SECTION 09725
DESIGNER EPOXY FLOORING
Miracote Chameleon Epoxy

PART 1.00 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Work of this Section as shown or specified shall be in accordance with the requirements of the Contract Documents.

1.02 WORK INCLUDED

A. Work of this Section includes all labor, materials, equipment and services necessary to complete epoxy flooring incorporating ceramic coated colored inorganic quartz aggregate and integral base as selected on drawings and/or specified herein.

1.03 RELATED WORK

A. Concrete - Section 03300

(Note to specifier: Concrete should be either water cured or cured using sodium silicate curing compounds only. Other types of curing compounds are generally not acceptable. Concrete should be cured for a minimum of 28 days. On grade floors should have functioning vapor retarder beneath slab.)

B. Floor drains - Division 15

(Note to Specifier: Floor drains, clean-outs etc. should be of the floor-flange type as manufactured for use with composition floors by most major drain manufacturers.)

1.04 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product Data: Submit manufacturer's technical data application instructions and general recommendations for decorative quartz epoxy flooring specified herein.

C. Samples for initial selection purposes in form of manufacturer's color charts showing range of standard colors available.

1. Submit 2-1/2" x 4" samples in color and flake aggregate combination as selected.

D. Material certificates signed by manufacturer certifying that the designer epoxy flooring submitted complies with requirements specified herein.

E. Maintenance Instructions: Submit manufacturer's written instructions for recommended maintenance practices.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer or applicator who has specialized in installing resinous flooring types similar to that required for this Project and who is acceptable to manufacturer of primary materials.

B. Single-Source Responsibility: Obtain epoxy component of flooring materials, including primers, resins, hardening agents, and finish or sealing coats, from a single manufacturer. Obtain ceramic-coated quartz aggregate from primary manufacturer of that product.

1.06 DELIVERY STORAGE AND HANDLING

A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels containing brand name and directions for storage and mixing with other components.

B. Store materials to comply with manufacturer's directions to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects.

1.07 PROJECT CONDITIONS

A. Environmental Conditions: Comply with epoxy resin composition flooring manufacturer's directions for maintenance of ambient and substrate temperature, moisture, humidity, ventilation, and other conditions required to execute and protect work.

B. Lighting: Permanent lighting will be in place and working before installing designer epoxy flooring.

PART 2:00 - PRODUCTS

2.01 MATERIALS

A. Designer epoxy flooring shall be Miracote Chameleon system as manufactured by Crossfield Products Corp., Rancho Dominguez, California; or, Roselle Park, New Jersey.

2.02 PROPERTIES

A. Colors: As indicated, or if not otherwise indicated, as selected by Architect from manufacturer's standard color combinations.

B. Physical Properties: Provide flooring system that meets or exceeds the listed minimum physical property requirements when tested according to the referenced standard test method in parentheses.

Compressive Strength
Complete System (ASTM C-109) 8,556 psi.
Resin Component (ASTM D-695) 12,900 psi.

Surface Hardness (ASTM D-2240) Durometer D 85

Aggregate Hardness (Moh's Mineral Scale) 6 1/2-7

Indentation Characteristics (MIL-D-3134)
Para. 4.7.4.2.1-Steadily Applied Load) 0.005 indentation

Impact Resistance (MIL-D-3134) 0.011 indentation
Para.(4.7.3) No cracking, loss of bond

Adhesion (ACI Comm. 503.1-92) 345 psi. (100% failure in concrete)

Water Absorption (MIL-D-3134) Less than 1%

Abrasion Resistance (ASTM C-501) 19 Wear Index (H-22 Wheel)

Tensile Strength (ASTM D-638) 4,400 psi.
Resin Component
Elongation (ASTM D-638) 19.6%
Resin Component

2.03 SUPPLEMENTAL MATERIALS

A. Waterproofing Membrane: Type recommended or produced by manufacturer of epoxy resin composition flooring system for type of service and floor condition indicated. **(Note to Specifier: The use of waterproof membrane is optional and is generally confined to suspended floors and in rooms having floor drains and subject to very wet spillage and service. All areas requiring membrane treatment should be clearly shown on plans and finish schedules.)**

B. Anti-Microbial Additive: Incorporate antimicrobial chemical additive to control growth of most bacteria, fungi, algae and actinomycetes. **(Note to Specifier: The use of antimicrobial additive is optional. Its use poses no health hazard.)**

PART 3.00 - EXECUTION

3.01 INSPECTION

A. Examine the areas and conditions where decorative flake epoxy flooring is to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Architect.

3.02 PREPARATION

A. Substrate: Perform preparation and cleaning procedures according to flooring manufacturer's instructions for particular substrate conditions involved and as specified. Provide clean, dry, and neutral substrate for flooring application.

B. Concrete Surfaces: Shot-blast, acid etch or power scarify as required to obtain optimum bond of flooring to concrete. Remove sufficient material to provide a sound surface, free of laitance, glaze, efflorescence, and any bond-inhibiting curing compounds or form release agents. Remove grease, oil, and other penetrating contaminates. Repair damaged and deteriorated concrete to acceptable condition. Leave surface free of dust, dirt, laitance, and efflorescence.

C. Materials: Mix epoxy resin components when required, and prepare materials according to flooring system manufacturer's instructions.

3.03 APPLICATION

A. General: Apply each component of designer epoxy flooring system according to manufacturer's directions to produce a uniform monolithic flooring surface of thickness indicated.

B. Designer Coats: Apply liberal application of designer pigmented epoxy resin mixture, allow to self-level, optional spray (by hand or spray machine) dispersing agent and allow to set to hard. Process will achieve total nominal thickness of 1/32"-1/8" depending on the design chosen.

C. Finish or Sealing Coats: After designer coat has cured sufficiently, apply finish coats of type recommended by flooring manufacturer to produce finish matching approved submittal sample and in number of coats and spreading rates recommended by manufacturer.

1. Finished floor shall be 1/32"-1/8" thick and free of roller marks.

3.04 CURING, PROTECTION AND CLEANING.

A. Cure decorative epoxy flooring materials according to manufacturer's directions, taking care to prevent contamination during application stages and before completing curing process. Close application area for a minimum of 24 hours.

END OF SECTION