Floor Seal Technology, Inc. Distributed by ZeroDocs.com

Utilize this section to specify water vapor emission control on freshly poured below-grade, slab-on-grade and slab on deck concrete floors.

High moisture vapor content in floors can result in loss of adhesion of the finish flooring materials and damage to the finish materials themselves.

Work of this section is included in the contract and floors are guaranteed to be compliant with flooring manufacturers’ moisture tolerance requirements at no cost to Owner.

Moisture vapor testing should always be performed before flooring installations.

For assistance in selecting decorative concrete material samples, contact Floor Seal Technology, Inc. calling 800-572-2344 or visit [www.floorseal.com](http://www.floorseal.com)

Michael Nicodemus

Architectural Representative

(916) 532-5115

[Michael.nicodemus@floorseal.com](mailto:Michael.nicodemus@floorseal.com)

**SECTION 03 57 00 – WATER VAPOR EMISSION CONTROL**

1. **GENERAL**
   1. SUBMITTALS
      1. Action Submittals:
         1. Product Data: Manufacturer’s descriptive data and product attributes for emission control system.
         2. Warranty: Manufacturers warranty certificate as specified.
      2. Informational Submittals:
         1. Test Results: Third party water vapor transmission rate for installed products.

C. Close-Out Submittals:

1. Executed copy of manufacturers’ warranty.

2. Installers workmanship warranty.

* 1. QUALITY ASSURANCE
     1. Quality Standards Requirements:
        1. Comply with ACI 301, “Guide to Cast-in-Place Architectural Concrete Practice”.
        2. Comply with ACI 302.1-R “Guide to Concrete Floor Slab Construction”.
        3. Comply with ACI 117, “Guide for tolerance Compatibility in Concrete Construction”.
        4. Comply with CRSI publication, “Manual of Standard Practice”.
     2. Manufacturer Qualifications:
        1. On-site supervision during placement and finishing of concrete with floor flatness monitoring.
        2. Acceptance of mix design, and products for a warranted system.
        3. Five projects of similar sizes and complexity completed within the last 5 years.
     3. Installer Qualifications:
        1. Firm specializing in work of this Section with minimum [10] [\_\_] years’ experience.
        2. 5 documented projects of similar size and complexity.
        3. Factory employed personnel.
     4. Substrate meets finished floor manufacturers recommended adhesion/bond testing.
     5. Provide third party verification of ASTM C156 water retention properties.
     6. Maintain a floor flatness of FF35 (minimum of FF22) and FL 20 (minimum of FL18) within 72 hours of placement when tested to ASTM E1155, following ACI 117 using 3D laser imaging to meet requirements.
     7. Concrete moisture compliance requirements for flooring:
        1. Water vapor emission: Less than 3 lbs. when tested to ASTM F1869.
        2. Relative humidity: Meet flooring manufacturer requirements when tested to ASTM

F2170.

* + - 1. Water absorption: Compliant with ASTM F3191 requirements.

1.4 WARRANTY

1. Manufacturer’s 15-year warranty for material performance and workmanship. Includes repair and replacement of finished flooring system damaged by substrate moisture at no cost to Owner.
2. Manufacturer to oversee concrete placement and warrant a floor flatness of FF35 (minimum of FF22) and FL 20 (minimum of FL18) within 72 hours of placement when tested to ASTM E1155.
3. Manufacturer to guarantee the installation.
4. **PRODUCTS**
   1. MANUFACTURERS
      1. Contract documents are based on Floor Seal Technology, Inc. [www.floorseal.com](http://www.floorseal.com)
         1. [\_\_\_\_\_\_\_\_\_\_]
      2. Substitutions: [Refer to Division 01.] [Not permitted.]
   2. MATERIALS
      1. Preventative Vapor-Control Curing:
         1. Product: Vapor-Seal 309.
         2. Type: Single-component, resin-based, liquid membrane forming compound for water vapor emission control and curing.
         3. Water retention: 0.36 kg/sq meter in 72 hours when tested to ASTM C156.
         4. Alkali Resistance: Tolerant to 5 percent alkali solution, when tested to ASTM C1308.
         5. Low-Emission: Compliant with CDPH 01350 testing.

* + 1. Remedial Water Vapor Emission Control:
       1. Product: MES-100.
       2. Type: Two-component, moisture-alkaline tolerant epoxy meeting ASTM F3010.
       3. Perm rating: 0.10 when tested to ASTM E96.
       4. Alkali-pH resistance: up to 14pH.
       5. Vapor Emission: up to 25 lbs. when tested to ASTM F1869.
       6. Adhesion: 600psi or 100-percent concrete cohesive failure when tested to ASTM D7234.

2.3 ACCESSORIES

A. Primer: Manufacturer recommended non-porous primer for securing underlayment.

B. Underlayment:

1. Description: Moisture tolerant, Portland cement based.

2. Compressive strength: Minimum 5,000 PSI when tested to ASTM C109.

1. **EXECUTION**
   1. APPLICATION
      1. Apply preventative vapor control curing to concrete surfaces at the direction of manufacturers onsite personnel.

* + 1. Test substrates at manufacturers recommended rates prior to installing finish flooring materials in accordance with the following:
       1. Alkalinity:
          1. Test method: Measure pH according to ASTM F710.
          2. Acceptable results: pH between 8 and 10.
       2. Moisture vapor transmission:
          1. Test method: Perform anhydrous calcium chloride test to ASTM F1869.
          2. Acceptable results: Maximum 5 pounds per 1000 square feet in 24 hours.
       3. Relative humidity:
          1. Test method: Perform relative humidity test using in situ probes to ASTM F2170.
          2. Acceptable results: Maximum 75 percent.
    2. Install remedial water vapor emission control in areas exceeding floor manufacturers tolerances at no cost to Owner.
  1. PREPARATION
     1. Mechanically profile surface to ICRI No. 3 profile.
     2. Clean surfaces of debris and contaminates.
  2. INSTALLATION
     1. Apply remedial water vapor emission control in accordance with manufacturer’s instructions.
     2. Prime surface to receive underlayment.
     3. Install underlayment to nominal 1/8-thickness from wall to wall; feather edge to match adjacent elevations for flooring compatibility.
  3. FIELD QUALITY CONTROL
     1. Perform required inspection and materials required to obtain water vapor emission control and flooring manufacturers’ warranty.

END OF SECTION