

CTU Online Anytime Module 2.4 – Setting Glass Tile and Moisture-Sensitive Stone

Key Takeaways

- Glass tile requires its own set of installation materials, methods and standards.
- Since glass tile is often transparent or translucent, a number of installation mistakes can be seen.
 - Trowel ridges
 - Uneven hydration
 - Voids in mortar coverage
- The manufacturing process creates inherent stress within glass tile.
 - This stress can lead to cracking due to thermal cycling or use of the improper mortar
- Glass tile is vitreous, making it smooth, non-porous and difficult to bond to mechanically.
 - Glass is classified as an impervious tile with close to 0% water absorption
 - Requires the use of a modified mortar with high bond strength
 - It is very important to select a mortar with minimal shrinkage. Using a cement-based mortar not designed for glass tile can result in tile cracking due to mortar shrinkage.
 - ANSI A137.2 is the standard for glass tile
 - Always consult the manufacturer be sure that glass tile is appropriate for the project
 - Large format glass is just 3" x 3"
- CUSTOM Glass Tile Mortar is specifically designed for clear or translucent glass (per ANSI A137.2).
 - High bond strength exceeds ANSI A118.15
 - Superior non-sag and non-slip performance
 - Low shrinkage
 - Bright white color to showcase glass designs
- Natural stone tiles that are moisture sensitive or have resin backing require special installation methods.
 - See ISO 14617
 - Class A ($\Delta < 0.3\text{mm}$): Dimensionally stable. Cement-based mortar is suitable.
 - Class B ($0.3\text{mm} > \Delta < 0.6\text{mm}$): Sensitive to moisture. Rapid setting cement-based mortar is recommended.
 - Class C ($\Delta > 0.6\text{mm}$): Very sensitive to moisture. Cannot use water-based adhesive or setting material. A 100% solids epoxy is recommended.
 - ANSI A118.3 is the standard for chemically resistant, water cleanable epoxies
 - 100% solids epoxy system can have two or more parts
 - Always clean before epoxy hardens

- CUSTOM EBM-Lite™ Premium Epoxy Bonding Mortar is specifically designed for such applications and will inhibit warping and staining of moisture sensitive stone.
 - 100% Solids
 - High strength and impact resistance
 - Chemically resistant
 - Contributes to LEED
 - Non-sag, non-slump
 - Exceeds ANSI A118.3