



## SECTION 07260

### CONCRETE MOISTURE & ALKALINITY BARRIER

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. Seamless barrier applied to concrete slab surfaces to reduce moisture and alkalinity migration that causes flooring covering or coating adhesion failure.

##### 1.02 REFERENCE

- A. American Society for Testing Materials [www.astm.com](http://www.astm.com)
  - 1. ASTM E 96 Water Vapor Transmission Testing
  - 2. ASTM D 1308 Acid & Alkali Testing
  - 3. ASTM D 4541 Concrete Adhesion Testing
  - 4. ASTM F 1869 Calcium Chloride Testing

##### 1.03 SUBMITTALS

- A. Product Data: Standard literature and installation details.
- B. Samples: Coated mortar or concrete brick sample.
- C. Independent Laboratory Reports: Third party testing for ASTM E96, D4541, D1308. Reports must not exceed 3 years in age.
- D. Safety: Site precautions, ventilation requirements and storage information.
- E. Extended Warranty: Manufacturers warranty, as specified.
- F. Field Quality Control Documents: Post installation testing per ASTM F1869, ASTM D 4541 if required.

##### 1.04 WARRANTY

- A. Extended Warranty Period: Barrier warranty for 10 years covering performance, concrete adhesion, moisture or alkalinity damage to barrier and installed floor coverings. In the event of barrier failure, manufacture shall cover material cost to replace moisture or alkalinity damaged flooring or coatings, reapply barrier, adhesives, patching compounds and installation accessories.
  - 1. Warranty shall list performance of moisture and pH control to be within acceptable limits.
  - 2. Warranties limited to manufacturing defects are not acceptable.
- B. Warranty shall not exclude ACI documents, dew point, concrete salts, ad mixtures, resin treatments. Installations on slab surfaces deems acceptance of on site conditions. Barrier manufacturer is responsible for complete review of concrete mix designs, admixtures, sub slab vapor barrier installed and curing methods for written acceptance prior to installations.
- C. Installer: Applicator shall provide Owner a 10 year warranty covering installation workmanship.

#### PART 2 PRODUCTS

##### 2.01 MATERIAL

- A. Provide of the following manufactures, subject to specified requirements:
  - 1. Advanced Moisture Control, Inc. [www.VaporSafe.com](http://www.VaporSafe.com) "Vapor-Guard LA"
  - 2. Substitutions: Not Permitted (No Know Equal).

## 2.02 PHYSICAL PROPERTIES

- A. Formulation:
1. Chemistry: Synthetic polymer.
    - a. Shall not contain epoxy, latex, acrylic or silicates.
  2. Concrete Adhesion: Chemical and mechanical bond.
  3. Durability: Excellent chemical, thermal expansiveness and ultraviolet (UV) resistance.
  4. Moisture Vapor Reduction: From 20 pounds to less than 3 pounds, per ASTM F1869-04.
  5. Alkalinity Control: 14 pH., no upper performance limitations.
- B. Environmental:
1. Growth Resistance: Non-organic and shall not support the growth of mold, mildew or microorganisms.
  2. Safety: Non-corrosive, non-toxic, non-combustible, non-flammable and non-hazardous to installers.
  3. Water Pollution: Not classified as a marine pollutant.
  4. Clean up: Water soluble, water clean up. No solvents needed.
- C. Fire Resistance:
1. Smoke Development: None (0)
  2. Flame Spread: Nil (5)
  3. Fuel Contribution: None (0)
- D. Barrier Performance:
1. ASTM E96 Water Vapor Transmission: 80 to 95% vapor reduction
  2. ASTM D1308 Alkali & Acid Resistance: No effect, resistant
  3. ASTM D4541 Adhesion Strength: Concrete cohesive failure
  4. ASTM F 1869 Post Testing Results: 1.5 ( $\pm 0.50$ ) pounds
  5. Tensile Strength: 6,000 to 8,000psi
  6. Compressive Yield: 12,000psi
  7. Ultimate Flexural: 10,000psi

## PART 3 EXECUTION

### 3.01 PREPARATION

- A. General: Coordinate work with work specified under other sections to ensure proper and adequate interface of work. Protect all adjacent surfaces from drips, spray, air pollution of surrounding environment, and other damage from work.
- B. Concrete Substrates: Shot blast surface to allow maximum penetration and adhesion. Grind near walls and edges.

### 3.02 APPLICATION

- A. Barrier Application: Roller and squeegee methods to saturate concrete porosity.
1. Moisture Vapor: Reduce moisture vapor levels to compliant levels.
  2. Alkalinity: Stabilize pH levels of 14pH.
- B. Joint & Crack Treatment: Coat in cracks and joints. Apply approved crack and joint compound according to instruction.
- C. Cement Topcoat: Install as required by barrier manufacturer.

### 3.03 FIELD QUALITY CONTROL

- A. Conduct post installation testing in the presence of manufactures representative, installer and Owners laboratory.
1. Verify moisture reduction per ASTM F 1869 testing to a level of 1.5 ( $\pm 0.50$ ) pounds or less. Reapply barrier to reduce moisture levels at no cost to Owner.
  2. Perform ASTM F 4541 portable pull off adhesion tests at 5 locations to verify adhesion up to cohesive failure of the substrate. Repair areas not meeting adhesion, at no cost to Owner.

END OF SECTION