

SECTION 09780

ARMOR-REZ SLB 625

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 1. Moisture vapor emission testing.
 2. Surface preparation.
 3. Waterproofing membrane (if required).
 4. Furnishing and installation of seamless slurry broadcast high density system.

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 materials used in the seamless slurry broadcast high density 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 Fahrenheit.

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 system and graded silica filler shall be as supplied by Arizona Polymer Flooring, Phoenix, Arizona.
- B. Broadcast aggregate shall be supplied by:
 - 1. SpectraQuartz
 - 2. Gordon Sand
 - 3. Other suitable manufacturer
- C. Elastomeric caulking compounds shall be supplied by:
 - 1. Vulkem
 - 2. SIKA
 - 3. Sonneborn

2.01 MATERIALS

- A. Seamless slurry broadcast high density flooring shall consist of Epoxy 100 primer, a 100% solids Epoxy 600, APF Slurry Filler, 20-30 mesh Monterey-type sand or 20 or 30 mesh silica sand.

2.03 SYSTEM DESCRIPTION

- A. Flooring system to be 1/8" thick with color and texture to match the sample chosen.
- B. Finished flooring system shall have the following performance characteristics:
 - 1. Compressive Strength (ASTM C 579): 9500 psi.
 - 2. Tensile Strength (ASTM C 307): 2500 psi.
 - 3. Flexural Strength (ASTM C 580): 4200 psi.
 - 4. Hardness Shore D (ASTM D 2240): 85
 - 5. Impact Resistance (ASTM D 2794): Passes 160 inch pounds.
 - 6. Thermal Shock Resistance (ASTM D 1044): passes
 - 7. Tabor Abrasion (ASTM D 1044): 34 mg. loss
 - 8. Water Absorption (ASTM D 543): 0.2%
 - 9. Bond Strength (ACI 503.4-2.3.2): 350 psi, concrete failure
 - 10. USDA Approval: Approved
- C. Chemical Resistance: (ASTM D 1308 - 7 day exposure) Unaffected by the following:
Key:
 - 1. - Suitable for continuous contact
 - 2. - Suitable for intermittent spills and continuous contact up to 72 hours
 - 3. - Suitable for intermittent spills if followed promptly by water flushing
 - 4. - Not recommended

*Coating stains when exposed to this chemical

Acetic Acid, 15%.....	1	Formaldehyde.....	1
Acetic Acid, 25%.....	2	Formic Acid 25%	1
Acetic Acid, Glacial	3	Hydrobromic Acid, 48%	*1
Acetone.....	4	Hydrochloric Acid, 37%	*1
Aluminum Chloride	1	Hydrofluoric Acid 25%	2
Aluminum Nitrate	1	Hydrogen Peroxide, 30%.....	1
Aluminum Sulfate.....	1	Lactic Acid, 50%	1
Ammonium Hydroxide	1	Lactic Acid, 85%	2
Ammonium Nitrate	1	Jet Fuel.....	1
Ammonium Sulfate	1	Isopropyl Alcohol	1
Aniline	3	Maleic Acid, 40%	2

Barium Chloride	1	Methanol.....	2
Barium Hydroxide	1	Methylene Chloride.....	3
Barium Sulfide	1	Methyl Ethyl Ketone.....	4
Beer	1	Nitric Acid, 15%	*1
Benzene.....	1	Oleic Acid	1
Brake Fluid.....	1	Phosphoric Acid, 85%	1
Boric Acid.....	1	Potassium Chloride	1
N-Butyric Acid, 50%.....	3	Potassium Cyanide.....	1
Calcium Chloride	1	Potassium Hydroxide.....	1
Calcium Hydroxide.....	1	Potassium Nitrate	1
Calcium Nitrate	1	Potassium Sulfate.....	1
Calcium Sulfate.....	1	Skydrol.....	1
Chloroform	1	Sodium Hydroxide, 50%	1
Chromic Acid, 50%	*1	Sodium Chloride	1
Citric acid, 50%.....	1	Sulphuric Acid, 50%	*1
Cola Syrup	1	Tetrahydrofuran.....	3
Copper Chloride.....	1	Tolulene.....	1
Copper Nitrate	1	Trichlorethylene	3
Copper Sulfate.....	1	Trichlorethane.....	1
Diesel Fuel.....	1	Urea.....	1
Ethyl Acetate	1	Xylene.....	1
Ethyl Alcohol	1		

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
1. Inspect surfaces to receive epoxy flooring.
 2. Moisture testing must be done prior to flooring installation. Both calcium chloride testing (ASTM-1869) and relative humidity probe testing (ASTM-2170) must be done. Report test results to 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. Surfaces to receive flooring system shall be abraded to a minimum of 10 mil profile using shot blasting. Surface shall have a roughness between 80 and 100 grit sandpaper.
- 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 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. If waterproofing is required, apply elastomeric Polyurethane 300 according to manufacturer's instructions to achieve a 40 mil membrane.

- D. Install coved base if required to a thickness of 1/8" to 1/4". Cove shall be 4" to 6" high with 3/4" to 1" radius and terminated with a metal or plastic edge strip. Cove shall be reasonably smooth and uniform in appearance to provide an easily cleaned surface. The seam between the coved base and the wall shall be sealed with an elastomeric polyurethane caulking.
 - E. Flooring system shall be installed using the slurry broadcast to achieve the specified thickness.
 - 1. Primer shall consist of Epoxy 100 applied at 200-250 sq. ft. per gallon.
 - 2. Slurry shall consist of Epoxy 600 and APF slurry filler. For each gallon of liquid resin, 7-14 pounds of slurry filler must be added. The slurry shall be applied at 30 sq. ft. per gallon.
 - 3. Broadcast aggregate for the first broadcast may be 20-30 mesh Monterey-type sand or 20 or 30 mesh silica sand.
 - 4. Topcoat of Epoxy 600 shall be applied at 80-125 sq. ft. per gallon.
 - F. If the floor has been installed over true expansion joints, saw cut through the finished floor and caulk the joints with elastomeric polyurethane caulk.
- 3.04 FIELD QUALITY CONTROL
- A. Installer shall monitor the thickness of the system as the work progresses. Areas found to not meet the required thickness shall receive additional material until specified thickness is attained.
- 3.05 PROTECTION
- A. Installation areas must be kept free from traffic and other trades during the application procedure and cure time.

END OF SECTION