

SECTION 09699
EPOXY COATINGS
VAPORSOLVE® FRESH CONCRETE SYSTEM

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Submittals.
 - 2. Quality Assurance.
 - 3. Warranty.

1.02 RELATED SECTIONS

- A. Section 03300 – Cast-In-Place Concrete:
 - 1. Concrete shall meet the requirements for “Durable Concrete” according to ACI Committee 201.
- B. Section 09620 – Specialty Flooring, installation requirements.
- C. Section 09640 – Wood Flooring, installation requirements.
- D. Section 09650 – Resilient Flooring, installation requirements.
- E. Section 09660 – Static Control Flooring, installation requirements.
- F. Section 09690 – Fluid Applied Flooring, installation requirements.
- G. Section 09680 – Carpet, installation requirements.

1.03 SUBMITTALS

- A. Submit manufacturer’s product data including ASTM test reports on product performance.
- B. Submit manufacturer’s application instructions.
- C. Submit manufacturer’s warranty information.

1.04 QUALITY ASSURANCE

- A. All materials used in concrete moisture control system shall be supplied by Arizona Polymer Flooring, Glendale, AZ. No multiple sourcing or substitutions will be allowed.
- B. If 10 year gold warranty is selected by the owner, the application contractor must be certified by the manufacturer or be under the supervision of a factory technical service person for the application of VaporSolve® FC.

1.05 DELIVERY, STORAGE AND HANDLING

- A. All material shall be delivered to the job site in unopened containers clearly labeled and stored in a dry location at a minimum of 65 degrees F.

1.06 WARRANTY

- A. The owner may choose the standard warranty. If the standard warranty is selected, the product manufacturer guarantees that the products are free from manufacturing defects and comply with its published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer’s remedies shall be limited to the repayment of the product purchase price. All consequential damages, including but not limited to installation labor, damage to the structure or contents of the structure are excluded.

The contractor guarantees that surface preparation and application meet industry standards. The length of the warranty shall be determined by the local or state governing contractor’s board.

- B. If the gold warranty is selected, the warranty shall be made jointly to the owner by the product manufacturer and the application contractor.

Arizona Polymer Flooring guarantees that its products are free from manufacturing defects and comply with its published specifications. In addition, we further guarantee that the moisture remediation system will protect subsequently applied flooring from **damage due to moisture or alkalinity regardless of the level of moisture in the concrete**. This warranty shall be limited to repair of the affected areas only as determined by Arizona Polymer Flooring. Repair shall include removal of existing flooring, reapplication of remediation system and new flooring. New flooring shall be of the same type and value as the old flooring. Labor charges shall be reasonable and average for the industry. Removal and replacement of owner's equipment is not covered. Consequential damages to the building structure or its contents are excluded. Damages due to temporary loss of building use are excluded. The length of the Gold warranty is 10 years from the date of installation.

The application contractor guarantees that he shall comply with the product manufacturer's application specification governing surface preparation, product mixing and application thickness. All invoices must be paid in full for warranty to take effect.

Arizona Polymer Flooring and the installation contractor shall be released from warranty obligations under any of the following conditions:

1. Laboratory analysis reveals interior concrete contamination from previously applied reactive silicate materials or organic hydrocarbon materials that interfere with the bonding of VaporSolve™ Basic System.
2. Weakening of the concrete over time caused by conditions beyond the control of the product manufacturer or the installation contractor. If the concrete deteriorates sufficiently, it will no longer support the bond of the remediation system. Such conditions are detailed in "Guide to Durable Concrete" ACI Committee 201 published by the American Concrete Institute and would include any of the following:
 - A. Attack from sulfates of sodium, potassium, calcium, magnesium, or Ettringite, sometimes found in soil or dissolved in ground water.
 - B. Deterioration caused by the physical action of salts from ground water containing sodium sulfate, sodium carbonate and sodium chloride.
 - C. Cracks that develop in the concrete or joints after the application of the remediation system. This includes cracks and damage to the concrete caused by Alkali Silica Reaction (ASR).
 - D. Failure of the concrete due to expansive contaminants in the concrete mix.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Resin system, crack and control joint filler shall be supplied by Arizona Polymer Flooring, Phoenix, Arizona.
- B. If a self-leveling cementitious underlayment is required over the moisture control system, APF tie coat and APF E-Z Level shall be used.

2.02 MATERIALS

- A. Fresh concrete primer, joint and crack filler, 100% solids top coat shall comprise VaporSolve® System.

2.03 SYSTEM DESCRIPTION

- A. One coat of VaporSolve® FC applied to freshly poured concrete at 250 sq. ft. per gallon.
- B. Seal protrusions and penetrations through the fresh concrete with VaporSolve™ Joint Filler.
- C. Apply VaporSolve® 100 at the rate of 200 sq. ft. per gallon. Total system thickness shall be not less than 11 mils.
- D. The system shall have the following properties:
 - 1. Adhesion to fresh concrete (ASTM D4541) – 550 psi, concrete fails
 - 2. Permeability (ASTM E96) – not more than 0.6 perms
 - 3. Permeability/MVT (ASTM E-96) – not more than 1 pound/24 hours/1,000 sq. ft.
 - 4. Resistance to alkalinity (ASTM 1308) – 60 day immersion.
 - a. 35% Potassium Hydroxide: No visible change, weight gain of 0.07%.
 - b. 35% Sodium Hydroxide: No visible change, weight gain of 0.08%.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
 - 1. Concrete mix design shall meet industry standards and have a water/cement ratio not greater than 0.5.
 - 2. Chloride accelerators or reactive silicate admixtures shall not be used.

3.02 INSTALLATION

- A. Allow sufficient time for the installation of the flooring system. At no time shall the speed of project completion be allowed to detrimentally affect the application.
- B. Provide sufficient light, power, and heat to permit proper application of the material. Substrate temperature shall be at a minimum of 50 degrees F during the application and for 48 hours thereafter.
- C. When concrete supports foot traffic, but before 24 hours elapses, apply mixed VaporSolve® FC to concrete by pump-up sprayer, airless spray or pouring from a sprinkling can. Application rate shall be 250 sq. ft. per gallon prior to the addition of water. Immediately after spreading the coating, work the material into the surface using a floor machine with a nylogrit brush. After scrubbing, backroll with a ¾ inch nap roller.
- D. Allow to cure at least 12 hours and apply VaporSolve® 100 at 200 sq. ft. per gallon.

3.03 FIELD QUALITY CONTROL

- A. Installer shall apply the material at the thickness specified by the product data sheet. Measure out the area to be covered and use the entire kit on that area. For example, a two gallon kit of VaporSolve® FC must cover 500 sq. ft. (excluding water added) to meet the specification.

3.04 SELF-LEVELING CEMENTITIOUS UNDERLAYMENT

- A. Should a self-leveling cementitious underlayment be required by the flooring adhesive manufacturer or for the purposes of smoothing the substrate, APF tie coat and APF E-Z Level shall be used.

END OF SECTION