

# Product Specification: AquaFlex® (Porous)



## **SURFACEAMERICA®**

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Note: AquaFlex® is a Landscape Structures Inc. product provided by Surface America.

### **1. GENERAL**

1.1 *Scope:* These are the manufacturer's specifications for the AquaFlex Porous Surfacing System.

1.2 *Description:* AquaFlex Porous is a porous thermoplastic aliphatic rubber (installed at 3/8" thickness) designed to be used in the surfacing of water play applications that come in contact with chlorine. It will bond to most surfaces and will flex with surface movements. It has been designed to be light-stable and will stand up to weather and chlorine.

1.3 *Work:* Provide all necessary materials, labor, tools and equipment to perform the work included in the section for the installation of the resurface.

1.4 The installation of the new surface shall be completed by Surface America certified installers. Manufacturer's detailed installation procedures shall be submitted to the architect and made part of the bid specifications.

1.5 Temperature must remain above 50-degrees Fahrenheit throughout the installation and curing process. Weather and surface must be dry, and there should be no rain in the immediate forecast.

1.6 Site must be made secure against vandalism during installation and curing period.

### **2. SUBMITTALS**

2.1 Manufacturer's product literature and specification data.

2.2 ASTM C 1028-07 Skid Resistance Test.

2.3 Manufacturer's written instructions for recommended maintenance practices.

2.4 Color samples for customer verification.

2.5 Written statement on Manufacturer's letterhead certifying that the top surface will be light stable for a period of three (3) years from date of installation.

2.6 Written manufacturer's warranty for water play.

2.7 Product liability insurance certificate with project owner as certificate holder.

2.8 MSDS and Product Data Sheets for items in Section 3 “Products.”

### **3. PRODUCTS**

3.1 *Product:* AquaFlex Porous Surfacing Systems.

3.2 *Materials:* AquaFlex aliphatic, 100% solids, two-component, chlorine-resistant polyurethane Binder/Primer; AquaFlex aliphatic thermoplastic large pebbles.

3.3 *Equal Materials:* The AquaFlex pebbles are a thermoplastic aliphatic polyurethane. The system is 100% color. The AquaFlex Binder/Primer is a two-part aliphatic chlorine resistant polyurethane. Any equal product granule or pebble must be aliphatic polyurethane based; not rubber based such as EPDM, TPV, or polyolefin-based TPE; must include an aliphatic polyurethane binder proven to be chlorine resistant and must be 100% color. Recycled black material is not acceptable. Where applicable, systems should be approved by the local board of health.

3.4 *Finish Texture:* Pebble grain.

3.5 *Color:* Selected from Manufacturer’s color chart by owner prior to bid.

### **4. SURFACE PREPARATION**

4.1 *New or Existing Concrete:* New concrete must be at least 28 days old. All concrete must be acid etched. Slowly add acid to water in clean polyethylene buckets at a ratio of eight parts water to one part acid. Care should be taken to prevent splashing on workers. Protective clothes such as safety glasses, rubber gloves and boots, should be used. The acid solution should be applied to the surface at a rate of 100 square feet per 5 gallons of acid solution. Using a stiff broom, scrub acid solution onto the surface. Never let the surface dry with acid on it. After 5 minutes, rinse the surface with large amounts of clean water to remove all the acid solution, and then allow the surface to dry. Old concrete that is contaminated with grease or oil can be cleaned with a power-washer. Use a degreasing agent before power-washing. For concrete where a power-washer cannot be used, a diamond grinder can be used to lightly grind the surface to remove contamination.

4.2 *Metal Preparation:* All metal surfaces must be rigid and structurally sound. Contamination such as grease, oil and dirt must be removed prior to coating. Rust or scale should be removed through mechanical means such as sanding or sandblasting. The surface should be abraded until bright metal is showing. If the surface will be exposed for an extended period of time, it should be treated with a 10% phosphoric acid solution to prevent new rust formation.

4.3 *Tile Preparation:* Unstable or loose tiles must be removed. Contamination should be removed with a power-washer or mechanically abraded. Any glazing on tile must be abraded with a grinder or shot blaster.

4.4 *Fiberglass Preparation:* Power-wash any contaminants off the surface. Allow 24 hours for the surface to dry. Glaze coating must be abraded or sanded. Solvent-wipe the fiberglass surface before coating with primer.

4.5 *Asphalt Preparation:* New asphalt must be 15 days old. Broom scrub using a degreaser to remove any surface oils. Power-wash any contaminants off the surface. Allow 24 hours for the surface to dry. AQUAFLEX CANNOT BE INSTALLED OVER ASPHALT CURED FOR LESS THAN 15 DAYS.

4.6 *Curb Preparation:* Cut a 3/8" x 1" keyway groove into the existing surrounding curbing. Groove shall

be swept clean and be free of all residue.

4.7 *Drains, Ground Pop Jets, Doorways/Entryways*: Cut a 3/8" x 1 " keyway groove into the concrete surrounding the object. Groove shall be swept clean and be free of all residue.

## 5. INSTALLATION

5.1 *Forming*: If forming is required following the shape of the area to be surfaced, form out the area with 1" x 4" wood strips, or for curved concrete, use plywood cut into 4" strips. Stabilize the wood with spikes or stakes and thoroughly wax the wood surfaces with carnauba wax.

5.2 *Priming*: Roll or brush AquaFlex aliphatic, two-component polyurethane Binder/Primer onto the surface being sure to liberally cover the entire area. Mix an amount of primer that will be used in less than 30 minutes. Normally this would be approximately one gallon when the temperature is up to 85-degrees Fahrenheit. If it is warmer, the primer will cure faster and less material should be mixed. Only prime 200 square feet at a time, and as the installers approach an unprimed area, prime 200 additional square feet.

5.3 *AquaFlex Mixing and Finishing*: Dry-mix two 50-pound bags (100 pounds total) of AquaFlex pebbles in a mortar mixer. Pre-mix 9 pints of AquaFlex aliphatic, two-component, chlorine-resistant polyurethane Binder/Primer in an appropriate plastic container with a paddle mixer. Add the premixed 9 pints of binder to the pebbles in the mortar mixer. Mix thoroughly so that each pebble is covered evenly. Dump the mix onto the primed area and spread it with a cam rake, screed bars or screed box (1/2" setting) to an average thickness of 3/8", keeping the surface as level as possible. Hand or power-trowel using a solution of soapy water to spray the surface of the trowel. This will allow easier manipulation of the trowel as well as aid in the curing of the polyurethane. Let the surface set for 72 hours.

## 6. CLEANING

6.1 The contractor should clean the job site of excess materials.

6.2. The contractor shall instruct the owner's personnel on proper maintenance and repair of the AquaFlex Surface.

## 7. SPECIAL CONSIDERATIONS

7.1 *Coated Concrete*—For a coated concrete surface, diamond grind or power-scarify as required to obtain optimum bond of the AquaFlex material to the concrete. Remove sufficient coated material to provide a sound surface, free of glaze, efflorescence, or from release agents. Remove grease, oil and other penetrating contaminants. Remove and/or replace any loose or unstable concrete. Concrete will have a pitch of 0.25 inches per foot and should not have low areas that will hold water under the system.

7.2 *Existing Caulk-filled Edges*—Prepare edges of existing pad to meet surrounding concrete. Remove any and all silicone or caulking where the pad and the surrounding concrete meet.

7.3 *Existing Ground Features*—Prepare the ground features submerged into the existing pad by cutting a 45-degree angle, 1/2" deep keyway. Remove all concrete adhered to the existing sides of the ground feature. Solvent-wipe the ground features to remove any contaminants.

7.4 *Existing Drains*—Prepare the drains submerged into the existing pad by cutting a 45-degree angle, 1/2" deep keyway. Remove all concrete adhered to the existing sides of the drains. Solvent-wipe the drains to remove any contaminants. Drill-weep holes at a 45-degree angle into the sides of the drains.

**Warranty**

*Limited AquaFlex Warranty:* AquaFlex offers a 3-year limited warranty on manufacturing defects.

**Maintenance**

As with any surface exposed to high traffic, regular cleaning helps to maintain a vibrant and attractive surface. AquaFlex is not only highly resistant to ultraviolet rays and chemicals, but it also stands up to 2,800 psi power-washing, and/or high-temperature (up to 180-degrees Fahrenheit maximum) pressure-washing.

The following cleaning agents should not be used on your AquaFlex surface: gasoline, diesel fuel, naphtha, benzene, acids, turpentine, mineral spirits, carbon tetrachloride, WD-40 and all other petroleum distillates.