

SECTION 09 67 23-RESINOUS FLOORING

PROCRYL SCW – Standard (Solid Color) Methyl Methacrylate Wall Coating System

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section includes the following:
 - 1. Resinous flooring system as shown on the drawings and in schedules.
- B. Related sections include the following:
 - 1. Cast-in-Place Concrete, section 03 30 00
 - Concrete Curing, section 03 39 00

1.3 SYSTEM DESCRIPTION

- A. The work shall consist of preparation of the substrate, the furnishing and application of a methyl methacrylate (MMA) solid color seamless floor coating system.
- B. The system shall have the color and texture as specified by the Owner with a nominal thickness of 42-48 mils. It shall be applied to the prepared area(s) as defined in the plans strictly in accordance with the Manufacturer's recommendations.

1.4 SUBMITTALS

- A. Product Data: Latest edition of Manufacturer's literature including performance data and installation procedures.
- B. Manufacturer's Safety Data Sheet (SDS) for each product being used.
- C. Samples: A 3 x 4 inch sample of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system.
- D. LEED Submittals:
 - 1. Product data for Credit EQ 4.2: For flooring system, documentation including VOC content and chemical composition.
 - 2. MR Credit 2.1, 2.2: Construction waste management, packaging can be recycled.

1.5 QUALITY ASSURANCE

- A. The Manufacturer shall have a minimum of 5 years' experience in the production, sales, and technical support of epoxy urethane and acrylic industrial flooring and related materials.
- B. The Applicator shall have been approved by the flooring system manufacturer in all phases of surface preparation and application of the product specified.
- C. No requests for substitutions shall be considered that would change the generic type of the specified System.
- D. System shall be in compliance with requirements of United States Department of Agriculture (USDA), Food, Drug Administration (FDA), and local Health Department.

- E. A pre-installation conference shall be held between Applicator, General Contractor and the Owner to review and clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Packaging and Shipping
 - 1. All components of the system shall be delivered to the site in the Manufacturer's packaging, clearly identified with the product type and batch number
- B. Storage and Protection
 - 1. The Applicator shall be provided with a storage area for all components. The area shall be between 60°F and 85°F, dry, out of direct sunlight and in accordance with the Manufacturer's recommendations and relevant health and safety regulations.
 - 2. Copies of Safety Data Sheets (SDS) for all components shall be kept on site for review by the Engineer or other personnel.
- C. Waste Disposal
 - 1. The Applicator shall be provided with adequate disposal facilities for non-hazardous waste during installation of the system.

1.7 PROJECT CONDITIONS

- A. Site Requirements
 - 1. Application may proceed while air, material and substrate temperatures are between 32°F and 85°F providing the substrate temperature is above the dew point. Outside of this range, the Manufacturer shall be consulted.
 - 2. The relative humidity in the specific location of the application shall be less than 85% and the surface temperature shall be at least 5°F above the dew point.
 - 3. The Applicator shall ensure that adequate ventilation is available for the work area. This shall include the use of manufacturers approved high CFM fans (if necessary), small bore tubing and suitable around the work area including relevant signage.
 - 4. Ensure that no open flame (e.g. temporary propane heating) or pilot lights are on during application and curing process.
 - 5. The Applicator shall be supplied with adequate lighting equal to the final lighting level during the preparation and installation of the system.
- B. Conditions of new concrete to be coated with ProREZ System.
 - 1. New concrete shall be moisture cured for a minimum of 4 days and have fully cured a minimum of 30 days in accordance with ACI-308 prior to the application of the coating system pending moisture tests.
 - 2. Concrete shall have a flat rubbed finish, float or light steel trowel finish (a hard steel trowel finish is neither necessary nor desirable).
 - 3. Sealers and curing agents should not to be used.
 - 4. 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.

C. Safety Requirements

1. All open flames and spark-producing equipment shall be removed from the work area prior to commencement of application.
2. "NO SMOKING" signs shall be posted at the entrances to the work area.
3. The Owner shall be responsible for the removal of foodstuffs from the work area.
4. Non-related personnel in the work area shall be kept to a minimum.

1.8 WARRANTY

- A. ProREZ Performance Resins & Coatings warrants that material shipped to buyers at the time of shipment substantially free from material defects and will perform substantially to ProREZ Performance Resins & Coatings published literature if used in accordance with the latest prescribed procedures and prior to the expiration date.
- B. ProREZ Performance Resins & Coatings liability with respect to this warranty is strictly limited to the value of the material purchase.
- C. ProREZ Performance Resins & Coatings has no responsibility for the application and processing of products and is under no circumstances liable to any third party whatsoever.

PART 2 – PRODUCTS

2.1 FLOORING - ProREZ Performance Resins & Coatings: ProCryl MMA coating system.

1. System Materials:

- a. Primer: ProREZ Performance Resins & Coatings, ProCryl Primer and Initiator. Inspect primer on completion of cure for uniform thickness over the entire area. A second primer coat may be required on very porous slabs.
- b. Parge Coat: ProREZ Performance Resins & Coatings, ProCryl Binder, Cabosil, Pigment and Initiator.
- c. Body Coat: ProREZ Performance Resins & Coatings, ProCryl Binder, Cabosil, Pigment and Initiator.
- d. Topcoats (2): ProREZ Performance Resins & Coatings, ProCryl HT Topcoat resin and initiator.

2.2 MANUFACTURER

- A. ProREZ Performance Resins & Coatings, 47 Inwood Road, Rocky Hill, CT 06067.
- B. Manufacturer of Approved System shall be single source and made in the USA.

2.3 PHYSICAL PROPERTIES

A.	Primer	ProCryl Primer
1.	Percent Reactive	100%
2.	VOC	0 g/L
3.	Adhesion to Concrete, ASTM D 7234	>400 psi, substrate fails
B.	Parge/Bodycoat	ProCryl Binder
1.	Percent Reactive	100%
2.	VOC	0 g/L
B.	Topcoat	ProCryl UVR
1.	Percent Reactive	100%
2.	VOC	0 g/L
3.	Shore D Hardness, ASTM D 2240	75-80 psi
4.	Impact Resistance, ASTM D 2794	>160 in/lb

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting flooring performance.
 1. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements specified.

3.2 PREPARATION

- A. General
 1. New and existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
 2. Mechanical Surface Preparation
 - a. All surfaces to be prepared using vacuum-assisted diamond grinding with 16 grit diamonds. All surface and embedded accumulations of paint, toppings hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be completely removed leaving a bare concrete.
 - b. Areas inaccessible to grinders shall be mechanically abraded to the same degree of cleanliness, soundness and profile using needle guns, bush hammers, or other suitable equipment.
 - c. Cracks and joints (non-moving) greater than 1/8 inch wide are to be chiseled or chipped-out and repaired per manufacturer's recommendations.
 3. Bond Test
 - a. Bond Tests should be performed to ensure surface is suitably prepared for ProCryl application. Bond tests should pull aggregate at interface with concrete. Please consult with ProRez Technical Department for more information.
 4. Patching
 - a. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufactures recommendations.

3.3 APPLICATION

A. General

1. The system shall be applied in five distinct steps as listed below:
 - a. Substrate preparation
 - b. MMA Primer
 - c. MMA Parge Coat
 - d. MMA Binder
 - e. MMA Topcoats (2)
2. Immediately prior to the application of any component of the system, the surface shall be dry and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
3. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
4. The system shall follow the contour of the substrate unless pitching, or other leveling work has been specified by the Architect.
5. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

B. Primer

1. The initiator shall be added to the resin at the prescribed level and thoroughly dispersed by suitably approved mechanical means.
2. The Primer shall be applied by roller as approved by the Manufacturer at a rate of 140s.f. per gal.
3. Immediately upon placing, the primer shall be rolled with a 3/8" non-shed, nap roller.
4. A second Primer coat may be required on overly porous substrates.
5. Allow the material to fully cure.

C. Parge Coat (Pigmented)

1. The pigment shall be added at 8 oz per gal (for lighter colors and "Safety Yellow" a higher dosage may be required). Add Sylothix or Cabosil thickening agent and SL Filler at the Rate of 1 gal Resin, 1 gal Cabosil and 1 quart of SL Filler. Initiator shall be added to the resin at the prescribed level and thoroughly dispersed by suitably approved mechanical means.

D. Binder Coat (Pigmented)

1. The Binder Coat shall be applied over surfaces using a 3/8" non-shed, nap roller at a rate of 100 s.f. per gal as approved by the Manufacturer. It maybe advisable to make smaller amounts if areas are difficult to access. Continue to work material up onto the vertical surface until a suitable mil thickness is achieved. **If material is applied too thin then curing issues may occur.*
2. Allow the material to fully cure.

E. Topcoats (Pigmented)

1. The Topcoat shall be comprised of a liquid resin and a powder initiator that is mixed and installed per the Manufacturer's recommendations. (Refer to Binder Coat instruction if Pigmented Topcoat.)
2. Apply using a 3/8" non-shed, roller nap for a coverage rate of 120-140s.f./gal.
3. Allow material to fully cure and apply a 2nd topcoat.

3.4 FIELD QUALITY CONTROL

- A. Tests, Inspection – The following tests shall be conducted by the Applicator:
 - 1. Temperature
 - a. Air, substrate temperatures and, if applicable, dew point.
 - 2. Coverage Rates
 - a. Rates for all layers shall be monitored by checking quantity of material used against the area covered.

3.5 CLEANING AND PROTECTION

- A. Cure flooring material in compliance with manufacturer's directions, taking care to prevent any contamination during stages of application and prior to completion of the curing process.
- B. Remove masking. Perform detail cleaning at floor termination, to leave cleanable surface for subsequent work of other sections.