

Florock Seamless Flooring Systems

Architectural Specification – FloroEster VE

Vinyl Ester Secondary Containment System

Part 1: General

1.01 System Description

- A. Roller applied high solids, low viscosity, penetrating vinyl ester based primer, followed by a midcoat of high solids vinyl ester secondary containment coating/lining and optional aggregate broadcast, with a topcoat of high solids vinyl ester secondary containment coating/lining.
- B. This system shall be applied to the prepared substrate(s) as defined by the plans strictly in accordance with the manufacturer's recommendations.

1.02 Submittals

- A. Product Data
 - 1. Current edition of manufacturer's product literature including physical data, chemical resistance, surface preparation, and application instructions.
- B. Samples
 - 1. A hard sample of the proposed system shall be submitted to represent the finished floor.
- C. Warranty
 - 1. Manufacturer's standard warranty
 - 2. Applicator's standard warranty

1.03 Quality Assurance

- A. Qualifications
 - 1. The manufacturer shall have a minimum of ten (10) years' experience in the production, sales, and technical support of polymer-based floor coatings/linings.
 - 2. The applicator shall have a minimum of three (3) years' documented experience in the application of polymer floor coatings to concrete floors.
 - 3. Proposed suppliers shall provide certification that they have ten (10) years' experience in the production of polymer floor coatings/linings and be required to meet all provisions of this specification as well as provide evidence for compatibility between components to the satisfaction of the Architect.
- B. Pre-Bid Conference
 - 1. A pre-bid conference should be held between prospective applicators and the Architect to review surface preparation, application, clean-up procedures, and design issues.

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C. Packing and Shipping

1. All materials are to be delivered to the job site in the manufacturer's original packaging. The product code and other identification marks should be clearly marked and visible.

D. Storage and Protection

1. All material is to be stored in a cool, dry place out of the direct sunlight and away from any ignition sources. The applicator should refer to the manufacturer's literature and material safety data sheets for more information.
2. Material Safety Data Sheets are to be kept on site and made readily available for all personnel.
3. Keep containers sealed and ready for use.

1.04 Project Conditions

A. Environmental Requirements

1. Optimum air and substrate temperature for product application is between 50° F (10° C) and 90° F (32° C). For temperatures outside of this range, consult the manufacturer for product application suggestions.
2. Verify the work environment is properly equipped with vapor barriers and perimeter drains.
3. Maintain proper lighting throughout the work environment; the lighting should be comparable to the final lighting level of the space.
4. Store and dispose of any waste in accordance with regulations of local authorities.

B. Safety Requirements

1. "No Smoking" signs shall be posted throughout the work area prior to application.
2. The owner shall be responsible for removing any foodstuffs from the work area.
3. Open flames, spark producing tools/items, and ignition sources shall be removed from the work area prior to application.
4. Only work-related personnel shall be allowed within the work area.

1.05 Warranty

A. Coordination

1. The manufacturer offers a full, one-year warranty against defects in materials. Warranties concerning the installation of the material are solely the responsibility of the applicator.

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Part 2: Products

2.01 Manufacturer

- A. Florock Polymer Flooring
 1120 W. Exchange Avenue
 Chicago, IL 60609
 Phone: (773) 376-7132; (800) 356-7625
 Fax: (773) 376-0945
<http://www.florock.net>

2.02 Materials

- A. Primer
 - 1. The primer shall be Florock FloroEster U Primer.
- B. Midcoat & Optional Aggregate Broadcast
 - 1. The midcoat shall consist of Florock FloroEster VE.
 - 2. The optional broadcast shall consist of Florock-approved aggregate.
- C. Topcoat
 - 1. The topcoat shall consist of Florock FloroEster VE.
- D. Properties
 - 1. The coating system should meet the following physical properties, in addition to the complete chemical and corrosion resistant properties outlined in the FloroEster Corrosion Resistance Guide.

Cured System Properties

Cured Physical Properties	Cured Physical Properties
Compressive Strength ASTM C579	8,500–9,000 psi (58.60-62.05 MPa)
Tensile Strength ASTM 638	2,500 psi (17.0 MPa)
Adhesion Strength Concrete ASTM D7234	Concrete Failure
Adhesion Strength Steel ASTM D7234	1,000 psi (6.89 MPa)
Service Temperature Limitations	Continuous: 140° F (60° C) Intermittent: 180° F (82° C)
Abrasion Resistance, Taber Abrader CS-17 Wheel, 1000 gm load, 1000 cycles ASTM D4060	70 mg loss

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Part 3: Execution

3.01 Inspection

A. General

1. Examine the areas and conditions where the system is to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the contractor in a manner acceptable to the Architect.

3.02 Preparation

A. Patching and Joint Preparation

1. Before application, the floor shall be examined for spalls, pits, holes, cracks, non-functional joints, etc. These must be treated after preparation and before application with the suitable Florock products. For functional or expansion joints, these shall be treated with 100% solids elastomeric resin having a minimum elongation of 150%, Florock System 6500.

B. Concrete Surfaces

1. The concrete shall have a minimum Compressive Strength of 3,500 psi (25 N/mm²), in addition to a minimum Surface Strength of 200 psi (1.4 N/mm²) for coatings and 300 psi (2.1 N/mm²) for linings. It must be thoroughly cured and dry at the time of application. Prepare the concrete substrate in accordance with the Florock Preparation of Concrete Guide, paying special attention to mechanical prep and MVT information. Consult FloroProof System Data Sheet for details on MVT parameters and mitigation.

C. Carbon Steel

1. Carbon Steel—Abrasive blast to “White Metal”, in accordance with SSPC SP-5, NACE Specification #1 or SA 3. After blast cleaning, prime the steel surface before the formation of any rust bloom. Contact your local Florock representative for more details

A. Materials

1. Mix components as required, and prepare materials according to system manufacturer’s instructions.

3.03 Application

A. General

1. The system shall be installed in the order described below:
 - a. Substrate Preparation
 - b. Primer Application
 - c. Midcoat Application and Optional Aggregate Broadcast
 - d. Topcoat Application
2. Concrete surfaces on grade shall have been constructed with a vapor barrier to protect against the effects of vapor transmission and possible delamination of the

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system. Refer to manufacturer's concrete preparation instructions for additional recommendations.

3. The surface should be dry prior to application of any of the aforementioned steps. Furthermore, the substrate shall always be kept clean, dry, and free of any contaminants.
4. The handling and mixture of any material associated with the installation of the system shall be in accordance with the manufacturer's recommendations and approved by the Architect.
5. The system shall follow the contours of the substrate unless otherwise specified by the Architect.
6. A neat finish with well defined boundaries and straight edges shall be provided by the applicator.

B. Priming

1. All areas considered for the application shall be primed with the manufacturer's vinyl ester primer to seal and penetrate the substrate in preparation for applying subsequent coats.
2. Porous concrete substrates may require additional applications of primer followed by a midcoat.

C. Midcoat and Optional Broadcast

1. The midcoat shall consist of the manufacturer's approved vinyl ester coating.
2. The optional broadcast shall consist of the manufacturer's approved aggregate.

D. Topcoat

1. The topcoat shall consist of the manufacturer's approved vinyl ester topcoat to seal the surface and give the substrate the required protection and characteristics.
2. No traffic or equipment shall be permitted on the finish during the curing period.

3.04 Field Quality Control

A. Tests & Inspection

1. The following tests shall be performed by the applicator and recorded during application to submit to the Architect:
 - a. Temperature during installation
 1. Air
 2. Substrate
 3. Dew Point

3.05 Cleaning

A. Disposal

1. Properly remove and dispose of any excess materials.

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