



Installation of Tile in Commercial Kitchens TDS 160

Tile installations in commercial kitchens require special consideration. These environments present factors that can contribute to the deterioration of ceramic tile installations, and LATICRETE manufactures specific products designed to help minimize many of the problems associated with these conditions.

Tile, grout, thin-set, and the substrate are often exposed to bacteria, food acids, harsh chemical cleaners, aggressive cleaning methods, and disinfectants. Surface temperatures can vary constantly, and the live load of personnel and equipment moving throughout the space places continuous stress on the installation. Recently, there has been an increasing trend toward the use of non-rinse, enzymatic degreasers, which may also have an adverse effect on many epoxy grouts used in commercial kitchens.

The best recommendation for tile installation materials is to use mortars and grouts with high compressive strength, high shear bond strength, load-bearing capacity, and resistance to harsh chemicals. The use of waterproofing and anti-fracture membranes is also recommended. HYDRO BAN®, HYDRO BAN 1, HYDRO BAN Quick Cure, or 9235 Waterproofing Membrane will help protect the substrate from saturation by water, bacteria, and cleaning solutions, while also helping to protect the tile installation by inhibiting cracks in the substrate from transferring through to the finished surface.

Installation methods may vary slightly depending on the substrate. Thick-bed mortar installations allow the tile contractor to install tile at the specified elevation and to create proper floor pitches, enabling water and cleaning solutions to flow efficiently toward drains.

Thick-Bed Installation over concrete:

1. For the thick-bed mortar, use 3701 Fortified Mortar or 226 Thick Bed Mortar mixed with 3701 Mortar Admix. For bonding the thick-bed mortar, use a slurry bond coat made from 254 PLATINUM™, 254 PLATINUM™ Plus, or MULTIMAX™ LITE (see [TDS 143](#) for more information).

See LATICRETE® Execution Statement [F134](#) – Concrete – Chemical Resistant Thick Bed – Industrial Grout.

For non-bonded thick-bed installations, the mortar bed must be a minimum of 2" (50 mm) thick and reinforced with 16-gauge, 2" x 2" (50 mm x 50 mm) welded, galvanized wire mesh to ensure proper strength and durability.

See LATICRETE® Execution Statement [F114](#) – Concrete – Unbonded Thick Bed with Epoxy Grout

2. For both waterproofing and anti-fracture protection, install HYDRO BAN, HYDRO BAN 1, HYDRO BAN Quick Cure or 9235 Waterproofing Membrane directly to the mortar bed. 3701 Fortified Mortar; or, 226 Thick Bed Mortar mixed with 3701 Mortar Admix must dry for a minimum of 72 hrs. @ 70°F (21°C) before installing the membrane.
3. Tile may be installed directly to the HYDRO BAN, HYDRO BAN 1, HYDRO BAN Quick Cure or 9235 Waterproofing Membrane with either 254 PLATINUM™, 254 PLATINUM Plus, MULTIMAX LITE or MULTIMAX™ 1 Pre-Mixed Adhesive Mortar. For areas where a more chemically resistant adhesive is necessary, use LATAPOXY® 300 Adhesive and allow to harden.
4. Grout using SPECTRALOCK® 2000 IG.

Thin-Set Installation (over pre sloped concrete or cured mortar bed):

1. For both waterproofing and anti-fracture protection, install HYDRO BAN®, HYDRO BAN 1, HYDRO BAN Quick Cure or 9235 Waterproofing Membrane directly to the concrete. Concrete must cure for a minimum of 14 days and have a maximum amount of moisture that does not exceed 5 lbs./1,000 ft²/24 hours (2.3kg/92.3m²/24 hours) as tested per ASTM F1869 or less than 75% RH as measured with moisture probes before installation. 3701 Fortified Mortar; or, 226 Thick Bed Mortar mixed with 3701 Mortar must cure for a minimum of 72 hrs. @ 70°F (21°C) before installing the membrane.
2. Tile may be installed directly to the HYDRO BAN, HYDRO BAN 1, HYDRO BAN Quick Cure or 9235 Waterproofing Membrane with 254 PLATINUM™, 254 PLATINUM Plus, MULTIMAX™ LITE or MULTIMAX 1 Pre-Mixed Adhesive Mortar. For areas where a more chemically resistant adhesive is necessary, use LATAPOXY® 300 Adhesive and allow to harden.
3. Grout using SPECTRALOCK® 2000 IG.

See LATICRETE Execution Statement [F133](#) - Concrete - Chemical Resistant Thin Bed.

Thick-Bed Installation (over Exterior Glue Plywood substrate)

An exterior glue plywood substrate must have a minimum of 2 layers of 5/8" (16mm) thickness each (1 1/4" [32mm] total thickness). Floor systems, including the framing system and sub-floor panels, over which tile will be installed shall be in conformance with the International Building Code (IBC) for commercial applications, or applicable building codes. For more information on wood floor construction requirements see [TDS 152](#) or for deflection requirements see [TDS 123](#).

1. Directly over the exterior glue plywood loose lay a cleavage membrane (4 mil polyethylene or 15 lb builders felt) and install the thick bed mortar comprised of 3701 Fortified Mortar; or, 226 Thick Bed Mortar mixed with 3701 Mortar Admix directly over the cleavage membrane. The thick bed mortar must be a minimum of 2" (50mm) thick and reinforced with 16 gauge, 2" x 2" (50mm x 50mm) welded, galvanized wire mesh to ensure proper strength and durability.
2. For both waterproofing and anti-fracture protection, install HYDRO BAN, HYDRO BAN 1, HYDRO BAN Quick Cure or 9235 Waterproofing Membrane directly to the mortar bed. 3701 Fortified Mortar; or, 226 Thick Bed Mortar mixed with 3701 Mortar Admix must dry for a minimum of 72 hrs. at a surface temperature of 70°F (21°C) before installing the membrane.
3. Tile may be installed directly to the HYDRO BAN, HYDRO BAN 1, HYDRO BAN Quick Cure or 9235 Waterproofing Membrane with MULTIMAX LITE or MULTIMAX 1 Pre-Mixed Adhesive Mortar. For areas where a more chemically resistant adhesive is necessary, use LATAPOXY 300 Adhesive and allow to harden.
4. Grout using SPECTRALOCK 2000 IG.

SPECTRALOCK 2000 IG is the perfect choice for use in a commercial kitchen installation due to its extreme chemical resistance and ability to handle high temperatures and aggressive cleaning regimens. SPECTRALOCK 2000 IG exceeds ANSI A118.3 and ANSI A118.5 specifications but may not be resistant to enzymatic/no rinse type degreasers and cleaners.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at <https://laticrete.com>
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