

# Florock Seamless Flooring Systems

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## Architectural Specification – FloroQuartz HB

### Colored Quartz High Build 3/16" Flooring System

#### Part 1: General

##### 1.01 System Description

- A. Roller-applied 100% solids, penetrating epoxy primer followed by a troweled epoxy mortar, consisting of 100% solids epoxy and graded aggregates with a roller-applied basecoat of 100% solids epoxy with a broadcast of colored quartz granules, and two (2) grout coats of 100% solids epoxy, to achieve a total system thickness of 3/16" (5.0 mm).
- 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.
  - 2. The applicator shall have a minimum of three (3) years' documented experience in the application of polymer floor coatings to concrete floors and be approved by Florock.
  - 3. Proposed suppliers' products shall provide certification that they have ten (10) years' experience in the production of polymer floor coatings and be required to meet all provisions of this specification as well as provide evidence of 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.

# Florock Seamless Flooring Systems

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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 55° F (13° C) and 95° F (35° 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.

# Florock Seamless Flooring Systems

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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 a 100% reactive, epoxy-based, penetrating primer that exhibits chemical resistance: Florock Floropoxy 4700 Epoxy Primer.
- B. Mortar (Matrix Coat)
  - 1. The mortar shall consist of a three-component mixture of 100% solids epoxy, activator, and graded aggregates: FloroBuild System 4750 or 4755 Trowel Epoxy.
- C. Basecoat
  - 1. The basecoat shall consist of a tough, impact-resistant 100% solids epoxy coating appropriate for accepting broadcast aggregate: Florock Floropoxy 4805.
- D. Broadcast
  - 1. Broadcast BC grade colored quartz aggregate to the point of rejection into the wet basecoat: Florock FloroQuartz BC Aggregate.
- E. Grout Coat(s)
  - 1. Apply grout coat with a flat squeegee, then backroll, using a Clear 100% solids, chemical and UV resistant epoxy. If no optional finish coats are to be used, apply a second grout coat: Florock Floropoxy 4805.
- F. Optional Topcoat(s)
  - 1. Apply 1 to 2 topcoat(s) of a high performance, color-stable, chemical resistant urethane to enhance the abrasion and chemical resistance of the flooring system: Choice of Florock Florothane or other Florock High Performance Topcoat.

# Florock Seamless Flooring Systems

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## 2.03 Properties

- A. The coating system should meet the following physical properties:

### Cured System Properties

<u>Chemical Properties</u>	<u>FloroQuartz HB</u>
Compressive Strength, ASTM C579, psi	10,000
Flexural Strength, ASTM C580, psi	4,300
Flexural Modulus of Elasticity, ASTM C580, psi	2.0 x 10E6
Indentation, MIL-D-3134F	No Indentation
Hardness, Shore A/D, ASTM D2240	85 / 90
Impact Resistance, ASTM D4226, in/ lbs.	>160
Percent Elongation, ASTM D2370, %	6
Water Absorption, ASTM C413, %	0.1
Bond Strength, ACI Committee #503, pg. 1139-1141, psi	>400
Abrasion Resistance, Taber Abrader CS-17 Wheel, 1000 gm load, 1000 cycles, ASTM D4060, max. gm loss	0.04
Heat Resistance Limitation (Continuous Exposure)	140° F / 60° C
Coefficient of Friction, ASTM D2047	0.6
Flammability, ASTM D635	Self-Extinguishing
Thermal Coefficient of Linear Expansion, ASTM C531, in/ in/ °C	1.8 x 10E5

## Part 3: Execution

### 3.01 Inspection

#### A. General

1. Examine the areas and conditions where FloroQuartz is to be installed and notify the Architect of any 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. General

1. Consult the manufacturer's recommendations for concrete substrate preparation before proceeding.

#### B. 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,

## Florock Seamless Flooring Systems

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these shall be treated with 100% solids elastomeric resin having a minimum elongation of 150%, Florock System 6500.

### C. Concrete Surfaces

1. Shot-blast, diamond grind or power scarify as required to obtain clean, open, porous concrete. Remove sufficient material to provide a sound surface, free of laitance, glaze, efflorescence, and any bond-inhibiting curing compounds or form release agents. Remove grease, oil, and other penetrating contaminants. Repair damaged and deteriorated concrete to acceptable condition; leave surface free of dust, dirt, laitance, and efflorescence.

### D. Materials

1. Mix components when required, and prepare materials according to flooring system manufacturer's instructions.

## 3.03 Application

### A. General

1. The system shall be installed in the order described below:
  - a. Substrate Preparation
  - b. Priming
  - c. Mortar Matrix
  - d. Basecoat & Broadcast Application
  - e. Grout Coat Applications
  - f. Optional Finish Coat Applications
2. Concrete surfaces on grade shall have been constructed with a vapor barrier to help protect against the effects of vapor transmission and possible delamination of the 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 primer to seal and penetrate the substrate in preparation for applying the basecoat and grout coat.

## Florock Seamless Flooring Systems

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2. Porous concrete substrates may require additional applications of primer.
- C Mortar (Matrix Coat)
1. The mortar shall consist of a three-component mixture of 100% solids epoxy, activator, and graded aggregates: FloroBuild System 4750 or 4755 Trowel Epoxy
- D Basecoat & Broadcast
1. The basecoat shall consist of the manufacturer's approved resin and decorative colored broadcast quality quartz aggregate, installed to resurface the floor, seal the surface and give the floor impact and chemical resistance.
  2. Slip-resistant properties are provided through a broadcast of quartz aggregate into the basecoat application.
- E Grout Coat(s)
1. The grout coat(s) and optional topcoat(s) shall be consistent with the manufacturer's recommendations for the system.
- F. Optional Topcoat(s)
1. Additional abrasion and chemical resistance may be provided by applying the manufacturer's compatible high performance urethane.
  2. No traffic or equipment shall be permitted on the floor 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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