

SECTION 09700
RESINOUS FLOORING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fluid applied urethane primer coat
- B. Notched Squeegee or trowel-applied cementitious urethane flooring
- C. Fluid applied epoxy top coats.

1.2 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Selection Samples: For each finish product specified, submit two samples 4 by 4 inches in size illustrating color and texture.
- D. Verification Samples: For each finish product specified, submit two samples 4 by 4 inches in size in color, chip size and variation, and matrix color, representing actual product scheduled.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
- B. Installer Qualifications: Installation shall be performed by an applicator approved by the manufacturer of the floor surfacing materials.
- C. Pre-Application Meeting: Convene a pre-application meeting two weeks before the start of application of the floor coating system. Require attendance of parties directly affecting work of this section, including the Contractor and Applicator. Review the surface preparation, application, cleaning, protection and coordination with other work.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

- B. Store materials in accordance with the manufacturer's instructions.
 - 1. Store materials in dry, enclosed area with adequate protection from moisture.
 - 2. Keep containers sealed until ready for use.
- C. Storage Temperature: Store between 60 degrees F (18 degrees C) and 80 degrees F (27 degrees C).

1.5 PROJECT CONDITIONS

- A. Roof shall be completed and building enclosed prior to flooring commencement.
- B. Maintain temperature range of between 65 degrees F (18 degrees C) and 75 degrees F (25 degrees C) 24 hours before, during, and 72 hours after installation of flooring.
- C. Ventilate area where flooring is being installed, if required..
- D. Provide uniform lighting of 50 fc in area of installation.
- E. Restrict traffic from area where flooring is being installed or is curing, until 48 hours after completion.

1.6 WARRANTY

- A. Provide 1 year warranty on labor and materials.
- B. Warranty: Include coverage for delamination (separating of layers) of floor and degradation of surface finish.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer:
 Puma-CRETE Corp,
 68 Harrison Ave
 Boston, MA 02111-1929
 Email: info@PumaCRETE.net; Tel: 857-226-8247;
 Web: www.PumaCRETE.net
- B. Substitutions: Not permitted.

2.2 MATERIALS

- A. PRIMER: PumaCRETE Apply a primer coat at 300-400 sf per gal, in order to seal the substrate.
- B. BASE COAT: PumaCRETE 301SL Urethane concrete slurry (self leveling) base coat, notch squeegee or rake applied to 1/16 inch thickness. 60-80 sq ft per unit.
- C. TOP COAT: PumaCRETE 104-PumaPOXY MB This roll-applied epoxy glaze coat will provide a glass smooth finish 200 sq ft per gal.
- D. Optional TOP COAT: 109-PumaTHANE Satin; 2-component, roll applied, polyurethane top coat. Optional spherical glass oxide bead (PumaGRIP) for very light anti slip, easy to clean texture.

FINISHES AVAILABLE: *The standard specified finish for this system is #1*

- 1. Smooth finish
- 2. Light Glass bead finish. Includes top coat with integral spherical glass bead texture.
- 3. Medium Anti-Skid finish –includes 40/60 mesh silica broadcasted into floor, prior to intermediate coat.. This finish requires auto floor scrubber machine to clean.
- 4. Heavy Anti-Skid finish –includes 20/40 mesh silica. Exhibits extreme slip resistance, requires hi pressure power wash cleaning or deck brush or auto scrubber. It is slip-resistant even when wet or oil covered.. Recommended for any area that needs to be constantly cleaned and is always wet.

Acceptable Manufacturer and Product: Resinous flooring material shall be PumaCRETE 301SL heavy duty floor system, as manufactured by PumaCRETE Corp of Boston, MA. Substitutions are not permitted

1. Material shall include select cementitious and silica quartz fillers.
2. Floor system shall be a 100 percent solid, pigmented urethane/epoxy resin system.
3. Primer coat
4. Base Coat: a three-component, pigmented, integral troweled base consisting of PumaCRETE 301 resin, 301-hardener and SL aggregate..
5. Mid Coat 2-component, epoxy glaze coat, 104-PumaPOXY MB by PumaCRETE
6. Optional Top Coat: (for added cleanability, chemical and stain resistance) 109-PumaTHANE.

Color as selected by Architect from manufacturers standard color range.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
 1. Verify that substrate is ready to receive work, and that sub-floor surface is clean, dry, and free of substances which could affect bond.
 2. Concrete hydrostatic, capillary or moisture pressure must be no greater than **18.0 lbs./1000 sf/24 hours**. It is recommended that substrates in contact with the ground must have a properly installed, functioning and effective vapor barrier to help prevent potential problems resulting from hydrostatic, capillary or moisture vapor emission. New concrete must cure for minimum **14 days**, and contain less than **10% moisture** when tested per ASTM D1864.
 3. Maintain minimum concrete surface temperature between 60° and 80° F., and relative humidity below 80% for a minimum of 48 hours before, during , and after installation, or until cured. Surface temperature must be 5° F. above dew point.
 4. Beginning work constitutes acceptance of substrate.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Substrate Requirements:
 1. Concrete contractor to provide positive drainage at floor drains (if required).
 2. Floor drains shall be set no higher than 1/8 inch (4 mm) above slab.
 3. Floor sinks shall be set in accordance with local codes and regulations.
 4. Gaps between wall sheathing and substrate shall be filled prior to flooring commencement per flooring manufacturer's requirements.
 5. FRP and any other wall finish should terminate near or at the floor.
 6. The substrate shall be clean, dry and sound. Remove dust, laitance, grease, curing compounds, waxes, foreign particles and any previously applied potentially incompatible coatings by shot-blasting, diamond grinding, scarifying, chipping, wire brushing, acid etching, or pressure washing.
 7. Concrete: New concrete must cure for at least **10 days** at 70°F (21°C), and have been free from water for at least 7 days. Older floors should be scarified, shot-blasted or diamond grinded and thoroughly clean. If badly cracked, crumbling, punky or deeply contaminated with oil, a new concrete topping of proper thickness and strength should be installed. Unsound areas should be chipped out and any cracks, spalls, joints or other depressions filled with PumaCRETE PumaPatch, Cement-All by Rapid-Set, or other equal underlayment. The concrete should be at least 3500 psi. Concrete hydrostatic, capillary or moisture pressure must be no greater than **18.0 lbs./1000 sf/24 hours**.
 8. Quarry / Ceramic Tile: Tile and grout shall be thoroughly diamond-grinded with 18 grit diamonds. Loose tile shall be removed and filled in with PumaCRETE 301-SL, Rapid Set, or equal underlayment.

More detailed floor preparation guidelines can be found at www.PumaCRETE.net/resources

3.3 INSTALLATION - FLOORING

- A. Apply flooring in accordance with PumaCRETE's instructions, finished floor thickness 1/8-inch.
- B. Apply primer at 200-250 sf per unit.
- C. Apply 301SL cementitious urethane base coat, to a minimum thickness of 1/8 inch.
- D. Apply coat of 104-PumaPOXY MB coating at rate of 200 sf per gal.
- E. Optional Top Coat: (for added cleanability, chemical and stain resistance) 109-PumaTHANE.

Review more detailed PumaCRETE Floor installation instructions at www.PumaCRETE.net/resources

3.4 TOLERANCES

- A. Maximum Variation from Flat Surface: 1/8 inch in 10 feet.

3.5 PROTECTION

- A. Protect finished installation during construction.
- B. Do not permit traffic over finished floor surfaces for 48 hours.

3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION