

Avoiding Pool Tile Problems

BY CAROLINA OLIVIERI

TILE CAN ADD so much beauty to a pool – but what do you do when pool tile or stone falls off, or an installation goes bad? Tile and stone installers need to closely follow product instructions and know the industry standards established by the Ceramic Tile Institute of America, the Marble Institute of America, the Tile Council of North America, and the American National Standards Institute (ANSI) committees. Tile installers need to understand which tile or stone is most suitable for a particular application. Tile or stone that is installed correctly will perform well and last the life of the pool. To avoid problems and ensure



a successful and lasting tile installation, one can have a qualified consultant evaluate the application and the tile selected, prepare detailed installation guidelines, and provide a quality-control plan and daily monitoring during the tile installation, says Donato Pompo of Ceramic Tile And Stone Consultants, Inc. (CTaSC), an APSP member company in Jamul, Calif. "Our seasoned tile installers end up training the tile installer on the job, showing them how to install correctly, and making sure they do so throughout the installation."

When tile failures occur, it's often because the wrong installation products were used, or the installer did not prepare the pool surface properly. These failures are often compounded by several factors, including the weather.

The installer or builder should always consider the climate conditions and the suitability of the material when selecting pool tile or stone. Glazed or glasslike porcelain ceramic tiles are very dense and durable and are the most common tile used in swimming pools. Natural stone is becoming more popular today, but it is not always suitable for pool applications, especially in colder climates. Water in the permeable stone can freeze, causing the stone to flake and deteriorate.

Most kinds of tile expand when subjected to heat and moisture and contract when conditions are cold and dry. Because tile moves, there must be "soft movement joints" (expansion joints) within the tile work. Debonding failures occur when there are no expansion joints, leaving the tile nowhere to go but up.



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The density of porcelain tile requires that only a good quality polymer or latex-modified thin-set mortar be used, meeting the ANSI A118.4 Standard. According to Pompo, "Tile industry standards require between 95 percent and 100 percent of thin-set contact between the tile and the substrate. Often, installers don't use enough thin-set and don't apply the tile properly. That results in substantially less thin-set contact and greatly diminishes the overall bond strength." In addition, it is critical for the installer to prepare the substrate properly, with a suitable, waterproof coating (browncoat).

What can the pool builder do to ensure that pool tile is installed correctly? Pompo recommends the following:

1. Make sure you are using suitable (and compatible) products and methods for the surface preparation and tile installation.
2. Have the tile supplier provide assurance in writing that it is suitable for the application; and
3. Only use installation products with both a labor and materials warranty. This guarantees that the products will perform as advertised, ensures product compatibility, and clarifies how the tile should be installed. It does not cover incorrect installations. It is the installer's responsibility to install tile correctly per the manufacturer's directions and industry standards. **AQ**

CTaSC does forensic investigations of tile failures, qualifies suitability of surfaces, tile products and applications, writes installation guidelines and quality control plans, provides testing and on-site quality control inspections, and provides tile and stone training services. The firm has worked on large Olympic-sized competition swimming pools, small and large residential swimming pools, spas, reflection pools, and swimming pools that have only waterline tile.

Carolina Olivieri has authored or contributed to articles in APSP publications, including AQ and APSP Industry Currents.