

**LEVEL TOP STAIN**

***Easy-to-use, self-leveling re-surfacing compound, designed for use on either new or worn concrete substrates. LEVEL TOP STAIN’s acrylic polymer modification provides excellent adhesion, toughness, and long-term durability. LEVEL TOP STAIN can be , dyed, stained, and epoxy coated for a decorative finish.***

***{Note to Specifier: The paragraphs below are meant to be incorporated into Parts 1, 2 and 3 of a standard CSI 3 Part Format specification, project’s General Structural Notes or directly onto the plans. They must be carefully reviewed by a qualified design professional and edited to meet the particular requirements of the project at hand, assure compliance with any governing building codes, and coordinate with other specification sections and drawings.}***

SECTION 09 94 00 – POLYMER MODIFIED CEMENTITIOUS OVERLAY

PART 1: GENERAL

1.1\_\_ SUMMARY

1. This section includes: Existing concrete surfaces treated with polymer modified cementitious overlay system.

1.2\_\_ RELATED SECTIONS

1. The following sections contain requirements that relate to this section:
   1. <Insert Sections>

1.3\_ SUBMITTALS

***EDIT NOTE; Retain text below if a cementitious stainable overlay is being specified.***

1. Product Data: Submit product data and samples for proprietary materials and items, including polymer modified cementitious overlay system, stains, sealers, and others requested by Architect.
2. Samples: Submit cementitious overlay manufacturer’s color chart and sample color chips for color selection or if selection has been made submit sample chips of specified colors.
3. Approved Installer Certificate/Letter: Provide letter of certification from the polymer modified cementitious overlay manufacturer stating that installer is a certified applicator of the specified concrete finish material and is familiar with proper procedures and installation requirements required by manufacturer.

1.4\_\_ QUALITY ASSURANCE

1. All Bonding Agents, Polymer Modified Cementitious Overlay, Stains, Joint Sealers and Clear Sealer components shall originate from a single source manufacture.
   * 1. Manufacturer of all system components shall be ISO-9000 certified.
2. Decorative Concrete Installer Qualifications:

***EDIT NOTE; Insert number of desired applications to qualify contractor***

* + 1. Minimum of [5] decorative concrete finish applications within last 3 years similar in type and size to Work of this Contract.
    2. Assign experienced mechanics from previous applications including lead mechanic. These personnel shall be on site at all times while work is being performed.

***EDIT NOTE; Insert desired mock-up dimensions below. Minimum 4’ x 4’ recommended.***

1. Field-Constructed Mockup: Prior to installation of cementitious overlay work, erect sample panel in place to further verify color selections and finishes. Provide <insert dimensions>, full-scale mock-up in area designated by architect/engineer. Mockup shall demonstrate each color, pattern, forming method, finishing method and finishing condition, joint treatments, protective sealers, and all workmanship including same personnel and techniques to be used throughout Project. Any concrete to receive polymer modified cementitious overlay must be at least 28 days old prior to treatment.
   * 1. Retain mock-up for comparison with materials used in remaining work.
     2. When Architect determines that mockup does not meet requirements, demolish and remove it from the site and cast another until the mockup is accepted.
     3. Keep accepted mockup undisturbed during construction as a standard for judging completed work.
     4. Mockup may be incorporated into the Work, when directed by Architect
2. Pre-installation Conference: At least 7 to 10 days prior to cementitious overlay installation, the contractor shall hold a meeting to obtain owner/architect approval of mockup, and to discuss application methods and procedures to meet the specifications. The contractor shall send a pre-installation agenda to all attendees 10 days prior to the scheduled date of the conference. Representatives from each entity directly concerned with polymer modified cementitious overlay installation shall participate, including but not limited to the following;
   * 1. Contractor's superintendent.
     2. Bonding Agent Manufacturer
     3. Representative of cementitious overlay manufacturer
     4. Cementitious Overlay Applicator
     5. Owner/Architect Representative

1.5\_ DELIVERY, STORAGE AND HANDLING

1. Obtain each material from the same source to maintain a high degree of consistency in workmanship throughout Project.
2. Store cementitious overlay materials in a dry area with a temperature above freezing and per manufacturers published instructions.

PART 2: PRODUCT

2.01\_\_ POLYMER MODIFIED CEMENTITIOUS OVERLAY SYSTEM

A. Polymer Modified Cementitious Overlay Topping: Prepackaged, cement based, single component, self-leveling cementitious topping designed for interior application and providing a minimum compressive strength of 4,000 psi. at 28 days when tested in accordance with ASTM C 109 and maximum shrinkage of -0.046% at 28 days when tested in accordance with ASTM C157.

1. Product:
   1. LEVEL TOP STAIN by Increte Systems a subsidiary of Euclid Chemical ([www.euclidchemical.com)](http://www.euclidchemical.com))

**Note to Specifier: LEVEL TOP STAIN cures to a light concrete gray finish. It can be colored utilizing Increte COLOR-CRETE integral colors or stained utilizing one of Increte’s surface applied stains. Insert language below if product is to be integrally colored.**

[2. Colors: **<<Insert color chosen from Increte** [**COLOR-CRETE color chart**](http://www.increte.com/engineered-systems/cast-in-place/increte/integral-color-gallery-increte/)**>>]**

**Note to Specifier: LEVEL TOP STAIN cures to a light concrete gray finish. It can be colored utilizing Increte COLORCRETE integral colors or stained utilizing one of Increte’s surface applied stains. Insert Article 2.02 below and choose desired stain product.**

2.02\_\_ SURFACE APPLIED STAIN

***Note to Specifier: Stain-Crete chemically reacts with cured concrete, Level Top Stain or Micro-Crete to provide a distinctive permanent color with a subtly shaded marbled effect similar to the look of aged natural stone. Stain-Crete's variegated finish will not peel, crack, chip, or fade. Insert language below if Stain-Crete will be applied to the surface.***

[A. Acid Based Stain: Pre-packaged acid based stain containing colorfast metallic salts

1. Product:
   1. STAIN-CRETE by Increte Systems a subsidiary of Euclid Chemical ([www.euclidchemical.com)](http://www.euclidchemical.com))
2. Colors: Chosen by architect from manufacture’s standard colors.] Stain-Crete Color Gallery

***Note to Specifier: Vibra-Stain is a uniquely blended solution of dyes that is diluted with water to create deeply penetrating vibrant semi-transparent color for cementitious surfaces.***

[A. Water Based Stain: Blend of concentrated powdered-metallic dye formulated for dilution with water.

1. Product:
   1. Vibra-Stain by Increte Systems a subsidiary of Euclid Chemical [www.euclidchemical.com](http://www.euclidchemical.com)
2. Colors: Chosen by architect from manufacture’s standard colors.]

***Note to Specifier: Vibra-Stain SB is a uniquely blended solution of dyes that is diluted with water to create deeply penetrating vibrant semi-transparent color for cementitious surfaces.***

[A. Solvent Based Stain: Blend of concentrated powdered-metallic dye formulated for dilution with acetone.

1. Product:
   1. Vibra-Stain SB by Increte Systems a subsidiary of Euclid Chemical [www.euclidchemical.com](http://www.euclidchemical.com)
2. Colors: Chosen by architect from manufacture’s standard colors.]

2.2\_\_ CLEAR SEALER SYSTEM

***Note to Specifier: Current clear sealer choices for LEVEL TOP STAIN are as follows; Choose desired sealer and insert appropriate language.***

1. ***CLEAR SEAL Decorative Acrylic Concrete Sealer: This membrane forming sealer system would consist of (2) coats of a high quality, acrylic clear sealer. It will be suitable for low wear areas receiving foot traffic, and occasional vehicular traffic.***
2. ***HIGH PERFORMANCE EPOXY and WB URETHANE Wear Resistant Epoxy/Urethane Coating: This highly wear resistant system combines epoxy and urethane coatings to provide long lasting protection to the surface. It should be suitable for most, commercial use environments where LEVEL TOP STAIN has been utilized.***
3. ***HIGH GLOSS WAX is a clear, durable, acrylic wax that leaves a beautiful high-gloss finish that when properly maintained resists surface abuse, heel marks, stain, and abrasion. HIGH GLOSS WAX can be buffed to maintain a high gloss finish and should be used to maintain the clear sealer systems shown above.***

***EDIT NOTE: Retain paragraph below for stained areas in low to moderate wear areas.***

**[A. Decorative Acrylic Concrete Sealer: Decorative clear sealer system consisting of (2) coats of clear acrylic sealer.**

**1. Product:**

**a. CLEAR SEAL by Increte Systems a subsidiary of Euclid Chemical (www.increte.com)]**

***EDIT NOTE: Retain paragraph below for interior, high wear, commercial use, type areas.***

**[A. Wear Resistant Clear Epoxy/Urethane Coating System: Two coat system consisting of one coat of epoxy coating followed by one coat of V.O.C. compliant, polyurethane floor coating.]**

**1. Epoxy Coating: 2 part epoxy coating with minimum 100% solids, and exhibiting maximum 32 mg of loss when tested for abrasion resistance utilizing Taber Abrader CS-10 Wheel with 1,000 gm/1,000 cycles.**

**a. Product:**

**1) HIGH PERFORMANCE EPOXY Clear by Increte Systems a subsidiary of Euclid Chemical (www.increte.com)**

2. **Water-Based Urethane Coating: (2) component, aliphatic, water-based, urethane coating with minimum 56% solids containing less than 25 g/l VOC.**

**a. Product:**

**1) W/B URETHANE by Increte Systems a subsidiary of Euclid Chemical (www.euclidchemical.com)**

B. Protective Wax Based Finish for Stained and Sealed Floors: Provide durable acrylic wax that is heel mark, stain, and abrasion resistant and can be buffed to maintain a high gloss finish. Shall be manufactured by same manufacturer as polymer modified cementitious overlay manufacturer.

1. Product:

a. HIGH GLOSS WAX by Increte Systems a subsidiary of Euclid Chemical (www.euclidchemical.com

2.03\_\_ ACCESSORIES

A. Rewettable Latex Bonding Agent: Provide rewettable high build, ethylene vinyl acetate bonding agent manufactured by polymer modified cementitious overlay manufacturer.

1. Product:

a. TAMMSWELD or BOND-CRETE by Euclid Chemical; (www.euclidchemical.com)

1. Crack Repair Epoxy: Two component, 100% solids, moisture insensitive, ASTM C881 compliant, high modulus epoxy resin.

1. Product:

1. DURAL 452 LV by Euclid Chemical [www.euclidchemical.com](http://www.euclidchemical.com)

PART 3: EXECUTION

3.01\_\_ SURFACE PREPARATION

A. New concrete must be a minimum 28 days old prior to commencement of operations.

B. Concrete surfaces must be structurally sound and free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and other contaminants. Mechanically abrade the surface by shot-blast to achieve a surface profile equal to CSP 4-6 in accordance with ICRI Guideline 310.2.

C. Perimeter Keyway: Cementitious Overlay shall be keyed into base slab at perimeter and all terminations by saw cutting a ¼” inch deep key way into the base slab.

D. Cracks and Joints:

1. Prepare, treat, rout, and fill all non-moving cracks over 1/16” in width, with specified Crack Repair Epoxy, according to manufacturer’s written recommendations.

2. All joints, and control joints are to be brought up through the over-lay and sealed with the specified polyurethane sealant approved by manufacturer.

3. Comply with recommendations in ASTM C 1193 for joint-sealant installation.

3.02\_\_ REWETTABLE LATEX BONDING AGENT APPLICATION

A. First coat of rewettable latex bonding agent shall be diluted 1 to 1 with water, thoroughly mixed and applied per manufacturer’s published recommendations.

1. Excessively absorptive surfaces may require multiple coats of diluted material. If treated surface dries within 20 minutes continue treating with diluted material until dry time exceeds 20 minutes.

B. Second Coat of rewettable latex bonding agent shall be applied undiluted per manufacturer’s published recommendations.

3.03\_\_ POLYMER MODIFIED CEMENTITIOUS OVERLAY APPLICATION

A. Mix Cementitious Overlay grout per manufacturer’s published recommendations.

B. Pour mixed Cementitious Overlay material onto the surface and spread with gauge rake to thickness indicated on drawings. Smooth with Magic Trowel as needed.

***Edit Note: Insert article below if stain is to be applied.***

3.04\_\_ STAIN APPLICATION

A. Polymer modified cementitious topping shall be minimum 24 hours old at time of sealer application

B. Mask adjoining surfaces not receiving concrete stain to prevent over-spray, spillage, leaking, and migration of stains.

C. Apply specified stain per manufacturer’s published recommendations. Number or required coats shall be as determined at time of mock up application.

3.05\_\_ Clear Sealer Application

1. Polymer modified cementitious topping shall be minimum 24 hours old at time of sealer application.

***EDIT NOTE: Retain paragraph below if Decorative Acrylic Clear Sealer System is specified***

**[A. Decorative Acrylic Clear Sealer System:**

**1. Acrylic Sealer Application: After fully cleaned and flushed, stained surface has been allowed a minimum of (12) hours to dry, apply (2) coats of specified acrylic sealer per manufacturer’s published recommendations.]**

***EDIT NOTE: Retain paragraph below if wear resistant epoxy/urethane coating system is being specified.***

**[B. Wear Resistant Clear Epoxy/Urethane Coating System:]**

**1. Epoxy Coating Application: Following manufacturer’s written instructions on literature, apply epoxy coating at approximately 160 sq. ft. per gallon, for a total of 10 mils dry film thickness.**

**2. Urethane Coating Application: After epoxy coating has become tack free, but no more than 24 hours after application, apply specified urethane coating per manufactures written recommendations at approximately 500 to 750 sq. ft. per gallon (0.5 to 1 mil dry film thickness)]**

3.05\_\_ PROTECTIVE WAX APPLICATION

1. Apply specified protective wax per manufacturer’s published instructions utilizing a wax applicator, microfiber, or lamb’s wool mop.

3.06\_\_ ACCEPTANCE

A. Upon completion, the quality of the finishes shall meet and match the qualities, color renditions, texture, sheens and types of finished surfaces of the sample panels, which were reviewed and approved as quality control guides.

END OF SECTION 09 95 00