



## CERAMIC INSTALLATION GUIDELINES

Please read carefully before beginning installation

- **We recommend the hiring of a licensed professional tile installer who is experienced with the installation of ceramic tile.**
- **The owner or owner's representative is responsible for determining the acceptability of the product.**
- **Prior to installation OPEN AND INSPECT ALL BOXES to verify tile series, size/pattern, color and finish. Notify your tile seller immediately of any damage, defect or other issue. Variation in surface, color, shade, shape and size are inherent in artistic hand-crafted tile.**
- **Installation constitutes acceptance.**

## SUBSTRATE PREPARATION

- Concrete slabs (on grade) cured a minimum of 28 days, free of cracks, curing agents and any signs of laitance.
- Well cured mortar beds (ANSI A108.1B Standards-cured a minimum 7 days).
- Cement Board/backer units (CBU) to ANSI A118.9 Standards (Note: An ANSI A108A-2.1.8 membrane is required behind all CBU installations in wet areas).
- Gypsum board (dry areas only) installed to ASTM C1396 or ASTM C1396M-04 Standards.
- All substrates should be plumb and true prior to installation.

**Do not install ceramic tile directly over Particle Board or Plywood!**

The tile installation's substructure, location and substrate type (e.g. CBU or concrete) will influence the details of how the substrate should be prepared. Appropriate substrate preparation methods are detailed in the most up-to-date version of the Tile Council of North America's "TCNA Handbook for Ceramic, Glass, and Stone Tile Installation" and are organized by alphanumeric designation (e.g. W243-15). Refer to the TCNA Handbook for details. The TCNA Handbook is available for purchase at [www.tcnatile.com](http://www.tcnatile.com).

## ACCEPTABLE ADHESIVES

Use Mastic (dry areas only) or Modified Cementitious Setting Mortars to install ceramic tiles. Follow the adhesive manufacturer's recommendation for ceramic tile installations and usage requirements.

## PROCESS

Key or apply adhesive into substrate evenly with a square trowel. Work in sections of approximately 2 square feet at a time to keep setting material from skinning over. A 1/4" x 1/4" Square Notch trowel is recommended for installation. Check periodically during installation to verify proper coverage. Clean back of tile prior to installation.

Before grouting, allow adhesives to cure for the timeframe recommended by the manufacturer. Typically cure times will vary from 24-48 hours.

## MEMBRANES

There are a wide variety of anti-fracture and waterproofing membranes available for use in tile installations. Membranes will vary in type, installation method and performance. Depending on the application, installing Ceramic tile over an anti-fracture membrane may be beneficial. Consult the membrane manufacturer for specific recommendations and limitations.

### CUTTING GUIDELINES

- We recommend **WET** cutting and/or score and snap method **ONLY**
- Do **NOT** dry cut using power tools
- Improper cutting techniques could expose installer to harmful dust

#### California Residents Only-Prop 65

- **Warning:** This product can expose you to silica dust that is known to the State of California as harmful. Airborne particles of respirable size are created when product is dry cut or ground. Please strictly adhere to the cutting guidelines. For more information, please visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### CUTTING CERAMIC TILE

- Use **ONLY** a **WET** saw with a diamond blade designed for porcelain and ceramic material
- Do **NOT** dry cut using power tools
- To prevent rough edges, tile must be cut slowly with a liberal water flow
- To minimize chipping, tile must be fully supported during cutting
- Cut edges should be smoothed with a diamond hand pad or similar tool as needed

### DRILLING HOLES

- **WET** drill tile *before* installation. Drilling from both sides will minimize chipping and cracking
- Use a diamond core bit at low speed (250 to 300rpm)
- Constantly wet the tile and drill bit with water during drilling to prevent tile from cracking
- Openings should be 1/8" larger than fixture fittings to avoid stress transfer to the tile

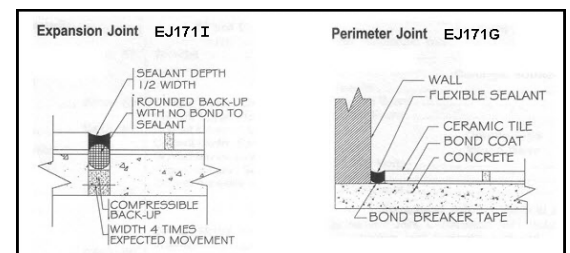
## MOVEMENT JOINTS EJ-171

Movement joints are essential for the success of most tile installations. Follow recommendations on Movement Joints EJ171-15 in the current version of the "TCNA Handbook for Ceramic, Glass, and Stone Tile Installation." Movement joint requirements will vary based 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.

### Movement/Expansion Joints: Refer to TCNA -EJ171

A soft joint is required between any change in direction or 90-degree angle and any dissimilar material within the tile installation (tile to tile, tile to metal, tile to wood).

Additional movement provisions may be required based on the conditions of the project.



## Special Instructions for Zel Collection Zellige

### Color Blending

Before beginning installation, we strongly recommend blending tiles from all boxes in your shipment. Lay out the tile in the installation area, and ensure color variation is distributed evenly, and that the client approves the layout. **Chips, pits and cracks and size variation are a natural part of the Zellige Collection.**  
**Failure to blend Zel tiles prior to installation may result in unsatisfactory results.**

### Grout Joints/Wall Applications

Traditionally, Zellige tile is installed without a grout joint, with tiles laid edge to edge. For our Zel tiles, we recommend the following:

- Zellige Classic 4"x4": No joint or 1/16" Joint
- Zellige Classic 2"x2" Mosaic: No joint between sheets
- Zellige Nouveau 4"x4" and Hexagon: 1/8" Joint or larger
- Bejmat: 1/8" Joint or larger

### Grout Joints/Floors

We recommend minimum of 1/8" joint for all Zel tiles used for floor applications.

### Grout Color Selection

Grout is an aesthetic choice that can affect the final appearance of your Zel installation. A grout color that is similar to the color of the tile will minimize the appearance of imperfections, chips and cracks in the tile. A contrasting grout color may accentuate chips, cracks and other imperfections. We recommend you finalize the grout color after the tile is installed and during the day when natural light is present. Further, we recommend you test your chosen grout color in a one square feet section of the installation before finalizing the grout color you use.

### Grouting

All Zel installations should be grouted, even if tile is installed without joints. There will be gaps and lippage which will need to be grouted to protect the tile.

- For tiles set with 1/16" joint or smaller, we recommend non-sanded grout or one of the recommended grouts below
- For tiles set with 1/8" joint or larger, standard sanded grout is recommended or one of the recommended grouts below

### Recommended grouts for joints 1/16" or larger

- Laticrete Permacolor Select
- Bostik Vivid Grout
- Mapei Flexcolor CQ

Apply grout following the material manufacturer's instructions and let dry 10-20 minutes. Using a slightly damp sponge, wipe diagonally across the tile to remove grout film and haze from the surface. Let dry, then wipe with a lint free cloth as a final step, buffing away all residual grout from the surface of the tile.

### Grout Haze

Do not allow grout to fully dry on the surface! Grout haze is a very thin layer of grout which results from allowing the grout to fully dry on the surface of the tile. During installation the grout must be completely wiped from the tile surface followed by buffing with a soft cloth to remove any residual grout film. Once the grout dries overnight there is little that can be done to remove grout haze, aside from washing the tile with a commercial acid grout haze removers.

### Sealing

All grout joints should be sealed with a high-quality penetrating sealer, after grout has cured. In wet areas, grout may need to be re-sealed occasionally to maintain protection. See sealer manufacturer's recommendations.

## RESOURCES & INDUSTRY GROUPS

**(NTCA)** National Tile Contractors Association

[www.tile-assn.com](http://www.tile-assn.com)

**(TCNA)** Tile Council of North America

[www.tcnatile.com](http://www.tcnatile.com)

**(TTMAC)** Terrazzo Tile and Marble Assoc. of Canada

[www.ttmac.com](http://www.ttmac.com)

**(CTIOA)** Ceramic Tile Institute of America, Glass Field Reports

[www.ctioa.org](http://www.ctioa.org)