



Ceramic Tile, Glass Tile and Stone Training: Avoid Costly Problems with Continued Education

As is true for so many products, ceramic tile, glass tile and stone are only as good as how they are installed. For that reason it is important tile installers know and keep up with industry standards, and strictly follow product manufacturers' directions.

Not unlike doctors, attorneys, accountants and other professionals, tile installers must keep up with industry standards and other changes within the industry. This requires each professional to commit time each year for continued education training. Industry standards are created by a consensus group of tile

installers, manufacturers, architects and engineers, scientists and industry consultants. Standards are established to prevent reoccurring problems. If installers are not familiar with the standards they are not fully equipped to avoid these potential problems.

Look at the new thin large porcelain tile panels as large as 5' x 10' and as thin as 1/8". We have some of the same concerns with this new type of tile as with typical tile installations—such as thin-set coverage and proper substrate preparation—but to a much larger degree. Not only is it more critical to achieve 95% thin-set contact and a

flatter substrate with the thin large tile panels, but a new installation method is required and a new set of tools and equipment is needed. These thin large tile panels have to be packaged, transported and stored differently. You need 80" fork lift extensions to lift the crates. It takes special equipment and multiple people to move the tiles around. It takes special tools to cut the tile panels, and it takes a crew of workers to move and install them.

Although there currently are no standards specifically for these thin

Above: Installing tile from a scaffold.



An installer verifies that the stone is completely covered with thin-set before setting.

large tile panels, the ANSI committee is in the process of creating an ANSI A137.3 standard for this new class of tile. Also a committee has been formed to create new installation standards for this category. Tile installers need these resources, and they need to be able to easily access this information to teach them about these new products, installation methods and tools.

Here is a good example of standards changing to avoid reoccurring problems. Recently the ANSI A108 committee, with the help of MMSA (Materials & Methods Standard Association), changed the name and requirements for medium bed thin-set mortars. The problem was tile installers were installing tiles with excessively thick applications of the thin-set mortars. This resulted in a number of failed tile installations due to excessive thin-set shrinkage and the tile being subjected to too much moisture from the thicker application. The thicker the thin-set mortar the more shrinkage occurs and the more water that is present to absorb into the tile. These conditions can cause

indent fractures and warpage in some types of tile, particularly if the tiles is bonded to a resilient membrane.

Many specifiers and installers perceived medium bed thin-set mortars as a method of installing tile over improperly prepared substrates, thinking it could be applied as thick as 3/4" after embedment. This product was never meant to be used that way. ANSI A118 for thin-set dry-set mortars clearly states they are not intended to be used in truing or leveling underlying substrates. Medium bed mortars are only to be used to support large and heavy tiles, and to help compensate for tiles that vary in thickness from each other. The new standard change the medium bed thin-set mortar name to large and heavy thin-set mortar, and limits the thin-set thickness to a maximum of 1/2".

Hands-on training. So it is great we have all of these knowledgeable people volunteering their time, money and efforts on these industry committees. They are helping to improve our

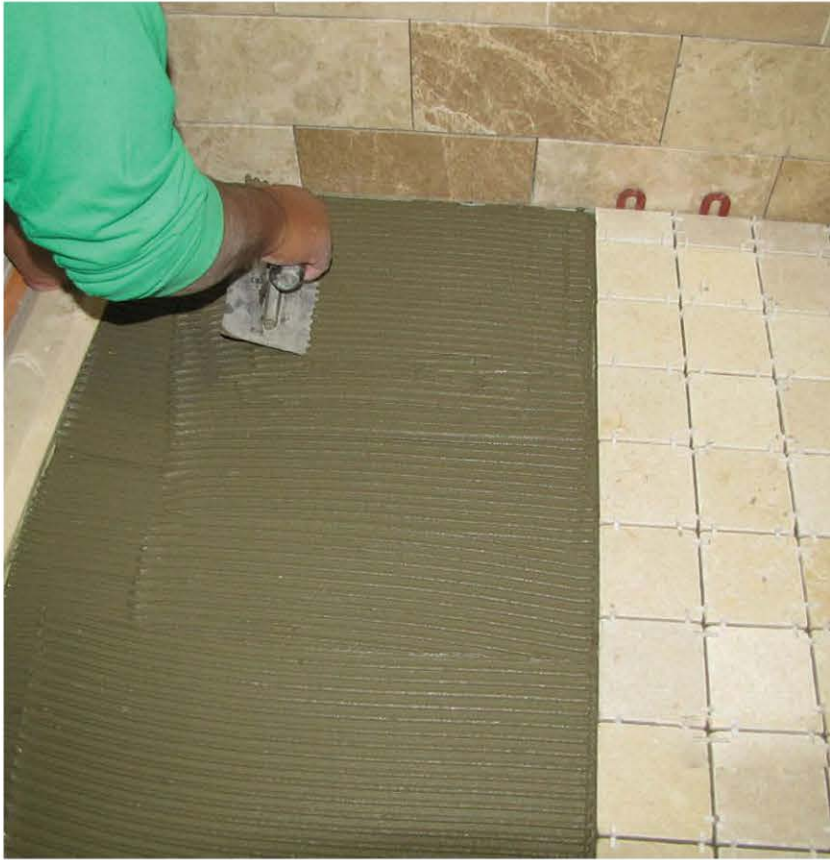
standards to prevent reoccurring problems. The challenge is how do we educate the tile installers and specifiers in a practical and timely manner?

Most tile installers have never had any formal tile installation education, and have only learned their skill and trade by OJT (on-the-job training). Most don't even know the standards of the industry. If they don't know what the standards are how can they avoid the potential problems?

There are relatively few resources available to provide continued education for most tile installers. The tile union does provide the most substantial training for their installers, but they are only a small percentage. NTCA (National Tile Contractors Association) does a good job putting on tile education seminars at tile distributor locations across the country. The TCNA (Tile Council of North America), NTCA, and other industry groups promote that consumers should use Certified Tile Installers (CTI)—those professionals whom have gone through the Ceramic Tile Education Foundation (CTEF) CTI program. The reality, though, is most tile installers don't have all of these skills.

So how do we avoid tile failures and make it easy for *all* people who sell and install tile to get convenient, affordable and timely education? The first step is to properly train tile and stone sales representatives who help the consumer select an appropriate tile for the intended application, and provide product and installer recommendations. The sales representatives should be consultants to their customers. They should explain the trade-offs between products so their clients avoid false expectations, and recommend installers whom have demonstrated they understand and are current with the industry standards.

Online training. I established the University of Ceramic Tile and Stone (UofCTS) online training campus in 2002 for the purpose to provide convenient, affordable and timely education to all members of the tile



Applying thin-set mortar during training.

industry. UofCTS utilizes a Learning Management System (LMS) technology and is the only online eLearning university in the tile and stone industry that provides interactive online training courses that is completely automated. UofCTS utilizes the latest learning methodologies to teach students in a way that maximizes learning and retention. The online courses are available 24/7, professionally narrated and interactive. Upon completion of each course the student receives a personalized certificate of completion and a student reference guide. The online courses only take on average from four to eight hours to complete; the student can go at their own pace, and come and go as they please.

UofCTS produces a four-hour course for tile installers—both setters and

helpers—called Tile Installer Thin-set Standards (ITS) Verification course. This course teaches the current industry standards, methods and practiced for adhered tile and stone applications. It is also a perfect way for consumers to verify their installers know the standards, so they can have some assurance that they will not be subjected to problems. The ITS Verification course is conveniently available 24/7 and costs \$150 per tuition list price. The course can be completed in one night or over two weeks at the student's own pace.

UofCTS also offers a seven-hour course called Understanding the Basics of Ceramic Tile and an eight hour course called Understanding the Basics of Natural Stone. These courses teach the student the key terms, standards and

concepts of stone, ceramic tile and glass tile. It gives the student the history and usage of tile and stone, including how it is manufactured, quarried, fabricated, installed and maintained. The courses provide consultative sales concepts on how to interact with clients, avoid false expectations, and give their clients upsell choices. These courses are good for both sales representatives and tile installers.

Training and continued education is key in maximizing employee performance and achieving quality products and services. The only way for the consumer to protect their investment is to verify the tile installers working on their projects are current with and understand the industry standards. For the employee of tile suppliers and installation companies, training their employees is cheap insurance for avoiding problems and a great investment to ensure more profitable sales and long lasting customers.

If we can educate the consumer and industry stakeholders to only hire and recommend CTI or ITS installers, then we can avoid the cost of negative advertising from failed tile installations. More successful tile installations will put a positive light on the use of tile and stone, and perpetuate and grow the use of tile and stone. That will protect and grow our livelihoods and help this generation leave a proud legacy for future generations to appreciate.

UofCTS courses are available through Ceramic Tile Distributors Association (www.CTDA.org), Local 18 - Tile Marble Terrazzo Union (www.tileunion.org), Fuse Alliance (www.fusealliance.com), World Floor Covering Association (www.wfca.org—qualifies for reimbursement), Terrazzo, Tile and Marble Association of Canada (www.tttmac.com), and at the University of Ceramic Tile and Stone (www.UofCTS.org). **FCI**

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