortar mixed with Keralastic Mortar Additive.
- TEC(H.B. FULLER): Super Flex Premium Performance Universal Latex-Modified Thin-Set Mortar.

** Color controlled for bag-to-bag consistency.*

Unacceptable Adhesives

- Organic adhesive (mastic) - due to yellowing and low bond strengths
- Epoxy - due to low flexibility

Movement Joints

Movement joints are essential for the success of most tile installations. Install movement provisions according to the "2008 TCA Handbook For ceramic tile Installation" method EJ171-07. A flexible sealant, recommended for submerged applications, is required between the tile and all restraining abutments (i.e. the decking or coping), at all inside corners, every 8'-12' on center in the tile field and directly over any joints in the concrete tank. An architect or design professional should be consulted when specifying the exact number and location of each movement joint.

There are a wide variety of flexible sealants available for use in tile installations. Each sealant product will vary in type, application and performance; consult the sealant manufacturer for specific recommendations and limitations. The following is a brief list of common sealant materials:

- LATICRETE: Latasil 100% Silicone Sealant
- SIKAFLEX: 1A or 2C Polyurethane-based Sealant

Acceptable Grout

We recommend grouting OceanScapes glass tile with a cement-based grout. The finish grout joint size of approximately 1/8" allows the use of either sanded or non-sanded grout. When installed with standard grouting technique, sanded grout will not scratch OceanScapes glass tile. Blue, green and red grouts may not be appropriate for submerged applications; consult the grout manufacturer for specific use recommendations and limitations.

Unacceptable Grout

- Epoxy Grout - due to low flexibility and degradation from ultraviolet light (sunlight)

Anti-Facture/Waterproofing Membranes

There are a wide variety of anti-fracture and waterproofing membranes available for use in tile installations. Each membrane product will vary in type, application and performance; consult the membrane manufacturer for specific recommendations and limitations. The following is a brief list of common membrane materials:

- AQUAFIN: 1K and 2K/M - Cementitious Waterproofing System
- CUSTOM BUILDING PRODUCTS: RedGard Waterproofing and Crack Prevention membrane
- HYDROMENT: Black-Top 90210
- LATICRETE: Hydro Ban
- MAPEI: Mapelastic 315
- TEC: HydraFlex Waterproofing Crack Isolation Membrane
- XYPEX: Concentrate

Cutting

OceanScapes glass tile can be cut to meet jobsite dimensions with the use of glass mosaic nippers or a high-quality wet tile saw equipped with a continuous, smooth-rim, diamond glass tile blade, such as:

- Alpha Professional Tools - Vetro
- daltool - Glass Tile Blade
- Husqvarna - Supelok Glass+
- MK Diamond - MK 215GL

Because OceanScapes glass tile is paper-face mounted with water-soluble glue, wet cutting an entire sheet can be problematic. Mosaic tiles should be removed from the sheet and wet cut individually or cut by hand using glass mosaic nippers. (See photos)

Drilling

Oceanscapes glass tile can be drilled using a wet core diamond bit and a water swivel (central water feed). The diameter of all drilled holes must be large enough for the fastener to pass through the glass tile without making contact.

Installation Instructions

STEP 1

To initiate the bond coat, use the flat side of a trowel and firmly apply thin-set to the substrate.

STEP 2

To establish the proper depth of the setting bed, use a 3/16”x1/4” V-notch trowel to apply additional thin-set and comb full notches in one direction.

STEP 3

Use the flat side of the trowel to flatten the notches and achieve a smooth, consistent thin-set setting bed.

STEP 4

Apply mosaic sheets to the thin-set setting bed (paper side towards you) with light, even pressure.

STEP 5

Prior to setting each additional sheet, check the thin-set for skinning (slight drying). If skinning occurs, remove the thin-set and repeat steps 2 and 3. Apply subsequent sheets so the joints line up and a consistent field is maintained.

STEP 6

To achieve the flattest possible surface, lightly tap the sheets with a wooden beating block and a finish hammer. To unify sheet transitions, tap from one sheet to the next.

STEP 7

After 15-30 minutes, (floors can be removed sooner) lightly wet the paper. Keep the paper wet by wiping with a damp sponge several times over a 5-10 minute period. After the paper has absorbed the water, the glue will release.

STEP 8

Peel the paper from the tile starting at the corner. Removing the paper while the setting material is still fresh allows for individual tile adjustment and re-inspection of color consistency.

STEP 9

Straighten individual mosaic tiles prior to final set with the goal of creating a consistent overall field of mosaics. To eliminate the sheet pattern, pay particular attention to the transitions between sheets.

STEP 10

After 48 hours, use water and a nylon scrub brush to remove residual glue from the tile. Clean rinse and towel dry.

STEP 11

Apply grout with a rubber grout float, forcing grout into joints until full.

STEP 12

Allow grout joints to set-up (firm) and perform initial cleaning with dry cheesecloth or lint-free paper towel. This method wicks moisture from the grout and helps avoid washing out the grout joints.

STEP 13

After 2 hours remove grout haze with a lightly damp sponge.

STEP 14

For final removal of grout haze, polish with a clean, soft cloth.

NOTE: See Cleaning and Maintenance section for recommendations on cleaning new installations and the removal of stubborn grout haze.

Cleaning And Maintenance

Proper care and maintenance is crucial to the long-term appearance and performance of any tile installation. The following information outlines the products and techniques recommended for the cleaning and sealing of OceanScapes glass tile and are general in nature. For heavy soil and stains that are not removed by the processes in this document, please consult a tile cleaning and restoration specialist.

Note: Always wear personal protection equipment and protect surrounding surfaces and finishes when using cleaning or sealing products. Test all cleaning/sealing products in an inconspicuous area for desired effect.

New Installations

For the removal of light cement-based grout haze or light construction dirt:

- Cure the installation a minimum of 24 hours after grouting.
- Remove loose dirt by vacuuming or sweeping.
- Prepare a cleaning solution of warm water and liquid dish soap or pH neutral cleaner.
- Thoroughly clean with the solution and a nylon scrub brush or nylon scrub pad (3M white).
- Thoroughly rinse with clean water and towel dry.

For the removal of stubborn cement-based grout or thin-set haze:

- Cure the installation a minimum of 10 days after grouting.
- Remove loose dirt by vacuuming or sweeping.
- Thoroughly pre-soak with clean water.
- Prepare a cleaning solution of Sulfamic Acid Cleaner per the manufacturer's directions.
- Following the Sulfamic Acid manufacturer's directions, clean with the solution and a nylon scrub brush or nylon scrub pad (3M white).
- Thoroughly rinse with clean water and towel dry.

Sealer Application

Sealers may be beneficial for cement-based grout; however they will not penetrate the impervious glass tile. To prevent sealer smears, remove unabsorbed sealer by buffing the installation with a clean, dry cloth. Change buffing cloth often and DO NOT allow the sealer to dry on the surface of the tile.

Note: Consult the grout manufacturer for specific grout sealing recommendations. Always test sealers in an inconspicuous area for desired effect.

General Cleaning

Maintaining proper water balance and chemistry is critical for the prevention of mineral scale build-up in pools and water features. Water balance is calculated via the Langelier Saturation Index (LSI). The water's LSI is a numeric expression of the water's balance and takes into consideration several factors (i.e. total alkalinity, calcium hardness, etc…). When water is balanced the LSI equals zero and variation between +0.5 and -0.5 is considered acceptable. LSI readings greater than +0.5 may lead to water cloudiness and accelerated scaling (mineral deposits). LSI readings less than -0.5 may lead to corrosion of cement-based materials (i.e. concrete, plaster & grout) and metal surfaces. Pool water chemistry should be measured and maintained by a pool-maintenance professional.

For general pool and spa maintenance and the prevention of build-up, scrub the installation with a nylon bristle scrub brush or a 3M White nylon scrub pad. Scrubbing should be part of the regular, weekly, pool maintenance program. Do not use a pumice stone or abrasive cleaners.

To remove light mineral scale, the installation may also be cleaned with LayorCare Heavy Calcium Releaser or a solution of sulfamic acid. Always follow the chemical manufacturer's instructions for safety and use. A standard practice when using acidic cleaners is to rinse and neutralize the surface of the tile, immediately after cleaning, with a solution of baking soda (sodium bicarbonate) and water (1lb: 3 gallons).

If the mineral scale is not removed through the above methods, media blasting may be necessary. There are pool tile-cleaning specialists who use portable media blasting equipment to clean pool tile. They use an array of blasting media ranging from sand (aggressive) to baking soda (mild). Generally, baking soda blasting media is aggressive enough to remove scale but will cause minimal damage to the tile. As with all cleaning procedures, this process should be tested in an inconspicuous area to ensure the results will not damage the tile surface and meet your expectations.

WARNING

Certain acids will damage the iridized surface of OceanScapes glass tile. Care should be taken to protect the surface of the glass tile when using acids in the pool finishing process or when adding acid to the pool water. Do not allow products that contain hydrofluoric, hydrochloric, muriatic or phosphoric acid to come in direct contact with the glass tile. In the case of accidental contact, neutralize immediately with baking soda and water.

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