



TerraPrime MM

Application Instructions

System Description

This document outlines the standard application guidelines for installation of aiflooring's moisture mitigation system. The system is composed of the following products.

TerraPrime MM: a two component, 100% solids epoxy designed to conform to ASTM Standards relevant to moisture vapor permeance.

ASTM F3010: Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings

ASTM Standard E96: Standard Test Methods for Water Vapor Transmission of Materials

Application Details

1. Concrete Condition

1.1 General

Concrete must be structurally sound and free of oil, grease, and other contaminants. New concrete must be thoroughly cured to prevent shrinkage cracks. Typically, 14 days at 70°F is sufficient.

1.2 Cracks, Sawcuts, Expansion Joints

Cracks, sawcuts, and expansion joints must be identified and characterized prior to installation. Cracks must be evaluated to determine if they are stable or moving. The method of crack treatment is dependent on the type of crack. Sawcuts and expansion joints should not be covered when the surface will experience changing temperatures.

1.3 Moisture

Excess moisture emissions can cause coating delamination. All concrete surfaces should be tested for moisture prior to applying a seamless coating. Concrete with a water-vapor emission rate below 3 pounds/1,000 square feet/24 hours (calcium chloride test) does not require special treatment for moisture mitigation. For a water-vapor emission rate between 3-12 pounds/1,000 square feet/24 hours, TerraPrime MM can be used as a moisture mitigating primer. Consult the manufacturer for a water-vapor emission rate over 12 pounds/1,000 square feet/24 hours.

2. Environmental Conditions

2.1 General

Store materials in clean, dry conditions at temperatures between 65°F and 90°F. Surface, air, and material temperatures must be between 65°F and 90°F during application. The temperature must remain within this range for a minimum of 24 hours after application. The surface temperature also be at least 5° above the dew point.

2.2 Rising Temperatures

Concrete will release air during periods of rising temperatures. This can result in bubbles in the coating even in apparently well sealed concrete. To prevent bubbling, always apply coatings when the application and cure temperatures will be constant or decreasing.

3. Surface Preparation

3.1 Cleaning

Oil, grease, and other contaminants will inhibit bonding. Remove by first scraping any thick, caked deposits, then by scrubbing with an appropriate cleaner. Always finish with a warm water rinse. Test the treated area with a 1:2 mix of muriatic acid and water. (Always add acid to water.) A white haze of bubbles indicates a clean concrete surface.

3.2 Surface Profile

Moisture mitigation systems require proper surface preparation in order to adhere to ASTM Specifications, ensure maximum performance, and prevent delamination of the coating system. Surface preparation to a CSP #3 (Concrete Surface Profile per ICRI guidelines) shall be performed by mechanical means only. **Acceptable methods include shot blasting, scarifying, or grinding. Grinding is only acceptable in areas where the shot blast or scarification equipment cannot reach.**

3.3 Surface Repairs

Voids, Popouts: Remove all loose concrete from the damaged area. Fill with TerraRich or Patch Filler.

Stable Cracks: Minor shrinkage cracks can be bridged without special treatment. For wider cracks, route the crack in a “V” cut to a width of ½” and a depth of at least ¼”. Clean the area and fill with an epoxy grout.

Moving Cracks: Cracks less than 1/8” : Apply 8-10 mils of TerraFlex 16-24 inches wide centered on the crack.

For larger cracks, saw cut the crack to a width of ½” and a depth of at least 1”. Clean the area and insert closed cell backer rod leaving an opening ½” deep. Fill the crack with TerraFlex and apply 8-10 mils of TerraFlex 16-24 inches wide centered on the crack.

Expansion Joints: Remove all material from the joint and insert closed cell backer rod. Leave the backer rod protruding from the joint during application to prevent the joint from being filled. Install the flooring up to the backer rod. After installation, depress the backer rod to a depth of ½”. Lightly sand the edges of the flooring system adjacent to the joint. Depress the backer rod, clean the joint, and install an appropriate sealant.

Drains: If a drain is surrounded by a joint, treat as outlined above. Seal all drain openings prior to application.

4. Mixing

4.1 Two Component Products

Premix Part A (resin) for 30 seconds with a drill and Jiffler or Hansen mixer. Slowly add Part B (catalyst) and continue mixing for 2 minutes. Mix at medium speed with the mixer immersed in the material to minimize air entrainment. Do not thin products.

5. Application

5.1 Two Coat Process (recommended)

First Coat

Mix the coating as described in 4.1. Immediately pour the material onto the floor and spread with a squeegee. Pull the material with the squeegee pressed firmly to the concrete surface to seal the concrete completely. Typical application rates are 150-200 square feet/gallon. Backroll with good quality 3/8” nap non-shedding roller.

Second Coat

Mix the coating as described in 4.1. Immediately pour the material onto the floor and spread with a squeegee (flat or notched). Spread the coating at a rate of approximately 200 square feet/gallon. Backroll with good quality 3/8" nap non-shedding roller.

System Thickness

The smooth finish system typically yields 16-20 mils.

5.2 Single Coat Process

Single Coat

Mix the coating as described in 4.1. Immediately pour the material onto the floor and spread with a squeegee or notched squeegee. Spread the material at a rate of 100 square feet/gallon and backroll with good quality 3/8" nap non-shedding roller.

6. Cleanup

6.1 Two Component Products

Clean all equipment immediately after use with isopropanol (rubbing alcohol) or xylene. Read the SDS and follow all safety procedures for any cleaning material.

7. Cure Time

7.1 Recoat

TerraPrime MM can be recoated as soon as it can accept foot traffic. Typical time at 70°F is 8-10 hours

TerraPrime MM must be recoated within 24 hours. After 24 hours, sanding is required before recoating.

8. Safety

8.1 Storage and Handling

Store products in a cool, dry area away from flames and sparks. Separate resins from hardeners. Safety Data Sheets are available and should be read before handling any material. Avoid contact with all materials to prevent irritation. Wear rubber gloves, protective clothing, and safety glasses. Use only with adequate ventilation.

8.2 Composition

TerraPrime MM contains epoxy and amine resins.

9. Floor Maintenance

9.1 Cleaning

Do not wash the floor within 5 days of installation. Exposure to water before the floor is completely cured may dull the finish. Avoid harsh chemical cleaning for ten days. To maintain the appearance and maximize the service life of the coating, clean regularly with a mild detergent and a floor scrubber with non-abrasive pads or brushes.

10. Technical Assistance

10.1 American Industrial

1218 W. 41st Street
Suite B
Tulsa, OK 74107

918-445-0627
800-535-5053 (24 hour safety and medical help)
www.aiflooring.com