

**SECTION 09780  
ARMOR-REZ SL 100**

**PART 1 GENERAL**

1.01 SUMMARY

- A. Section Includes:
  - 1. Moisture vapor emission testing.
  - 2. Surface preparation.
  - 3. Installation of waterproofing membrane (if required).
  - 4. Furnishing and installation of seamless aggregate-filled epoxy flooring.

1.02 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete:
  - 1. Concrete slabs on or below grade shall be installed over an effective moisture vapor barrier.
  - 2. Concrete slabs shall be cured 30 days, be structurally sound and have a steel trowel finish.
  - 3. Surface shall be well sloped to drains, straight and level with the permissible degree of tolerance of 1/4" in 10'-0" in any direction.
  - 4. No curing compounds or surface contaminants shall be used in placing new concrete.

1.03 SUBMITTALS

- A. Submit manufacturer's product data, literature and brochures.
- B. Submit manufacturer's samples showing color choices and texture.
- C. Prior to commencing work, installer shall prepare two 6" x 6" samples of the resinous flooring chosen for the project showing actual color, thickness and texture. These samples shall serve as a basis for comparison through the duration of the work.

1.04 QUALITY ASSURANCE

- A. All resin material used in the aggregate-filled epoxy flooring system shall be manufactured by a single manufacturer to ensure compatibility and proper bonding.
- B. Applicator shall be approved by the manufacturer and shall have a minimum of 3 years experience in installing seamless epoxy floors.

1.05 DELIVERY, STORAGE AND HANDLING

- A. All material shall be delivered to the job site in unopened containers clearly labeled by the manufacturer and stored in a dry location at a minimum of 65 degrees F.

1.06 WARRANTY

- A. Manufacturer shall guarantee that his materials are free from defects and comply with his published specifications.
- B. Applicator shall warranty against faulty workmanship for a period of 3 years from substantial completion of the project.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Resin materials and graded slurry filler aggregate: Arizona Polymer Flooring, Phoenix, Arizona.
- B. Elastomeric Caulking Compound:
  - 1. Vulkem
  - 2. SIKA
  - 3. Sonneborn

**2.02 MATERIALS**

- A. Seamless flooring system to consist of 100 percent solids epoxy resin binder and graded fine silica fillers and an optional polyurethane top-coat. All materials shall meet the performance requirements specified herein.

**2.03 SYSTEM DESCRIPTION**

- A. Flooring system to be a minimum 60 mil thick with color and texture to match the sample chosen.
- B. Cured resin binder shall meet the following minimum requirements:
  - 1. Compressive strength, psi (ASTM D-695): 13,780
  - 2. Tensile strength, psi (ASTM D-638): 8,590
  - 3. Flexural strength (ASTM D-790): 13,945
  - 4. Hardness, Shore D (ASTM D-2240): 86
  - 5. Bond strength to concrete (ACI 503.4-2,3.2) Concrete fails before loss of bond.
  - 6. USDA approval: Approved
- C. Chemical Resistance: (ASTM D-1308 7 day exposure).
  - 1. Urine..... no effect
  - 2. Blood..... no effect
  - 3. Whiskey..... no effect
  - 4. Black Ink..... no effect
  - 5. Brake Fluid..... no effect
  - 6. Gasoline..... no effect
  - 7. Skydrol B-4..... no effect
  - 8. Hydraulic Fluid #83282..... no effect
  - 9. Mineral Spirits..... no effect
  - 10. Xylene..... no effect
  - 11. MEK..... film softened
  - 12. 50% Sodium Hydroxide..... no effect
  - 13. 25% Hydrochloric Acid..... no effect
  - 14. 25% Sulphuric Acid..... no effect
  - 15. 25% Acetic Acid..... no effect
  - 16. 25% Nitric Acid..... film blistered

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verification of Conditions:
  - 1. Inspect surfaces to receive epoxy flooring.
  - 2. Conduct relative humidity probe testing for concrete moisture according to ASTM 2170.
  - 3. Before starting work, report in writing to the Architect any unsatisfactory conditions.
  - 4. Application of any material shall signify that surfaces have been inspected and are satisfactory.

### **3.02 SURFACE PREPARATION**

- A. Surfaces to receive flooring system shall be abraded to a minimum of 10 mil profile using diamond grinding or shot blasting.
- B. Fill all cracks, holes and joints with Epoxy 300 Flex Paste prior to application of flooring system. True expansion joints shall be marked for saw cutting after installation of the flooring system.

### **3.03 INSTALLATION**

- A. Allow sufficient time for the installation of the flooring system. At no time shall the speed of project completion be allowed to detrimentally effect the application.
- B. Provide sufficient light, power, heat and working conditions to permit proper application of the materials. Substrate temperature shall be at a minimum of 50 ~~degrees~~ °F during application and for 48 hours thereafter.
- C. If waterproofing is required, apply elastomeric Polyurethane 300 according to manufacturer's instructions to achieve a 40 mil membrane.
- D. Flooring system shall be installed using a self-leveling epoxy slurry method to achieve the specified thickness.
  - 1. Prime floor with Epoxy 100 at 200-250 sq. ft. per gallon.
  - 2. Slurry shall consist of Epoxy 400 and APF Slurry Filler. For each gallon of mixed resin, 7-10 pounds of slurry filler must be added. Apply with a ¼ inch notch squeegee and back roll.
  - 3. Top-coat material shall be Epoxy 400 at 200- 250 sq. ~~are~~ feet. per gallon.
  - 4. Optional top-coat shall be Polyurethane 100,100 VOC,501 or 325, applied at 300-400 sq. ~~are~~ feet. per gallon.
- E. If the floor has been installed over true expansion joints, saw cut through the finished floor and caulk the joint with elastomeric polyurethane caulk.

### **3.04 FIELD QUALITY CONTROL**

- A. Installer shall monitor the thickness of the system as the work progresses. Areas found not to meet the required thickness shall receive additional material until specified thickness is attained.

### **3.05 PROTECTION**

- A. Keep installation areas free from traffic and other trades during the application procedure and cure time.

**END OF SECTION**