

SECTION 09800

EPOXY/POLYURETHANE WALL COATING SYSTEM

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Surface preparation.
 - 2. Furnishing and installation of epoxy/polyurethane wall coating system as scheduled on drawings.

1.02 RELATED SECTIONS:

- A. Division 4 - Masonry: Masonry walls shall have neatly tooled and slightly concave joints.
- B. Section 09200 - Lath and Plaster: Surfaces shall be smooth troweled and free of irregularities.
- C. Section 92500 - Gypsum Board: Shall be taped and have smooth finish suitable for painting.

1.03 SUBMITTALS

- A. Submit manufacturer's product data and color charts.
- B. Submit manufacturer's samples showing the required texture. These samples shall serve as a basis for comparison throughout the duration of the work.

1.04 QUALITY ASSURANCE

- A. All resin used in the epoxy/polyurethane wall coating 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 3 years experience in the application of special wall coatings.
- 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 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 shall be supplied by Arizona Polymer Flooring Inc., Glendale, Arizona.
- B. Fiberglass materials shall be supplied by Composite Materials, Inc. or another suitable manufacturer.
- C. Fiberglass shall be either the continuous filament type known as "roving" or 3/4 oz. fiberglass mat and shall be compatible with the specified coating material.

2.02 MATERIALS

- A. Wall coating system shall consist of build coats of 100% solids Epoxy 400 Wall Coating and a finish coat of Polyurethane 100 or Polyurethane 500.
- B. Masonry block filler shall be a high solids vinyl acrylic supplied by Arizona Polymer Flooring.

2.03 SYSTEM DESCRIPTION

- A. Thickness of Coating System:
 - 1. Drywall or plaster walls: Minimum 30 mils.
 - 2. Masonry walls: Minimum 45 mils.
 - 3. Ceilings: Minimum 12 mils.
- B. Color and texture: Match selected sample(s).
- C. Cured resin binder shall meet the following minimum requirements:
 - 1. Tensile Strength, psi (ASTM D-638): 5,000 psi.
 - 2. Tensile Elongation (ASTM D-638): 25
 - 3. Compressive Yield Strength, psi (ASTM D-695): 7,075 psi.
 - 4. Hardness, Shore D (ASTM D-2240): 82
 - 5. Impact Resistance (ASTM D-2794): passes 120 inch pounds.
 - 6. Flexibility (Mandrel ASTM D-622): passes 1/8" without cracking.
 - 7. Tabor Abrasion (CS17 wheel, 1000 gm. load, 1000 cycles): 34 mg. loss
 - 8. Thermal Shock Resistance (ASTM C-884): passes.
 - 9. Flammability (ASTM D-635): self-extinguishing.
- D. Chemical Resistance: (ASTM D-1308 7-day exposure) Unaffected by the following:
 - 1. Blood
 - 2. Urine
 - 3. Mustard
 - 4. Alcohol
 - 5. Gasoline
 - 6. Brake Fluid
 - 7. Mineral Spirits
 - 8. 10% Sulfuric Acid
 - 9. 10% Hydrochloric Acid
 - 10. 10% Acetic Acid

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
 - 1. Inspect surfaces to receive epoxy/polyurethane wall coating system. Report in writing to the architect any unsatisfactory condition.
 - 2. Application of any material shall signify that surfaces have been inspected and are satisfactory.

3.02 SURFACE PREPARATION

- A. All surfaces to be coated shall be clean, dry and sound.

3.03 INSTALLATION

- A. Provide sufficient light, power, heat and working conditions to permit proper application of the materials. At no time shall the speed of the project completion be allowed to detrimentally affect the application.
- B. Installer shall protect all adjacent surfaces by masking and the use of drop cloths.
- C. Application over drywall or plaster:
 - 1. Apply uniform coat of Epoxy 400 Wall Coating at approximately 200 sq. ft. per gallon.
 - 2. Embed either chopped fiberglass or fiberglass mat uniformly into wet material.
 - 3. Roll fiberglass smooth with a wet roller and allow to cure overnight.
 - 4. Sand the surface to remove any projections and apply a second coat of epoxy at approximately 250 sq. ft. per gallon. Allow to cure overnight.
 - 5. Sand surface lightly and apply a third coat at approximately 300 sq. ft. per gallon. Allow to cure overnight.
 - 6. Apply finish coat of pigmented Polyurethane 100 or 500 at the rate of 350-400 sq. ft. per gallon. Color shall match the previously applied epoxy material.
- D. Application over masonry:
 - 1. Level any surface projections and mortar spatter by grinding, stoning or scraping.
 - 2. Apply block filler at the rate of 50-75 sq. ft. per gallon. Allow to cure overnight.
 - 3. Apply second coat of block filler at the rate of 75-100 sq. ft. per gallon. Allow to cure overnight.
 - 4. Apply Epoxy 400 Wall Coating at the rate of 250-300 sq. ft. per gallon. Allow to cure overnight.
 - 5. Apply second coat of Epoxy 400 Wall Coating at the rate of 250-300 sq. ft. per gallon.
 - 6. Apply finish coat of pigmented Polyurethane 100 or 500 at the rate of 350-400 sq. ft. per gallon. Color shall match the previously applied epoxy material.
- E. Application over ceilings:
 - 1. Apply Epoxy 400 Wall Coating at the rate of 300-325 sq. ft. per gallon. Allow to cure overnight.
 - 2. Apply second coat of Epoxy 400 Wall Coating at the rate of 300-325 sq. ft. per gallon.
 - 3. Apply finish coat of pigmented Polyurethane 100 or 500 at the rate of 350-400 sq. ft. per gallon. Color shall match the previously applied epoxy material.

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 desired thickness is attained.

3.05 PROTECTION

- A. Avoid heavy abrasion and chemical exposure for 72 hours.

END OF SECTION