

INSTALLING TILE ON WALLS

Setting tile on vertical surfaces and ceilings brings extra challenges like deflection and gravity to the project. Here are some of the most commonly asked questions about how to successfully install tile on walls, indoors and out.

WHAT CAN BE INSTALLED AND WHERE

Question: What is the maximum tile size and weight that can be installed on walls?

Answer: For direct bond installation on commercial projects, International Building Code limits tile on exterior walls to less than 24" on one side, less than 3 square feet total area and less than 9 lbs. per square foot. There are no restrictions for interior walls, but some suggest that maximum weight should not exceed 15 lbs. per square foot. Larger and heavier tiles will require anchoring with mechanical fasteners. Be sure to consult your local building code or other authorities having jurisdiction for tile size and weight limits on your specific project.



Question: Is gypsum drywall a suitable substrate for tile installation?

Answer: International Building Code restricts the use of gypsum drywall, including water-resistant gypsum drywall, in wet areas such as showers and tub surrounds. In these applications, the gypsum drywall should be removed and replaced with a cement backerboard such as WonderBoard® Lite. Bare gypsum drywall is a suitable substrate in all dry, interior applications.

Question: Can tile be directly installed to wood surfaces or foam insulation?

Answer: No. Plywood and OSB are not suitable surfaces for installing tile on walls and foam does not have the tensile strength to support tile. WonderBoard Lite cement backerboard or lath and a cement scratch coat must be installed to the wood or foam surface before the installation of tile with an appropriate mortar.

Question: Can tile be installed on painted surfaces?

Answer: The bond of the tile to the surface will only be as good as the bond of the paint to that surface. In most cases, the paint should be removed. If the paint is well bonded, the painted surface can be well cleaned and roughened with sand paper. The prepared surface can then be primed with MBP Multi-Surface Bonding Primer and tiles installed with a suitable polymer-modified thin-set mortar.

Question: Is there a flatness guideline to follow when tiling walls?

Answer: To ensure a flat tiled surface, it is important to start with a flat substrate. The wall surface should be installed or corrected so that there are no deviations greater than 1/4" in 10 feet. For shower walls and tub surrounds, install WonderBoard Lite 1/4" backerboard. If tiling on existing walls, apply and smooth General Patch to bring the surface into flatness compliance prior to tiling. Be sure to remove any bond breakers like dust or residues before applying membranes or mortar to any surface.

Question: What is the requirement for movement joints when tile is installed on walls?

Answer: For exterior applications, the requirements are the same for walls and floors. Install flexible movement joints every 8-12 feet and at all changes of plane. The minimum movement joint width is the same as the grout joint and not less than 1/4". Larger joints provide better protection to large format tile, with any side longer than 15". For interior applications, the movement joints should be placed every 20-25 feet, unless the tile assembly exposed to direct sunlight and then they should be spaced every 8-12 feet. Always consult with the Project Architect on commercial projects.

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Question: What are the guidelines for setting tile on ceilings?

Answer: Only small (8" x 8" or less), lightweight tiles are appropriate for setting on ceilings. Use a premium quality, non-sag, polymer-modified mortar and proper technique for best coverage. Tiled steam shower ceilings require additional surface preparation with a waterproofing and vapor-proofing membrane and must have a one-way slope of 2 inches per foot as detailed in TCNA SR614.

INSTALLATION PRODUCTS TO USE

Question: What is the best way to waterproof a shower wall or tub surround?

Answer: Monolithic application of RedGard® Waterproofing and Crack Prevention Membrane will effectively waterproof wet areas like shower walls and tub surrounds. Apply two coats of RedGard to the wall (continuing to the shower floor and drain assembly if applicable). A gallon of RedGard will cover 55 square feet in two applications (apply ½ gallon uniformly to 55 sq. ft. and repeat with remaining ½ gallon when the first coat dries). Allow the first coat to fully dry before applying the second and make sure there are no pinholes or voids in the coating. RedGard also acts as a vapor barrier preventing moisture vapor from entering the wall cavity behind the tile where moisture can contribute to mold growth.

Question: What kind of mortar should be used to set tile on walls and ceilings?

Answer: When tiling vertical or suspended surfaces, it is important to use a mortar that has excellent non-sag qualities. These mortars are designated by ANSI with the letter "T" after the standards number. ProLite® Premium Large Format Tile Mortar exceeds the requirements of ANSI A118.15T and is formulated to support the weight of large and heavy tiles on walls. ProLite weighs 40% less than typical mortars and helps reduce overall load bearing created by tile installation.

Question: What about the needs of glass tile?

Answer: Glass Tile Premium Thin-set Mortar is highly polymer-modified to bond to the smooth surface of glass. Its flexibility is designed to accommodate the extra movement of glass tile, which is sensitive to thermal changes. The bright white color offers a clean, uniform appearance when installing clear or translucent glass tile.

Question: Are installation needs different on exterior versus interior applications?

Answer: Yes, exterior tile assemblies are subject to much wider temperature swings and in most cases more prolonged water exposure than interior tile installations. The proper mortar should be selected for these demanding exterior installations that experience freeze/thaw cycles and other thermal fluctuations. Use ProLite or MegaLite® Ultimate Crack Prevention Large Format Tile Mortar, which also exceeds the non-sag requirements of ANSI A118.15T. Tiles installed in exterior and/or wet applications must be backbuttered to achieve the required 95% mortar coverage to the back of the tile. Movement joints should be placed every 8-10 feet in the tile assembly with a flexible sealant like Commercial 100% Silicone Caulk. Liquid-applied RedGard can mitigate efflorescence due to moisture migration in exterior tile and grout, and help protect the building envelope from water intrusion through the tile assembly.

Question: Do walls require special grout?

Answer: Walls can be stained by accidental splashes and it is important to use a stain resistant grout like Fusion Pro® Single Component® Grout. Epoxy grout can be used, but should be protected from strong UV light, as the color will shift. In extremely wet environments, a cement grout, like Prism® Color Consistent Grout, is the best choice and can be sealed against staining with Aqua Mix® Sealer's Choice® Gold.

For additional information, visit CustomBuildingProducts.com or call
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