

# SPECIFICATION FOR ARCUSSTONECOAT™ OVER HORIZONTAL CONCRETE SLABS

## 2004 CSI MASTERFORMAT SECTION 099700 CEMENTITIOUS COATINGS

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Labor, materials, tools, equipment and services required for surface preparation and application of ArcusStonecoat coatings as specified and in locations scheduled.

#### 1.02 REFERENCES

- A. ASTM D 4263: Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.
- B. ASTM D 4258: Standard Practice for Surface Cleaning Concrete for coating.
- C. ASTM D 4260: Standard Practice for Acid Etching Concrete.
- D. ASTM D 4262: Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces.

#### 1.03 SYSTEM DESCRIPTION

- A. Products provided and installation by this Section are ArcusStone Products LLC and Professional Products of Kansas materials requiring applicable special expertise in surface preparation, application, and safety procedures.

#### 1.04 SUBMITTALS

- A. General: Submit in accordance with Section 013000
- B. Product Data:
  - 1. Submit manufacturer's literature fully describing each product.
  - 2. Include manufacturer's recommendations for mixing and application.
  - 3. Submit manufacturer's material safety data sheets.
- C. Samples:
  - 1. Submit manufacturer's standard colors for selection by Architect.
  - 2. Submit 24" x 24" samples of ArcusStonecoat system on ½" cement board to demonstrate compliance with texture, color, block pattern, and grout material and color, if applicable.

#### 1.05 QUALITY ASSURANCE

- A. Applicator Qualifications:
  - 1. If required by the governing jurisdiction, the Applicator shall be appropriately licensed.
  - 2. Applicator shall have attended an ArcusStone Products one day instruction session and shall employ craftsman experienced in horizontal installations of the ArcusStonecoat product on the project.
- B. Regulatory Requirements: Comply with applicable codes, regulations, ordinances, and laws regarding use and application of materials that contain volatile organic compounds (VOC).
- C. Pre-Application Conference: Prior to making field samples and placing order for materials, Architect, Contractor, and Applicator shall meet and agree on methods and schedule for application.

D. Mock-Ups:

1. Construct mock-up panel using materials specified for final work. Construct mock-up as directed, and of full thickness. Demonstrate the proposed range of color, texture, and workmanship to be expected in the completed work. Obtain Architect's acceptance of visual qualities of the sample panel.
2. Leave approved mock-up in place as part of completed work if mock-up can be incorporated into work in an acceptable manner.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original, factory-sealed, unopened, new containers bearing manufacturer's name and label intact and legible.
- B. Store materials in a dry, well ventilated area at temperature between 40 and 90 degrees F. Materials should be under cover and off the ground.
- C. Do not stack ArcusStone materials over 2 pallets in height for extended periods.

1.07 PROJECT CONDITIONS

- A. Apply coating materials only under following prevailing conditions:
  1. Air and surface temperatures shall not exceed minimum or maximum requirements for product to be applied during application and curing of system components. (50 to 90 degrees F, unless otherwise stated on product data sheet). Provide temporary heat / cooling and sun / wind protection, if necessary. Maintain specified temperature range not less than 24 hours before beginning application and not less than 72 hours after completing application.
  2. Do not apply coatings to frozen surfaces or surfaces containing frost.
  3. Relative humidity that is not above 85 percent and surface temperature that is at least 5 degrees F above the dew point at the time of application and for a minimum of 24 hours after application.
  4. Wind velocity must be less than 20 mph (for exterior applications).
- B. Coordinate ArcusStonecoat coatings work with other trades to ensure adequate illumination, ventilation, and dust-free environment during application and curing of ArcusStonecoat coatings.
- C. Protect adjoining surfaces not to be coated against damage or soiling.
- D. Maintain work area in a neat and orderly condition, removing empty containers, rags, and rubbish daily from the site.

**PART 2 PRODUCTS**

2.01 MANUFACTURERS

- A. Provide products manufactured by or approved by ArcusStone Products LLC, 180 Harbor Drive, Suite 200, Sausalito, CA 94965. Ph (415) 339-4060, Fax (415) 339-4065. Web Address: [www.arcusstone.com](http://www.arcusstone.com); E-mail: [info@arcusstone.com](mailto:info@arcusstone.com).
- B. Provide products manufactured by Professional Products of Kansas, Inc., 4456 Clifton, Wichita, KS 67216. Ph (800) 676-7346, fax (316) 522-9346. Web Address: [www.watersealant.com](http://www.watersealant.com); E-mail: [Vicky@watersealant.com](mailto:Vicky@watersealant.com). Substitutions will not be acceptable.

2.02 MATERIALS

- A. ArcusStonecoat 50 lb. bag.
- B. ArcusAdMix Acrylic Bonding Additive.
- C. ArcusBooster Latex Polymer Additive.
- D. ArcusStone Mineral Oxide Powdered Pigments.
- E. Professional Products of Kansas' Extra Strength Water Repellant Sealer.
- F. Muriatic Acid.
- G. TriSodium Phosphate, or equivalent, cleaner.

## 2.03 MIXING

- A. Mix ArcusStonecoat materials in strict accordance with manufacturer's latest printed instructions.
- B. Do not use materials that exceed manufacturer's recommended and printed shelf life.
- C. Review the ArcusStone Application Manual Climatic and Environmental Considerations Section and follow recommendations given.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify surfaces to be coated are dry, clean, and ready to accept bond coat in accordance with manufacturer's recommendations.
- B. Notify Architect in writing of unacceptable conditions prior to commencing application.
- C. Do not coat over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions other wise detrimental to formation of a durable coating film.
- D. Do not begin work until unsatisfactory conditions have been corrected.

### 3.02 GENERAL PREPARATION

- A. Protect surrounding and adjacent surfaces and vegetation not receiving the ArcusStonecoat topping, using protective plastic, tarps, Kraft paper, and non-residue tape.
- B. Scrape or grind protrusions flush with the surface.
- C. Dislodge dirt, mortar spatter, and other dry materials by scraping or brushing. Remove dust and loose material by brushing, sweeping, vacuuming, and/or blowing with clean, dry, high pressure air.
- D. Remove oil, wax, and grease by scraping off heavy deposits and cleaning with a trisodium phosphate solution followed by a clean water rinse.

### 3.03 SUBSTRATE PREPARATION

- A. Concrete Slab
  - 1. For optimum performance of the ArcusStonecoat, new concrete should be cured a minimum of 28 days at 75 degrees F Minimum thickness for concrete slabs for vehicular traffic should be 6", reinforced with a minimum 24" x 24" grid of #4 steel rebar. Other slabs can be 4" minimum thickness, with a 24" x 24" grid of #4 steel rebar.
  - 2. Obtain optimum surface profile before installing the ArcusStonecoat. Surface profile should be that of 80 grit sand paper. Obtain this profile by various methods such as blast cleaning, scarification, sand blasting or acid etching (ASTM D 4260). Check for proper PH after any acid etching (ASTM D 4262).
  - 3. Surface must be pressure washed before application with a machine rated at a minimum 3000 psi and at least 4.5 gpm. ArcusStone recommends the use of a turbo tip during this process.
  - 4. Level protrusions and remove other surface imperfections.
  - 5. Surfaces must be free of excessive moisture (ASTM D 4263), laitance, concrete dust, form release agents, curing compounds, loose cement, hardeners, dirt and other foreign material (ASTM D 4258).
  - 6. Remove all oil and grease with a solution of trisodium phosphate. Remove rust stains with a solution of sodium metasilicate being wetted thoroughly with water. Rinse well and allow to dry thoroughly.

### 3.04 APPLICATION

- A. BOND COAT - Mix the ArcusStonecoat using a 1 to 1 ratio of ArcusAdMix to water. Using a short, stiff bristle brush, scrub the bond coat of ArcusStonecoat material into the concrete substrate with good pressure and a circular motion. A minimum coating of 3/16" is required. DO NOT ALLOW BOND COAT TO DRY OR DEVELOP A SKIN prior to overlaying the finish coat of ArcusStonecoat. If a skin develops, scrape the skin off before application of additional ArcusStonecoat material. It is best to work in teams of three craftsmen, with the bond coat being applied ahead of the finish coat by one team, and the finish coat following by another team.
- B. FINISH COAT - Mix the ArcusStone finish coat following manufacturer's published guidelines, using a dosage of 6 ounces ArcusBooster per each 50 lb mix of ArcusStonecoat. Apply the ArcusStonecoat finish coat by trowel, floating it over the bond coat while the bond coat is still tacky and free of any skin formation on the surface. The finished thickness of ArcusStonecoat for horizontal applications where vehicular traffic is anticipated should be a minimum of 1/2".
- C. MAXIMUM AREA – The maximum area allowed for horizontal applications of ArcusStonecoat before a control or aesthetic joint is required is 6 square feet, e.g. 36" x 24". Provide a coursing pattern to comply with this requirement.
- D. DO NOT COVER EXPANSION JOINTS – ArcusStonecoat should never be used to fill in or coat over expansion joints in the concrete substrate. Control joints MAY BE overlaid if the joint has been bridged with an approved crack-bridging membrane. However, it is strongly advised to provide a joint pattern that incorporates any control joints into the ArcusStonecoat pattern so that the joints struck in the ArcusStonecoat fall over the control joints.
- E. MAXIMUM JOINT DEPTH – Aesthetic joints struck in the ArcusStonecoat to replicate a stone block pattern should be a maximum depth of 1/4" where ArcusStonecoat application thickness is 1/2".

### 3.05 SEALING

Seal all ArcusStonecoat overlay surfaces after a minimum of 48 hours cure, using Professional Products of Kansas' Extra Strength rubber silicone penetrating water sealant. Follow manufacturer's application guidelines for installation. Vehicular traffic allowed on sealed surfaces after a minimum sealer cure of 24 hours.

### 3.06 ADJUSTING

- A. Touch up and repair damaged or otherwise unacceptable work.
  - 1. Damaged work will be back charged to the party that caused said damage.

### 3.07 CLEANING

Remove all coating spatters from glass and adjoining surfaces.

### 3.08 PROTECTION

Protect installed ArcusStonecoat against damage by other work in progress. Maintain protection in place until completion of Project and acceptance by Owner.

### 3.09 SCHEDULE OF EXTERIOR EXPOSURES

### 3.10 SCHEDULE OF INTERIOR EXPOSURES

END OF SECTION