



NEW RAVENNA®

..... MATERIAL INSPECTION .....

The owner or owner's representative is responsible for determining the acceptability of the product prior to installation. New Ravenna®'s products are handmade and of artisan quality; variation in color, shade, tone and size is normal and should be expected. **The key to a successful installation is an experienced craftsman familiar with handmade mosaics.** Range and variation are natural and inherent qualities of stone and should be embraced as characteristics that add beauty to your project. In many cases, there will be folds, wrinkles and bubbles in Jewel glass. These surface characteristics are inherent to the art glass manufacturing process and should be expected. Upon delivery, open and inspect each box of tile, no matter the material.

- **Mosaic tile** - verify sheet-to-sheet color consistency by laying each sheet adjacent to one another as according to the numbered stickers and map.
- **Unmounted tile** - verify color acceptability prior to installation. Translucent tile should be inspected and compared to one another on a white background. Prior to or during installation, blend the entire order to promote a visually consistent installation.

*Installation deems acceptance. Returns will be not be accepted once material is installed.*

..... INSTALLATION MATERIALS .....

**THIN-SET**

Due to the natural properties of stone and the translucent nature of glass, the color of the thin-set will affect the appearance of the installed tile. 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 variation. All submerged applications (pools & water features) 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.

**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 ADHESIVES

- CUSTOM BUILDING PRODUCTS: Glass Tile Thin-Set Mortar
- CUSTOM BUILDING PRODUCTS: MegaFlex Crack Prevention Mortar
- CUSTOM BUILDING PRODUCTS: MegaLite Crack Prevention Mortar
- DURABOND: D70 High Performance Extremely Flexible Mortar
- HYDROMENT: ReFlex Ultra-Premium Latex Modified Thin-Set Mortar
- LATICRETE: Glass Tile Adhesive
- MAPEI: Adesilex P10 Bright White Thin-Set Mortar mixed With Keraply Mortar Additive\*
- TEC SPECIALTY PRODUCTS: 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 Tile Council of North America (TCNA) Handbook For Ceramic, Glass and Stone Tile Installation, method EJ171-11. 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 and directly over any joints in the concrete tank. In-field movement joints are required every 8' on center in exterior applications or 20' on center in interior applications. 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.

## GROUTING

Grout is available in both sanded and nonsanded varieties. Refer to grout manufacturer's specifications for appropriate use. When installed in pools, we recommend grouting art glass with a cement-based sanded grout\* (will not scratch the tile). Blue, green, and red grouts may not be appropriate for submerged applications; consult the grout manufacturer for specific use recommendations and limitations.

## WATERPROOFING

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

### Cementitious Waterproofing:

- AQUAFIN: 1K
- MAPEI: Planiseal 88
- MERLEX: Super Blockade

### ANSI A118.10 Waterproof Membranes (Optional):

- AQUAFIN: 2K/M
- CUSTOM BUILDING PRODUCTS: RedGard Waterproofing and Crack Prevention Membrane
- HYDROMENT: Black-Top 90210
- LATICRETE: Hydro Ban
- MAPEI: Mapelastix 315
- TEC: HydraFlex Waterproofing Crack Isolation Membrane

## STRETCHING FACE-TAPED MOSAIC

Face tape can shrink slightly under prolonged storage or fluctuating temperatures. Please see our [YouTube video](#) for simple instructions.



## CUTTING

New Ravenna glass or stone can be cut to meet jobsite dimensions with the use of a high-quality wet tile saw equipped with a continuous, smooth-rim, diamond glass tile blade. To facilitate wet cutting, face taped mosaics may need to be cut individually as excessive saw overspray may cause them to fall off the tape.

## DRILLING

New Ravenna glass or stone can be drilled using a wet core diamond bit, designed for drilling dense materials (i.e., glass or granite) and a water swivel (central water feed). Solid blocking for the anchoring of fixtures, such as shower doors and towel bars, must be installed prior to installing the tile substrate. The diameter of all drilled holes must be large enough to allow the fastener to pass through the tile and substrate without making contact.

# MOSAIC INSTALLATION

## GLASS



**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  $\frac{3}{16}$ " x  $\frac{1}{4}$ " 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, tape side towards you, with light, even pressure. When joining sheets, be certain to adjust sheets so that grout lines are uniform. Periodically, check thin-set for skinning (slight drying). If skinning occurs, remove thin-set and reapply.



**Step 5** To achieve the flattest possible surface, lightly tap the sheets using light pressure with a grout float or a wooden beating block and a finish hammer. To unify sheet transitions, tap from one sheet to the next.



**Step 6** After 24 hours of cure time, peel the tape from the tile starting from the corner. Use an angled downward movement.

*NOTE: Grout application and cleaning process will vary based on the type and brand of grout. Refer to grout manufacturer's instructions for details.*

..... MOSAIC INSTALLATION .....  
GLASS



**Step 7** Apply Oceancare penetrating sealer as grout releases, per manufacturer's instructions.



**Step 8** Remove excess sealer with a clean white cloth. Allow cure time per manufacturer's instructions.

**Step 9** Apply grout with a rubber grout float, forcing grout into joints until full. Remove excess grout with edge of float.



**Step 10** Allow grout to set until firm and smooth finish with a damp sponge. After approximately 2 hours, remove grout haze with a lightly damp sponge.

**Step 11** For final removal of grout haze, polish with a clean, soft, white cloth. If tape residue remains on material, dampen a cloth with warm water and gently rub the material in small, circular motions. If residue remains, repeat process.

..... MOSAIC INSTALLATION .....  
STONE



**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  $\frac{3}{16}$ " x  $\frac{1}{4}$ " v-notch trowel to apply additional thin-set and comb full notches in one direction.



**Step 3** Apply mosaic sheets to the thin-set setting bed, tape side toward you, with light, even pressure. Periodically, check thin-set for skinning (slight drying). If skinning occurs, remove thin-set and reapply.



**Step 4** To achieve the flattest possible surface, lightly tap the sheets using light pressure with a grout float or a wooden beating block and a finish hammer. To unify sheet transitions, tap from one sheet to the next.



**Step 5** After 24 hours of cure time, peel the tape from the tile, starting from the corner. Use an angled, downward movement.



**Step 6** Apply Oceancare penetrating sealer as grout releases, per manufacturer's instructions.

*NOTE: Grout application and cleaning process will vary based on the type and brand of grout. Refer to grout manufacturer's instructions for details.*

..... MOSAIC INSTALLATION .....  
STONE



**Step 7** Remove excess with a clean white cloth. Allow cure time per manufacturer's instructions.



**Step 8** Apply grout with a rubber grout float, forcing grout into joints until full. Remove excess grout with edge of float.



**Step 9** Allow grout to set until firm and smooth finish with a damp sponge. After approximately 2 hours, remove grout haze with a lightly damp sponge.



**Step 10** For final removal of grout haze, polish with a clean, soft, white cloth. If tape residue remains on material, dampen a cloth with warm water and gently rub the material in small, circular motions. If residue remains, repeat process.

# ..... SHELL .....

## SHELL TYPES

Backed: shell that has been adhered to a porcelain base (3/8" total thickness)  
 Unbacked: shell mosaic mounted on mesh with no base (1/8" total thickness)

## APPLICATIONS

**Interior floors:** light traffic residential *only*

- Unbacked shell not recommended for installation directly over electric radiant heat systems

**Shower floors:** no

**Exterior floors:** no

**Interior walls:** all

**Exterior walls:** no

**Shower walls\*:**

- Backed shell: conventional showers *only*
- Unbacked shell: all, including steam

**Pools / fountains:** no

**Countertops:** bathroom *only*

# ..... MESH-BACKED PRODUCTS .....

Follow stone installation steps as shown on pages 5 & 6, skipping step 5.

## NOTES

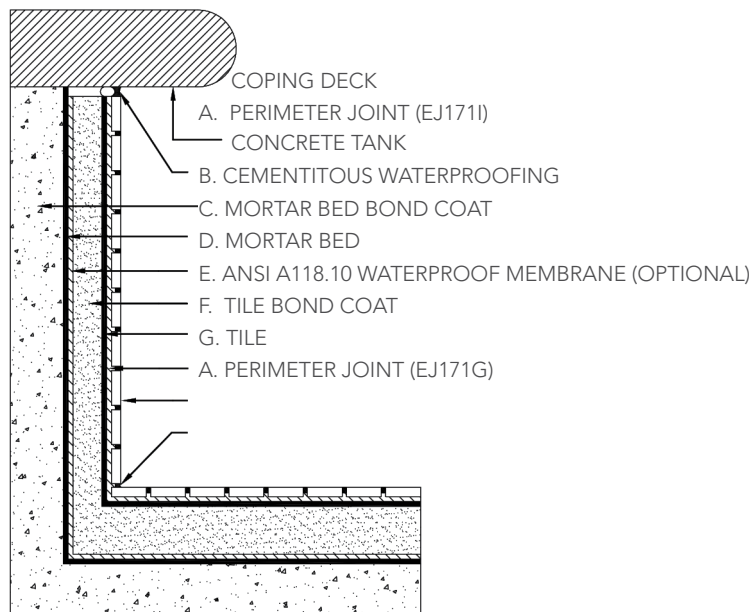
Remove paper backing prior to installation.

When using a wet saw, adhesive may soften. Allow any cut materials to dry completely prior to installation.

# ..... POOL & WATER FEATURE INSTALLATION .....

These instructions are provided as a general guideline for the installation of New Ravenna® mosaics in pools and water features; 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 these instructions before beginning any work.

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 information details the recommended pool and water feature substrate preparation method for New Ravenna's glass and stone.



## ..... 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 made watertight through the use of a cementitious waterproofing
- Materials:
  - A. Perimeter Joints - See "Movement Joints"
  - B. Cementitious Waterproofing - See "Waterproofing"
  - C. Mortar Bed Bond Coat - See "Acceptable Thin-Sets"
  - D. Mortar bed - Mix at a ratio of 1 part portland cement (ASTM C-150) to 4 parts damp sand (ASTM C-144) by volume.  
Walls ¾" nominal, Floors 1 ¼" nominal
  - E. ANSI A118.10 Waterproof Membrane (Optional) - See "Waterproofing"
  - F. Tile Bond Coat - See "Acceptable Thin-Sets"
  - G. New Ravenna glass or stone
- 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 during installation and curing from direct sunlight, excessive heat, wind, rain and freezing temperatures.*
- *Elastomeric waterproof membranes applied to the cement mortar bed may be beneficial in freeze-thaw climates.*
- *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.*



New Ravenna recommends OceanCare, an innovative line of sealing and maintenance products for tile and natural stone. Developed by Oceanside Glasstile using cutting-edge chemical technology, OceanCare products are highly effective, easy to use and environmentally friendly.

OceanCare products address the most common concerns associated with tile and natural stone maintenance and, when used in conjunction with one another, provide a complete maintenance solution without the damaging effects of bleach, acid, ammonia or abrasive cleaners. While OceanCare is specifically designed to work with Oceanside Glasstile and other glass tile products, it is also an excellent choice for most tile types, including porcelain, ceramic, and natural stone.

For product availability and pricing, please contact an OceanCare dealer or visit [www.oceancareproducts.com](http://www.oceancareproducts.com).

## ..... APPLICATION CHART .....

APPLICATION	High Performance Penetrating Sealer	ph Neutral Tile & Stone Cleaner	Glass Tile Shower Cleaner	All Natural Degreaser	Calcium Releaser
Wall - Interior					
Wall - Exterior					
Floor					
Shower Walls & Floor					
Tub Surround					
Shower Door					
Bathroom Countertop					
Kitchen Countertop					
Kitchen Backsplash					
Cooktop/Appliance					
Pool/Spa					
Fountain/Water Feature					