Architectural Specification –
Riocoat EMP

Self-Leveling Epoxy Flooring System

Part 1: General

1.01 System Description

A. Roller applied 100% solids, penetrating epoxy primer and optional midcoat, followed by a topcoat of a 100% solids RIO-COAT epoxy.

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.

3. Proposed suppliers 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 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.

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 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.

Part 2: Products

2.01 Manufacturer

A. Rio Polymer Flooring
2926 Chester Ave
Cleveland, Ohio 44114
1-888-278-2183
http://www.rioflooring.com

2.02 Materials

A. Primer
1. The primer shall be the appropriate Rio primer.

B. Optional Intermediate
1. The optional coat shall consist of a Riocoat EMP.

C. Topcoat
1. The topcoat shall consist of a Riocoat EMP.

D. Properties
1. The coating system should meet the following physical properties:

Cured System Properties

Chemical Properties	Riocoat EMP
Sward Hardness, ASTM D2240	40
Compressive Strength ASTM C579	11,200 PSI
Tensile Strength, ASTM D2370	7,300 PSI
Abrasion Resistance, Taber Abrader CS-17 Wheel, 1000 gm. load, 1000 cycles, ASTM D4060	7 mg loss
Coefficient of Friction, James Friction Tester, ASTM D2047	0.65
Percent Elongation, Coating, ASTM D2370	5%
Percent Elongation, Resin Only, ASTM D2370	6%

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 Rio products. For functional or expansion joints, these shall be treated with 100% solids elastomeric resin having a minimum elongation of 150%, Rio System EFM.

B. 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.

C. 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. Primer /Optional midcoat Application
    c. 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 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 topcoat.

2. Porous concrete substrates may require additional applications of primer followed by an intermediate coat.

C. Optional Intermediate
1. The optional coat shall consist of the manufacturer's approved epoxy.

D. Topcoat
1. The topcoat shall consist of the manufacturer's approved epoxy topcoat to seal the surface and give the floor improved wear resistance.

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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