


Primary Waterproofing Systems for Direct-Bond Tile Installation





Primary waterproofing is essential to the success of exterior installations on balconies or roof decks, especially if the installation is over occupied space. By installing a complete system – primary waterproofing, bond coat and tile-installation products – from a single-source supplier, you know that the system components will work together.

When you install a complete system from MAPEI, we can help with the project specifications, interact with the project's sustainability team to help your project contribute to green product-related credits available for green building standards, and recommend the correct products tailored for each project. Plus, MAPEI's complete primary waterproofing systems are available with the industry's Best-BackedSM 5-year and 10-year warranties.*



The Miami-Dade Notice of Acceptance (NOA) designates that the approved product meets Florida Building Code (FBC) High Velocity Hurricane Zone (HVHZ) requirements. Many coastal municipalities accept or require this NOA in their local building code. Always confirm the most current requirements per the local code.



The fully warranted direct-bonded tile application system includes:

- **Mapeflex® P1 FT / Mapeflex P2 NS:** Non-sag, elastomeric polyurethane sealants

- **Planiseal® CR1:** Single-component, 100%-solids, cold-fluid-applied, structural waterproofing membrane. It contains no tar or asphalt, and is resistant to rain after 2 hours. *Planiseal CR1* is moisture-curing, will not shrink and is VOC-compliant in virtually all municipalities. Very low in odor, it is well suited for use in and around occupied spaces. Thanks to advanced proprietary technology, this single-grade membrane can be used in horizontal as well as vertical applications, maximizing versatility. *Planiseal CR1* can be applied by roller, brush, trowel or squeegee.

- **MAPEI LMR Fabric:** Spunbond, nonwoven polyester reinforcing fabric for liquid-applied waterproofing membranes

- **Mapesand™ Coarse:** Calibrated, washed and oven-dried, 16/30 mesh silica sand. (Alternatively, use any 16/30 coarse dry-washed sand.)

- **ANSI A118.15 tile mortars from MAPEI:** *Granirapid® System, Kerabond/Keralastic™ System, Kerabond® T / Keralastic® System, Keraflex™ Super, Ultraflex® LFT™, Ultraflex LFT Rapid, MAPEI Ultralite® Mortar, MAPEI Ultralite S2*

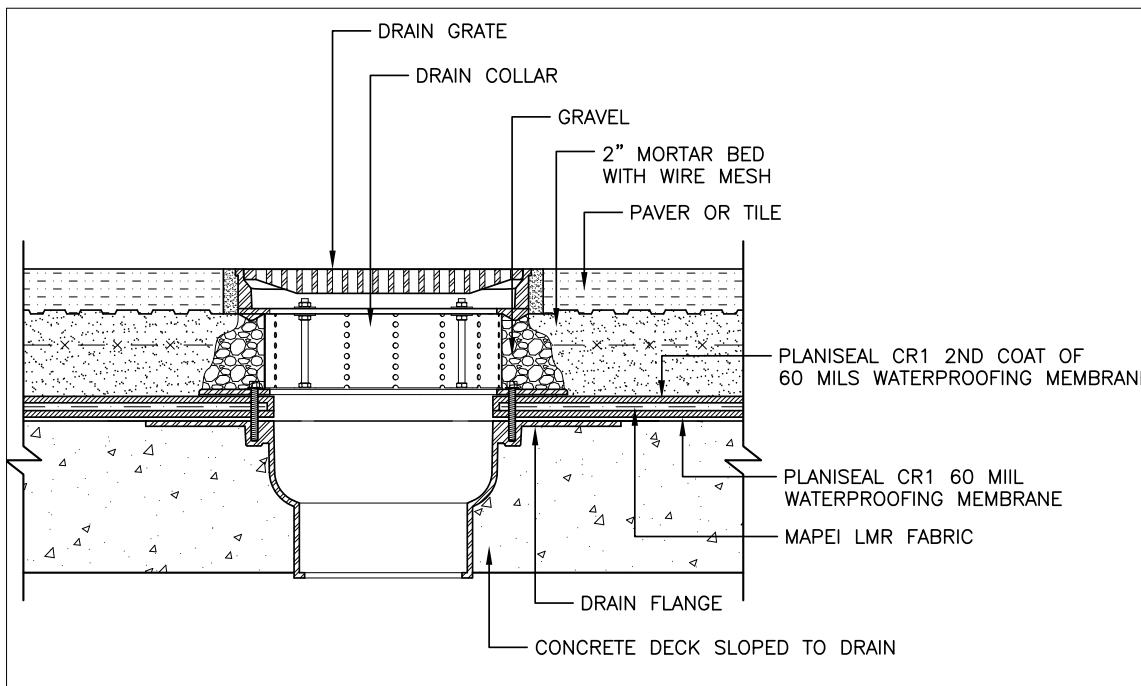
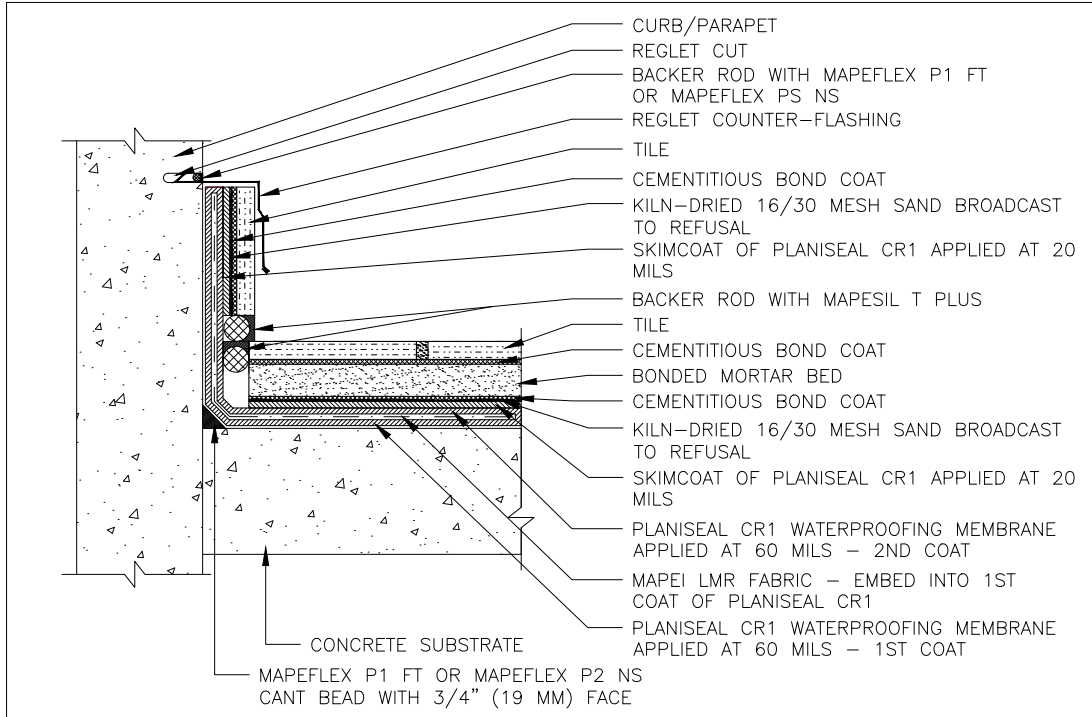
- **Ultracolor® Plus FA / Ultracolor Plus Max:** Rapid-setting, "all-in-one" grouts with DropEffect™ technology. *Ultracolor Plus FA* and *Ultracolor Plus Max* are ultra premium, fine-aggregate, polymer-modified, color-consistent, nonshrinking, efflorescence-free grouts for joint widths from 1/16" to 3/4" (1.5 to 19 mm).

- **Mapesil® T Plus:** Professional-grade, 100%-silicone sealant. Exceeding ASTM C920 and ASTM G21 standards, as well as TCNA EJ-171 and TCNA Res 1-7 / Com 1-7 environmental standards, *Mapesil T Plus* features enhanced adhesion for use on multiple substrates, including areas of heavy traffic and expansion/movement joints.



Installing MAPEI's primary waterproofing system

Whether you are installing a single-coat or a reinforced system, with MAPEI's primary waterproofing as the base for a system installation, you are off to a secure – and dry – start.



NOTE: These CADs are typical installations, but if drainage mats are required, please contact your local MAPEI representative.

Planiseal CR1 can be applied over concrete, wood, metal and plastic. Please refer to this product's Technical Data Sheet for a complete listing of suitable substrates, as well as surface-preparation and mortar-system requirements.



SURFACE PREPARATION

1. Before application, the substrate should be cleaned and properly prepared per industry standards. The substrate should not have any standing water.
2. Create a cant bead with *Mapeflex P1 FT* or *Mapeflex P2 NS* polyurethane sealant in all changes of plane.
3. Apply a reinforced system (see below) to all inside and outside corners per industry standards.
4. Chase and fill all cracks in concrete substrate per industry standards.
5. Standard TCNA-approved mortar bed installation is required when the system design features a drain.



SINGLE-COAT SYSTEM INSTALLATION

1. *Planiseal CR1* can be applied with a short-nap roller (3/8" or 10 mm), brush, trowel or squeegee.
2. Verify 60-mil thickness using a wet-mil gauge.
3. *Planiseal CR1* should also be applied 4" (10 cm) up the wall.



REINFORCED SYSTEM INSTALLATION

1. Immediately after applying the first 60-mil-thick coat, install *MAPEI LMR Fabric* into the wet material. This fabric can be embedded by lightly rolling with a dry roller.
2. The second 60-mil-thick coat of *Planiseal CR1* can be installed immediately, but must be installed no later than 24 hours after the first coat.

- Whether the system is single-coat or reinforced, allow it to cure for 24 hours. For installations where positive drainage is desired, apply a reinforced system over the drain assembly per industry standards.
- For warrantable applications, successful completion of a 24-hour flood test or Electric Field Vector Mapping (EFVM) is required for horizontal surfaces.

Once you have installed the primary waterproofing, it is time to install the tile.

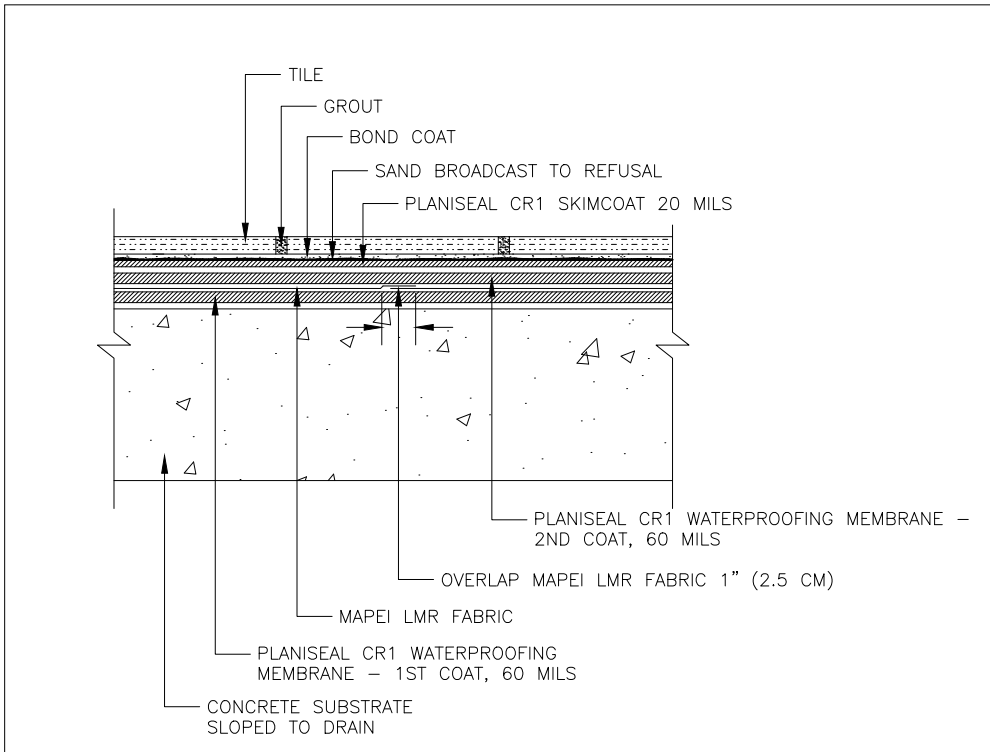
Tile installation over primary waterproofing

Preparing MAPEI's *Planiseal CR1* primary waterproofing system for tile installation is a straightforward process.



1. Apply a 20-mil skimcoat of *Planiseal CR1* over the entire primary waterproofing system where tile will be installed. Verify the thickness with a wet-mil gauge.
2. While the skimcoat is still wet, broadcast *Mapesand Coarse* – or any 16/30 coarse, dry-washed sand – to the point of refusal.
3. Allow to cure 24 hours and then remove all loose sand.
4. Install tile using a MAPEI mortar meeting ANSI A118.15 for a long-term warrantable installation. See mortar selections on the product spotlight page of this brochure.

Note: Direct-bond installation only applies to applications over a properly cured concrete substrate. Wood substrates require a reinforced mortar bed prior to tile installation. Contact MAPEI Technical Services for more details.



Planiseal CR1 can be installed in two types of systems:

- Reinforced systems are used for split slabs, plaza decks, courtyards and green roofs. These systems qualify for a 10-year Best-Backed warranty.*
- Single-coat systems are used for light-duty balconies and decks not subject to dynamic movement, as well as for general waterproofing of foundation walls and planters. These systems qualify for a 5-year Best-Backed warranty.*



WARRANTY INFORMATION

MAPEI backs our products with industry-leading Best-Backed warranties, which stand long after the general contractor has handed over the keys to the building. Visit our Website at www.mapei.com for details.

MAPEI'S PRIMARY WATERPROOFING SYSTEMS

- Single-coat systems (60 mils) qualify for a 5-year system warranty*
- Reinforced systems (120 mils) qualify for a 10-year system warranty*

Contact your MAPEI representative for warranty details.

ABOUT MAPEI

MAPEI is the industry-leading single-source supplier for primary waterproofing, producing the most superior and innovative products for the construction market. More than 6,000 products globally (such as adhesives, sealants, mortars and admixtures) are manufactured in MAPEI's plants, which produce the world's most complete range of building products. Diversified, high-quality chemical products – from powdered adhesives, to liquid and paste products, to polymers – are created to meet the needs of more than 66,000 customers around the world.

QUALITY CONTROL

MAPEI is an ISO 9001-2000 certified company. Its products are produced according to exacting standards, strictly adhering to process and procedural guidelines with documented compliance. This rigid production format is vigilantly followed to ensure that every product is produced uniformly from batch to batch.

KNOWLEDGEABLE SALES FORCE

MAPEI offers the largest, most highly trained sales force within the industry to serve your needs for product application/installation recommendations. Its sales representatives are focused on supporting you with product knowledge, product demonstrations, product information and marketing support materials.

TECHNICAL EXPERTISE

An in-house Technical Services Call Center responds to customers' telephone inquiries with answers to installation challenges in real time. In addition, MAPEI can offer field support for job startups, product training and on-site problem resolution.

CUSTOMER SERVICE PLUS

MAPEI's standards for customer service are best-in-class. Our industry leadership includes such service innovations as:

- Customer-friendly, efficient processes.
- One-call resolution.
- Employee commitment to effective customer dialogue.

INNOVATIVE RESEARCH AND DEVELOPMENT

We have always been highly committed to R&D. Our research scientists work within a global network of 32 centers, with our Corporate Research Centre in Milan acting as a central coordinating hub and as a central analysis laboratory. The United States has five centers, and Canada has one. All equipped with cutting-edge equipment, the centers collaborate continuously with universities as well as scientific and industrial research institutes. The R&D laboratories also provide support for our Technical Services division to help provide solutions for even the most complex requests from our clients. Working alongside these centers are our quality-control laboratories, which are present in all the MAPEI Group's production facilities.

For more information, contact your local MAPEI representative or visit www.mapei.com.

** Tile & Stone Installation Systems (TSIS) system warranties are only available for installation of Planiseal CR1 by a Recognized Applicator who is designated by MAPEI with a valid Recognized Applicator number.*





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