

SECTION 09705
URETHANE CEMENT COMPOSITION FLOORING
Dex-O-Tex Tek-Crete SL-CF Color Flake Chip Finish

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 the urethane cement composition flooring and integral base as scheduled on the 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 the urethane cement composition flooring specified herein.
- C. LEED Submittals:
1. Product Data for Credit MR 4.1 and Credit MR 4.2: For products having recycled content, submit documentation indicating percentages by weight of postconsumer and preconsumer recycled content.
 - a. Include statement indicating costs for each product having recycled content.
 - b. Include LEED Product Information Form for LEED Credits MR 4.1 and 4.2.
 2. Product Data for Credit EQ 4.2: For field applied, interior, paints coatings and primers, include printed statement of VOC content indicating compliance with Credit requirements.
 - a. Include LEED Product Information Form for LEED Credit EQ 4.2.
 3. Provide additional documentation for products as required to achieve each Credit(s).
- D. Samples for initial selection purposes in form of sample of red, gray or natural pigmented Tek-Crete
1. Submit 2-1/2" x 4" samples in color (red or gray) the selection shall be designated by the Architect.
- E. Samples for Verification: For each resinous flooring system or color specified, Provide 2 each, 6 inches (150mm) square samples in the selected color and texture, applied to a ridged backing by the installing contractor for this project.
- F. Material certificates signed by manufacturer certifying that the urethane cement composition flooring supplied for the project complies with requirements specified herein.

- G. Maintenance Instructions: Submit manufacturer's written instructions for recommended maintenance practices.
- H. Contractor Certification: Submit a letter from the primary materials manufacturer certifying that the installing contractor has been properly trained in the application of the materials being installed, is acceptable to the materials manufacturer, with a record of successful in-service performance.
 - 1. Engage an installer who employs only persons trained and approved by the resinous flooring manufacturer for applying resinous flooring systems specified.
 - 2. Engage an installer who is certified in writing by the resinous flooring manufacturer as a factory trained applicator qualified to apply the specified resinous flooring system.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer or applicator that 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 urethane cement composition flooring materials, including primers, resins, hardening agents, and finish or sealing coats, from a single manufacturer. Provide secondary materials, including patching and fill materials, joint sealant, accessory items, and repair materials. Of a type and from a source recommended by the manufacturer of the primary materials
- C. Qualified Materials: Request for material approvals for any products other than the specified products must be submitted to the architect two weeks prior to the bid, including complete application specification, physical characteristics, and chemical resistance data. Any request after this date will not be accepted. Failure of performance requires immediate removal and replacement of unapproved substituted material with those originally specified at no cost to the owner, architect, construction manager, or general contractor.
- D. Mockups: Apply mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set the standard of quality for materials and installation.
 - 1. Apply all components of the specified resinous flooring system at the specified thickness and finished in the texture and color as selected. Apply a minimum 100 square feet area to simulate the actual installation characteristics. Include areas that demonstrate the finished cove base, joint detailing, terminations or any other special conditions.
 - 2. Simulate finished lighting conditions for Architects review of mockups.
 - 3. Approved mockups may become part of the completed work if undisturbed at the time of substantial completion.

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 urethane cement 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 resinous flooring.
- C. Moisture Vapor Transmission: Perform Calcium Chloride test in conformance to ASTM F1869 or In Situ relative humidity test conforming to ASTM F2170 to determine moisture vapor emission levels prior to application of any component of the flooring system. Do not install flooring over

substrate with MVT emission levels in excess of 14 lbs. per 24 hour period over a 1000 square foot area or with a relative humidity in excess of 88%. Notify the architect immediately if MVT or rh levels exceed these levels.

PART 2.00 - PRODUCTS

2.01 MATERIALS

- A. Troweled urethane cement composition flooring shall be Dex-O-Tex Tek-Crete SL-CF as manufactured by Crossfield Products Corp. in Rancho Dominguez, California and Roselle Park, New Jersey.

2.02 PROPERTIES

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

B. Physical Properties:

Provide flooring system that meet or exceed the listed minimum physical property requirements when tested according to the referenced standard test method in parentheses.

Compressive Strength (ASTM C579)	8,100 psi
Thermal Distortion (250°F Emersion).....	Passes
Tensile Strength (ASTM C307).....	1,000 psi
Flexural Strength (ASTM C580).....	2,000 psi
Thermal Co-Efficient of Thermal Expansion (ASTM C531).....	1.4x10 ⁵
Density (ASTM C905)	130 lbs/ft ³
Water Absorption (MIL PRF-3134).....	0.64%
Surface Hardness (ASTM D2240)	85- 90 Durometer "D"
Abrasion Resistance (ASTM D1044).....	0.0 gr.
Adhesion (ASTM D4541).....	>400 psi (100% failure in concrete)
Flammability-Critical Radiant Flux (ASTM E648).....	Greater than 1.07 watts/cm ²
Resistance to Fungal Growth (ASTM G21)	Passes Rating 1

PART 3.00 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions where the urethane cement composition 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.
- B. Moisture Test: Perform moisture test in conformance with ASTM F 1869 and ASTM F 2170

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, 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 contaminate. Prepare substrate in accordance with SSPC SP 13. Repair damaged and deteriorated concrete to acceptable condition. Leave surface free of dust, dirt, laitance, and efflorescence.
- C. Materials: Mix resin hardener and aggregate as required, and prepare materials according to flooring system manufacturer's instructions.

3.03 APPLICATION

- A. General: Apply each component of urethane cement composition flooring system according to manufacturer's directions to produce a uniform monolithic flooring surface of thickness indicated.
- B. Body Coat: Over prepared surface, Screed mortar mix at nominal 3/16" – 1/4"-inch thickness as specified. Allow material flow out and begin to settle. Back roll with a spike roller or looped roller as appropriate to distribute material to a smooth even finish.
- C. Color Flake Chip Broadcast: Broadcast selected colored flake chip aggregate blend into the wet Body Coat. Apply to an even distribution and texture, allow to cure.
- D. Remove Excess Chip Aggregate: Remove all loose or unsound colored flake chip aggregate from the cured surface. Vacuum up all dust and fine particles from the surface, remove any ridge lines and detail all imperfection in the textured surface.
- E. Apply the selected clear seal coats as recommended to produce a surface matching the submittal sample and project mock-up samples.
- F. Cove Base: Apply cove base mix to wall surfaces at locations shown to form cove base height of 4 inches unless otherwise indicated. Follow manufacturer's printed instructions and details including taping, mixing, troweling, and sanding, of cove base.

3.04 CURING, PROTECTION AND CLEANING

- A. Cure urethane cement composition 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

DEX-O-TEX PRODUCT LINE
Crossfield Products Corp.
www.dexotex.com

3000 E. Harcourt Street
Rancho Dominguez, CA 90221
Tel: (310) 886-9100
Fax: (310) 886-9119

140 Valley Road
Roselle Park, NJ 07204
Tel: (908) 245-2800
Fax: (908) 245-2583