

INSTALLING DAL TILE® PANORAMIC PORCELAIN SURFACES™



Dal Tile® Panoramic Porcelain Surfaces™ are large-format porcelain panel/slabs that offer the look of stone with the performance of tile. These porcelain panels are 6 or 12 mm thick and are available in sizes up to 10'5" x 5'3" (3.2 x 1.6 m). Panoramic Porcelain Surfaces meet the performance requirements of ANSI A137.3 and are ideal for ceiling, wall, floor and countertop – even exterior – applications.

Because of the size of the large panels, the installer is cautioned that special handling and installation is required. Specialized equipment is needed for moving the panels into place. There are also cutting tools that are specifically designed for these large panels. Contact the manufacturer to determine the proper handling and cutting equipment needed.

It is advisable to have only industry-certified or highly experienced installers attempt the installation of Panoramic Porcelain Surfaces. Trained installers will know how to use the specialized cutting equipment, racks, trowels and other tools that make the installation of these tile panels/slabs efficient and successful. Breakage can be expensive, so it is best to have a trained expert perform the installation.

Panels must be installed per ANSI A108.19 and the manufacturer's directions.

Surface Preparation

One key to a successful installation of Panoramic Porcelain Surface is the preparation of the surface. The surface must be flat and true. Current TCNA guidelines for surface tolerance of large format tile (one side greater than 15") apply to these panels/slabs and should be a focal point for installation. Custom Building Products agrees with the TCNA position and recommends maximum allowable variation of no more than 1/8" in 10' and 1/16" in 2', with no abrupt irregularities greater than 1/32".

Lippage is another concern, as the current ANSI A108.19 guidelines allow up to 1/32" lippage between adjacent tiles. This may require use of a mechanical lippage control system, ideally with a removable cap to allow for tooling/cleaning during installation. These mechanical clamps help to align the edges of the tile and in many cases reduce lippage to zero. For more

information about lippage control systems, contact CUSTOM Technical Services.

CUSTOM offers several products to assist in preparing the surface to an acceptable tolerance.

- **LevelQuik® RS Self-Leveling Underlayment** quickly levels floors to industry tolerances. It can be used to fill depressions, can be applied up to 1 1/2" thick and is ready to tile in 4 hours.
- **CustomFloat® Bedding Mortar** allows for thick bed wall applications. This mortar is easy to place and screed to a smooth flat surface.
- **Skim Coat & Patch Cement Underlayment** is a trowel-applied patching and smoothing compound that can be used to eliminate imperfections in walls and floors and bring the surface into the acceptable tolerance.

Once the surface is properly smoothed, it may be necessary to utilize a waterproofing and crack isolation membrane before the installation of the tile.

- **RedGard® Waterproofing and Crack Prevention Membrane** can be applied to a dry film thickness of 15 mils for general waterproofing.

In installations where the new Panoramic Porcelain Surfaces will be installed directly over existing older tile, a bond enhancing primer, such as CUSTOM **MBP Multi-Surface Bonding Primer**, will eliminate the need to abrade the existing tile. The primer is simply rolled on the clean and prepared existing tile. Once the primer is dry, it is ready for the thin-bed installation of the Panoramic Porcelain Surfaces.

Setting the Panels

When installing the Panoramic Porcelain Surfaces, it is important to follow ANSI A108.19 and TCNA recommendations for the installation of porcelain tile. To assure that the tiles do not crack from point load or impact, it is mandatory that the mortar coverage is greater than 80% for interior wall assemblies, 85% for interior floor assemblies and 95% for exterior installations or wet areas, with no voids greater than two² inches, ensuring that all corners and edges are fully (100%) supported with mortar. The embedded mortar bed thickness should not be less than 3/16" thick. You may want to consider a specialty trowel designed to maximize the coverage with less effort, such as CUSTOM **SuperiorBilt® Premium Notch Trowel**.



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Apply mortar to both the surface of the substrate and the back of the Panoramic Porcelain Surfaces at the same time. The trowel ridge lines should be applied to the back parallel to the short side of the panel. The ridges applied to the substrate should be parallel to those on the back of the panel, so they interlock when pressed into place. This will prevent trapping air between the ridges under the tile and creating a void. Be aware that the panel must be joined within the allowed open time of the mortar or it will be necessary to re-comb the surface with fresh mortar.

To achieve continuous contact between the substrate and panels, a padded, high-speed orbital sander with a soft bonnet can be pressed against the panel. On walls, apply pressure and work from the center outward to the tile edges. On floors, you can walk on the panel in a shuffling action from the center towards the perimeter of the panel to force air out from under the tile. Use the orbital sander to consolidate bonding mortar where tiles meet while mortar is wet in partnership with the mechanical lippage control system.

The Panoramic Porcelain Surfaces should be checked regularly to assure full mortar coverage, with particular attention to the edges and corners. Exercise caution when checking for coverage as removal can cause the panel to crack. The mortar installation instructions must be followed for cure time and allowable traffic.

CUSTOM recommends the following mortars:

- **MegaLite® Ultimate Crack Prevention Large Format Tile Mortar** offers ultimate bond strength with exceptional non-sag characteristics. MegaLite's long working time makes it the product of choice for applications in hot, dry or windy conditions.
- **ProLite® Premium Large Format Tile & Stone Mortar** is ideal for installation on walls. Its non-sag formula supports large tiles without mechanical fasteners.
- **Complete Contact™-LFT Rapid Setting Fortified Mortar** is formulated for floor applications of large format porcelain panels, assuring full coverage of the back of the tile with minimal effort. The rapid setting feature allows for fast installation and quick return to service — an important feature for remodeling installations.

- **EBM-Lite™ Epoxy Bonding Mortar** or **CEG-Lite™ 100% Solids Commercial Epoxy Grout** is highly recommended for ultimate strength.

Grouting the Panels

Grouting should proceed per ANSI A108.10 or A108.6. Follow Dal tile recommendations for grout joint width. Consider the use of Aqua Mix® Grout Release or a penetrating sealer to speed the installation of the grout and avoid potential grout "picture framing" if only spreading grout at the edges of very large tiles such as these panels. CUSTOM recommends these grouts:

- **Fusion Pro® Single Component Grout®** is ready to use and easy to spread and clean. Fusion Pro is guaranteed stain-proof and color perfect.
- **Prism® Color Consistent Grout** is a fast-setting, high-strength grout that reduces efflorescence and grout shading for joints greater than 1/16".
- **CEG-Lite™ 100% Solids Commercial Epoxy Grout** produces the strongest joint and is preferred for floor applications. Epoxy grout should be used where stain and chemical resistance is critical.

It is important to observe all building codes and TCNA requirements for tile installation. It is vital that all movement joints are no less than 1/8" wide, properly placed and filled with the appropriate soft jointing material. See TCNA EJ171 for proper placement and additional movement joint information. It is the responsibility of the design professional or engineer to determine the location of movement joints. When tiles are 10-feet long, proper soft joint placement may be at every grout joint. In these cases, you may want to consider grouting the entire installation with silicone sealant for a uniform appearance.

- **CUSTOM Commercial 100% Silicone Sealant** meets the requirements of EJ171 for use in movement joints between the panels.

Consult the Dal tile website for more information on the handling and installation of Panoramic Porcelain Surfaces. For additional information about any of the installation materials, contact CUSTOM's Technical Services Department at **800.282.8786**.

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