



Marble and Granite Tiles

TDS 120

Marbles and granites have become increasingly popular over the past several years. Much of this is due to newer technology and techniques that have lowered production and installation costs. While marble and granite were once considered materials available primarily to the wealthy, they are now increasingly affordable.

The variations in marble, travertine, dolomite, granite, syenite, gabbro, and other natural stones are what give each stone its individuality and character. A basic knowledge of these differences, along with the proper usage and limitations of each stone, will help customers select the material best suited to their needs and preferences. Let us discuss some basic facts that are common to most marble, granite, and other natural stone products.

Marbles and granites are quarried from the earth in large blocks. These blocks are then cut into slabs or tiles of various thicknesses. The slabs or tiles are then polished, honed, flamed, or otherwise finished depending on the desired texture and appearance of the surface. After finishing, they are sold as slabs or tiles, or further cut and fabricated into various sizes and shapes.

Marble and granite tiles are commonly cut into 12" x 12" (300 mm x 300 mm) squares and gauged to a uniform thickness. They are then processed through a machine that creates a slight bevel along the edge of each piece. This creates a "cushioned edge" that reduces the sharpness of the edge when running fingers over an installed surface.

Many stone products have a mesh reinforcement adhered to the back surface of the tile. The adhesive used to attach the mesh is not standardized; however, it is commonly an epoxy- or polyester-based adhesive to which portland cement mortars may not reliably bond. Reinforced stone tiles may require the use of an epoxy adhesive (e.g., LATAPOXY® 300 Adhesive).

Please note that granites and marbles are available from overseas suppliers in a wide range of prices. The old adage, "You get what you pay for," often applies here. Uniformity and consistency of sizing, proper gauging, and quality of material are three very important factors to consider. Lower-quality tile may require additional installation time to compensate for variations in thickness, size, or flatness. This can result in an unsatisfactory installation that is more costly than originally anticipated.

INSTALLATION TIPS

Marble and granite tiles are generally 12" x 12" (300 mm x 300 mm) in facial dimensions. It is now possible to use thinner tiles (approximately 3/8" [10 mm]) due to advances in installation materials and techniques.

1. Although "mud," a 2"-3" (50-75 mm) bed of cement mortar, has traditionally been considered an ideal base for tile and stone installations, thin-bed applications can also be used when properly designed. A rigid floor structure is critical for providing long-lasting stone installations. The floor structure must meet the minimum standard for deflection of $L/480$.
2. Resin-backed, mesh-backed, green marble, moisture-sensitive stone, and agglomerate tile require special installation materials. LATAPOXY 300 Adhesive is recommended for these applications where a cement-based mortar may not provide a reliable bond. For more information on the installation of resin-backed tile or stone, please refer to [TDS 150](#)
3. Always use white mortar when installing white or light-colored marble to help prevent discoloration or staining.

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LATICRETE International, Inc ■ One LATICRETE Park North, Bethany, CT 06524-3423 USA ■ Tel 1.203.393.0010 ■ Toll Free 1.800.243.4788 ■ Fax 1.203.393.1684 ■ laticrete.com