SECTION 03 39 30

CONCRETE FLOOR SEALING AND HARDENING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Sealer and dustproofer for new and existing exposed concrete floors.

B. Related Sections:
   1. Division 03 Section “Cast-in-place Concrete” for new concrete.

C. References:

1.02 SUBMITTALS

A. Product Data: Manufacturer’s literature to include surface preparation, application instructions, recommendations and storage and handling requirements.

B. Test Data: Confirm compliance and performance with specified requirements.

C. Closeout Submittals:
   1. Manufacturer’s warranty document: Issued and executed by manufacturer of sealer-hardener.

D. LEED Submittals:
   1. Credit EQ 4.2 - VOC Content:
   2. Submit product data and material safety data sheets (MSDS) for paints and coatings used on the interior of the building indicating chemical composition and VOC content of each product used.

1.03 QUALITY ASSURANCE

A. Applicator Qualifications: Applicator must have prior experience applying specified product or similar products, or have manufacturer’s representative on site ensuring that preparation and application are performed correctly.

B. Regulatory Requirements: Products shall comply with federal, state, and local volatile organic compounds (VOC) regulations.
1.04 DELIVERY, STORAGE, AND HANDLING

A. Store products of this section in manufacturer's unopened packaging until installation.

B. Maintain storage area conditions for products of this section in accordance with manufacturer's instructions until installation.
   1. Do not allow materials to freeze. Store at temperatures between 35 degrees F and 125 degrees F.

1.05 PROJECT CONDITIONS

A. Environmental Conditions: Do not apply material when temperature is below 45 deg F or when temperature is expected to fall below 45 deg F within 48 hours, unless recommended by the manufacturer.

B. Do not apply sealer-hardener when rain is predicted within 24 hours after surface has been wet.

C. Do not apply sealer-hardener in high or gusty winds.

1.06 WARRANTY

A. Provide manufacturer's limited warranty against failure of sealer-hardener installation due to failure of sealer-hardener material for a period of 5 years from the Date of Substantial Completion.

PART 2 - PRODUCTS

2.01 LOCAL / REGIONAL MATERIALS

A. Preference shall be given to supplier whose facilities are within a 500 mile radius of the project site.

B. Preference shall also be given to materials that are harvested, extracted, mined, quarried, manufactured, etc. within a 500 mile radius of the project site.

2.02 PRODUCTS

A. Existing Interior Concrete Surfaces:
   1. Basis of Design: Subject to compliance with requirements, provide "US SPEC Hydrasheen 30%" as manufactured by U.S. Mix: www.usspec.com, or comparable products manufactured by one of the following:
      a. Textured Coatings of America, Inc.: www.texcote.com
      b. SEAL-KRETE, Inc.: www.seal-krete.com

CONCRETE FLOOR SEALING AND HARDENING
03 39 30 - 2
2. Concrete Sealing Compound for use on Existing Interior Concrete Surfaces:
   a. Type: Water-based, acrylic curing and sealing compound for existing interior floor surfaces. Minimum 30% solids content.
   b. Compliance: ASTM C-309 Type I, Class A. Meets maximum VOC content of 700 gm/L in accordance with EPA 40 CFR Part 59.

B. New Interior Concrete Surfaces:
   1. Basis of Design: Subject to compliance with requirements, provide "US SPEC CS-25-1315" as manufactured by U.S. Mix: www.usspec.com, or comparable products manufactured by one of the following:
      a. Textured Coatings of America, Inc.: www.texcote.com
      b. SEAL-KRETE, Inc.: www.seal-krete.com
      c. Interstate Products, Inc. www.interstateproducts.com
   2. Concrete Sealing Compound for use on New Interior Concrete Surfaces:
      a. Type: Solvent-based, non-yellowing, VOC compliant, concrete sealing compound with acrylic polymers.
      b. Compliance: ASTM C-309, Type I, Class B, ASTM C-1315 Type I, Class A. Minimum 25% solids content. Must be VOC compliant in accordance with EPA 40 CFR Part 59.

PART 3 - EXECUTION

3.01 EXAMINATION

   A. Verify that substrates to receive sealer-hardener are in condition consistent with manufacturer's instructions.

3.02 PREPARATION

   A. Protect adjacent surfaces to prevent accidental application to surfaces not indicated to receive sealer-hardener; remove accidental applications from surfaces immediately, following manufacturer's instructions.

   B. Preparation of pre-existing surfaces:
      1. Remove loose or deteriorated materials, including, but not limited to, scale, spalling, oil, paint, or other coatings.
      2. Clean with detergent-based materials, as recommended by manufacturer's instructions; cleaning with solvent-based or oil-based cleaners is prohibited.

   C. All control, crack and expansion joint sealing should be done prior to the application of the sealer-hardener.
3.03 APPLICATION

A. Apply sealer-hardener in accordance with manufacturer's instructions for indicated project conditions; for multi-coat applications, allow specified curing time between subsequent coats.

B. Addition of materials to sealer-hardener is prohibited, except as recommended by manufacturer.

C. Mix material to redistribute any settled ingredients. Apply directly from the can, with no thinning. Do not apply to concrete receiving toppings, epoxy coatings, urethane coatings, or epoxy adhesives.
   1. Apply to horizontal cast-in-place concrete surfaces as indicated, either by spray or roller:
      a. Prime Coat: Apply to concrete surfaces at a uniform rate in accordance with manufacturer’s instructions.
         1) Allow prime coat to dry at least 1/2 hour before the top coat is applied.
      b. Top Coat: Apply to concrete surfaces at a uniform rate in accordance with manufacturer’s instructions.
         1) Apply top coat at right angle to prime coat.

3.04 CONSTRUCTION WASTE MANAGEMENT

A. Construction waste shall be managed in accordance with provisions of Division 01 Section “Construction Waste Management and Disposal”. Documentation shall be submitted to satisfy the requirements of that section.

END OF SECTION