

## SECTION 09727

### GRANITEX COLOR CHIP FLOORING (HIGH BUILD)

#### 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 color chip 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.
- B. Section 06100 - Rough Carpentry: Wood Substrate.
  - 1. Wood substrate shall consist of two layers of 1/2" exterior grade plywood with overlapping seams and joints. Plywood should be glued together and secured with screws.

##### 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 throughout the duration of the work.

##### 1.04 QUALITY ASSURANCE

- A. All materials used in the seamless color chip flooring system shall be manufactured by a single manufacturer to ensure compatibility and proper bonding.
- B. Applicator shall be a licensed contractor, trained and approved by the manufacturer and shall have a minimum of three years experience in the application of special polymer flooring.
- C. All work shall be performed in strict accordance with the manufacturer's written instructions.

##### 1.05 DELIVERY, STORAGE AND HANDLING

- A. All material shall be delivered to the jobsite 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 three years from substantial completion of the project.

## **PART 2 PRODUCTS**

### 2.01 MANUFACTURERS

- A. Resin systems and color chips shall be as supplied by Arizona Polymer Flooring, Phoenix, Arizona.

### 2.01 MATERIALS

- A. Primer and base coat shall be two-component, thermosetting epoxy resin.
- B. Color chips shall be 3-5 mil thick colorfast vinyl acrylic paint chips.
- C. Glaze coats shall be either two-component, thermosetting epoxy resin or two-component, VOC compliant aliphatic polyurethane.

### 2.03 SYSTEM DESCRIPTION

- A. Flooring system shall be 30-35 mils thick with color and texture to match the sample chosen.
- B. Finished flooring system shall have the following performance characteristics:
  - 1. Tensile Strength (ASTM D 638): 5000 psi.
  - 2. Tensile Elongation (ASTM D 638): 25%
  - 3. Compressive Yield Strength (ASTM D 695): 7075 psi.
  - 4. Impact Resistance (ASTM D 2794): Passes 160 inch pounds.
  - 5. Tabor Abrasion (C517 wheel, 1000 gr. load, 1000 cycles): 40 mg.
  - 6. Thermal Shock Resistance (ASTM C 1884): passes.
- C. Chemical Resistance: (ASTM D 1308 - 24 hour exposure) Unaffected by the following:
  - 1. Urine
  - 2. Blood
  - 3. Alcohol
  - 4. Black Ink
  - 5. Gasoline
  - 6. Brake Fluid
  - 7. Skydrol B-4
  - 8. Xylene
  - 9. 25% Hydrochloric acid
  - 10. 25% Sulfuric acid
  - 11. 10% Acetic acid

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verification of Conditions:
  - 1. Inspect surfaces to receive seamless color chip flooring.
  - 2. Conduct calcium chloride moisture vapor emission testing according to ASTM 1869-04. If test reading is above three pounds, consult Arizona Polymer Flooring before proceeding.
  - 3. Before starting work, report in writing to the architect any unsatisfactory condition.
  - 4. Application of any material shall signify that surfaces have been inspected and are satisfactory.

### **3.02 SURFACE PREPARATION**

- A. Remove substrate ridges and protrusions by grinding or sanding.
- B. Concrete surfaces to receive flooring system shall be abraded to a minimum of 5 mil profile using shot blasting or acid etching. If acid etching is used, it shall be done in strict accordance with the manufacturer's written instructions. Etching shall be accomplished using a mechanical scrubber with an aggressive "nylogrit" type brush.
- C. Wood surfaces shall be level, free of all paint, grease, oil and other foreign materials. Sand surface with 60-80 grit sandpaper and sweep well before coating.
- D. Control joints and cracks should be filled with Epoxy 300 Flex Paste according to the manufacturer's instructions. All expansion joints should be honored.

### **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 affect the application.
- B. Provide sufficient light, power, heat and working conditions to permit proper application of the material. Substrate temperature shall be at a minimum of 50 degrees F during application and for 48 hours thereafter.
- C. Apply Epoxy 100 water-based primer at the rate of 300-400 sq. ft. per gallon. Allow to cure overnight.
- D. If waterproofing is required, apply elastomeric Polyurethane 300 according to manufacturer's instructions to achieve a 40 mil membrane.
- E. Apply pigmented Epoxy 400 at the rate of 200-275 sq. ft. per gallon. Broadcast premixed color chips into the wet base coat until no shiny spots are evident.
- F. After the base coat has cured, sweep excess chips and scrape aggressively with drywall scraper. Sweep again and vacuum loose chips.
- G. If application is interior, apply clear Epoxy 400 at approximately 200 sq. ft. per gallon. If application is exterior, apply Polyurethane 100 UVR or Polyurethane 500 UVR at approximately 200 sq. ft. per gallon.
- H. After first glaze coat has cured, sand surface lightly with 80-100 grit sandpaper. Sweep well and apply a coat of Polyurethane 100 UVR or Polyurethane 500 UVR at approximately 300 sq. ft. per gallon. If additional slip-resistant properties are required, broadcast #36 bleached aluminum oxide into this coat to achieve the desired texture.
- I. After second glaze coat has dried, apply a finish coat of Polyurethane 100 UVR or Polyurethane 500 UVR at approximately 300 sq. ft. per gallon.

3.04 PROTECTION OF FINISHED WORK

- A. Prohibit traffic on floor for 48 hours after installation.
- B. Avoid heavy abrasion and chemical exposure for five days.

3.05 MAINTENANCE

- A. Floor should be cleaned with ammonia and water or a mild, non-filming detergent. For difficult stains, paint thinner may be used without harming the finish.
- B. Waxing is not required but may be done if desired. Periodic re-glazing will completely renew the surface. This should be accomplished according to manufacturer's written instructions.

**END OF SECTION**