



Installation of Tile in Commercial Kitchens

TDS 160

Tile installations in commercial kitchens require special consideration. Factors exist in these environments that can contribute to the deterioration of ceramic tile installations, and LATICRETE manufactures specific types of products that can assist in minimizing many of the problems associated with these installations. The tile, grout, thin-set, and the substrate are often under attack from bacteria, food acids, harsh chemical cleaners, aggressive cleaning techniques, and disinfectants. Surface temperatures vary constantly and the live load of people and equipment traveling around the room puts constant pressure on the installation. Recently, there has been an increasing trend toward using non-rinse, enzymatic degreasers that may also have an adverse affect on many epoxy grouts used in commercial kitchens.

The best recommendation for tile installation materials is to use mortars and grouts that are high in compressive and shear bond strengths, load bearing and resistant to harsh chemicals. The use of waterproofing and anti-fracture membranes is also recommended. HYDRO BAN® or 9235 Waterproofing Membrane will protect the substrate from being saturated with water, bacteria and cleaning solutions and help to protect the tile by inhibiting cracks in the substrate from transferring through the tile installation.

The methods of installation vary slightly depending upon the substrate. Thick bed mortar installations allow the tile contractor to install the tile at the specified elevation and to create proper pitches in the floor which allow all water and cleaning solutions to travel to flow to drains.

Thick-Bed Installation over concrete:

1. For the thick bed mortar use 3701 Fortified Mortar Bed; 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 (see LATICRETE TDS 143 - Slurry Bond Coats – When and What To Use[†]).

See LATICRETE® Execution Statement F134* - Concrete - Chemical Resistant Thick Bed - Industrial Grout.

For non-bonded thick bed installation the thick bed mortar must be a minimum of 2" (50mm) thick, reinforced with 16 gauge, 2" x 2" (50 mm x 50mm) 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 or 9235 Waterproofing Membrane directly to the mortar bed. 3701 Fortified Mortar Bed; 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® or 9235 Waterproofing Membrane with 254 Platinum, or, 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® 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 Bed; or, 226 Thick Bed Mortar mixed with 3701 Mortar must cure for a minimum of 24 hrs. @ 70°F (21°C) before installing the membrane.

2. Tile may be installed directly to the HYDRO BAN® or 9235 Waterproofing Membrane with 254 Platinum, or, 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 ¼” [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 - Bonding Ceramic Tile, Stone or Brick Over Wood Floors† or for deflection requirements see TDS123 - Deflection†.

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 Bed; 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 or 9235 Waterproofing Membrane directly to the mortar bed. 3701 Fortified Mortar Bed; or, 226 Thick Bed Mortar mixed with 3701 Mortar 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 or 9235 Waterproofing Membrane with 254 Platinum, or, 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.

* LATICRETE Execution Statements are available at www.laticrete.com/ag

† LATICRETE Technical Data Sheets are available at www.laticrete.com

Technical Data Sheets are subject to change without notice. For latest revision, check our website at www.laticrete.com
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