SECTION 09 67 23-RESINOUS FLOORING

**SOFTOP RXC FLOOR 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

1. This section includes the following:
2. Resinous flooring system as shown on the drawings and in schedules.
3. Related sections include the following:

1. Resinous Flooring 09 67 23

1.3 SYSTEM DESCRIPTION

1. The work shall consist of preparation of the substrate, the application of a resinous primer, resinous body coat that is broadcast with chips, and finished with a resinous grout coat/topcoat. The system shall have the color and texture as specified by the owner with a nominal thickness of 3/16”. It shall be applied to the prepared area(s) as defined in the plans strictly in accordance with the manufacturer's recommendations.
2. Cove base (if required) to be applied where noted on plans and per manufacturer’s standard details unless otherwise noted.

1.4 SUBMITTALS

1. Product Data: Latest edition of manufacturer's literature including performance data and installation procedures.
2. Manufacturer’s Safety Data Sheet (SDS) for each product being used.
3. Samples: A 3 x 3-inch square sample of the proposed system. Color, texture, and thickness shall be representative of the overall appearance of the finished system subject to normal tolerances.

1.5 QUALITY ASSURANCE

1. The manufacturer shall have a minimum of 10 years experience in the production, sales, and technical

 support of epoxy and urethane industrial flooring and related materials.

B. The applicator shall have experience in installation of the flooring system as confirmed by the 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.

 F. Mock-up: Provide a 4’ X 4’ mock-up to be approved in writing by the owner or owner’s representative.

 G. System shall be in compliance with the Indoor Air Quality requirements of California section

 01350 as verified by a qualified independent testing laboratory.

* 1. PRODUCT DELIVERY, STORAGE, AND HANDLING
1. Packing and Shipping
2. 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 80 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 generated during installation of the system.

1.7 PROJECT CONDITIONS

1. Site Requirements
2. Application may proceed while air, material and substrate temperatures are between 60 F and 80 F providing the substrate temperature is above the dew point. Outside of this range, the manufacturer shall be consulted.
3. The relative humidity in the specific location of the application shall be less than 75 % 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.

 4. 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 material.

 1. Concrete shall be moisture cured for a minimum of 7 days and have fully cured a minimum of twenty

 eight days in accordance with ACI-308 prior to the application of the coating system pending moisture

 tests and tests for soluble salts .

 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.

1. "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. WARRANTY
1. The Sherwin-Williams Co., warrants that material shipped to buyers at the time of shipment substantially free from material defects and will perform substantially to Sherwin-Williams’ published literature if used in accordance with the latest prescribed procedures and prior to the expiration date.
2. Sherwin-Williams liability with respect to this warranty is strictly limited to the value of the material purchase. One year standard material warranty.

PART 2 – PRODUCTS

2.1 FLOORING

 A. The Sherwin-Williams Co., SOFTOP RXC seamless flooring system

 1. System Materials:

 a. Primer: Sherwin-Williams, Ruflor Glaze

 b. Body Coat: Sherwin-Williams, SOFTOP RX

 c. Broadcast: Sherwin-Williams, Decorative Vinyl Chips

 d. Grout Coat / Topcoat: Sherwin-Williams, ACCELERA EXT

2.2 MANUFACTURER

A. The Sherwin-Williams High Performance Flooring, 866-540-1299 swflooring@sherwin.com Website: <https://industrial.sherwin-williams.com/na/us/en/resin-flooring.html>

B. Manufacturer of Approved System shall be single source and made in the USA.

C. Alternates must be approved 10 days prior to bid.

2.3 System Properties with Accelera EXT Grout Coat / Topcoat

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| --- | --- |
| **Feature** | **Values** |
| Nominal Thickness  | 3/16" |
| Weight Solids % | 96 |
| Gloss (ASTM D-523) @ 60° | Gloss = 91 unitsSatin = 50-55 units *(Requires EXT Grout Coat + Satin Topcoat)* |
| Noise Reduction Coefficient (ASTM C-423) | 0.05 |
| UV Resistance / Stability | UV Stable  |
| Tensile Strength (ASTM D-638) | 1,185 psi |
| Hardness (ASTM D-2240), Shore A | 85-90 |
| Abrasion Resistance (ASTM D-4060) | 25mg loss *(Accelera EXT)* |
| Adhesion / Bond Strength (ASTM D-4541) | Failure in Substrate *(Dur-A-Glaze #4 Primer)* |
| Impact Resistance (ASTM D-2794) | >160 in-lb |
| Static Load Limit (ASTM F970) | 0.007 in @800 lbs |
| Residual Indentation (ASTM F1914) | <1% @210 lbs |
| Rolling Load (ASTM F2753) | No Deformation @ 100 lbs |
| Rapid Thermal Cycling (ASTM C-884)  | Pass |
| Static Coefficient of Friction (ANSI B101.1) | > 0.6 *with the use of non-slip aggregate additives\** |
| Dynamic Coefficient of Friction (ANSI A326.3) | > 0.42 wet *with the use of non-slip aggregate additives\** |
| VOC Values | 0 g/L (Resuflor Glaze)9 g/L (SOFTOP RX)33 g/L (Accelera EXT Clear) |
| TVOC Air Quality Values (CDPH v1.2-2017) | <0.5 mg/m3 |
| Critical Radiant Flux (ASTM E-648) | Class 1 |
| Curing Time (70F 50% RH) | Primer @6-8 hrsBodycoat @6-8 hrsGrout Coat @2-4 hrsTopcoat @2-4 hrs |
| Working Time (@ 70 F / 50% RH) | Primer @ 15-20 minsBodycoat @ 15-20 minsGrout Coat/Topcoat @ 8-10 mins |
| Pot Life (@ 70 F / 50% RH) | Primer @ 20 minsBodycoat @ 5-10 minsGrout Coat/Topcoat @ 8-10 mins |
| Recoat Window (@ 70 F / 50% RH) | ~16 hrs *(over Accelera EXT)* |

PART 3 – EXECUTION

* 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

1. 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.

1. Moisture Testing: Perform tests recommended by manufacturer and as follows:

a. Perform core testing by pulling 2 inch diameter cores that are 2 inches in depth. Pull a minimum of 2 cores for 1500 SF area. Provide cost of pulling cores and core analysis in proposal. Total soluble salts (Sodium, Potassium, Chloride) should me less than 1600 ppm/

. b. Perform relative humidity test using in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 80% relative humidity level measurement.

 c. If the vapor drive exceeds 80% relative humidity and the total soluble salts (Sodium, Potassium, Chloride)are less than 3200 ppm then the Owner and/or Engineer shall be notified and advised of additional cost for the installation of Polycrete SL at 1/8" with a full broadcast of silica quartz in lieu of Resuflor Glaze epoxy.

 3. If the vapor drive exceeds 99% relative humidity and the total soluble salts (Sodium, Potassium, Chloride) are greater than 3200ppm, then the Owner and/or Engineer shall be notified and advised of additional cost for the installation of a vapor mitigation system that has been approved by the manufacturer or other means to lower the value to the acceptable limit.

 3. There shall be no visible moisture present on the surface at the time of application of the system. Compressed oil-free air and/or a light passing of a propane torch may be used to dry the substrate.

 4. Mechanical surface preparation

1. Shot blast all surfaces to receive flooring system with a mobile steel shot, dust recycling machine (Blastrac or equal). 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 surface having a minimum profile of CSP 3-4 as described by the International Concrete Repair Institute.

 b. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.

 c. Where the perimeter of the substrate to be coated is not adjacent to a wall or curb, a minimum 1/4 inch

 key cut shall be made to properly seat the system, providing a smooth transition between areas. The

 detail cut shall also apply to drain perimeters and expansion joint edges.

 d. Cracks and joints (non-moving) greater than 1/8 inch wide are to be chiseled or chipped-out and repaired per manufacturer’s recommendations. Refer to Sherwin-Williams Joint Guidelines.

 5. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and

 patch per manufactures recommendations.

* 1. APPLICATION
1. General

 1. The system shall be applied in four distinct steps as listed below:

 a. Substrate preparation

1. Priming
2. Body Coat application with chip broadcast
3. Grout Coat/Topcoat application

 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 primer shall be Resuflor Glaze.

 2. The primer shall be applied at 8-12 mils by a squeegee and cross rolled with a 3/8” nap roller.

 C. Body Coat

 1. The body coat shall be applied as a single broadcast system as specified by the Architect.

 2. The body coat shall be comprised of three components: a resin, hardener, and aggregate as supplied by the Manufacturer and mixed per manufacturer instructions.

 3. The hardener shall be added to the resin and pre-mixed followed by the addition of aggregate and thoroughly mixed by suitably approved mechanical means.

1. The body coat shall be applied over horizontal surfaces using a pin rake adjusted to 3/16” V- and cross rolled with a pin roller at the rate of 30 SF/kit.

 5. Chips shall be broadcast to excess into the wet material, Macro chips at the rate of 0.20lbs/sf, and Micro or blended sized chips at the rate of 0.25 lbs/sf.

1. 6. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose broadcast aggregate.
2. 7. Scrape the floor with a trowel, floor scraper, or preferably a floor scrubber. Sweep and vacuum the floor again.

 D. Grout Coat/Topcoat

1. The grout coat shall be comprised of ACCELERA EXT resin and ACCELERA hardener mixed per the manufacturer’s instructions.

 2. The grout coat shall be flat squeegee applied and cross rolled with a 3/8” nap roller with a coverage rate of 65-75 SF per mixed large kit.

3. .

4. A second coat of Accelera EXT shall be applied at 200 SF per gallon for a smoother floor finish.

4. The finished floor will have a nominal thickness of 3/16”.

3.4 FIELD QUALITY CONTROL

 A. Tests, Inspection

 1. The following tests shall be conducted by the Applicator:

 a. Temperature

 1. Air, substrate temperatures and, if applicable, dew point.

 b. Coverage Rates

 1. Rates for all layers shall be monitored by checking quantity of material used against the area covered.

* 1. CLEANING AND PROTECTION

 A. Cure flooring material in compliance with manufacturer’s directions, taking care to prevent their contamination during stages of application and prior to completion of the curing process.

 B. Remove masking prior to full cure. Perform detail cleaning at floor termination, to leave cleanable surface for subsequent work of other sections.

5/2025/SOFTOP RXC STANDARD SPECIFICATION

*Please recycle - Thank you!*