FlexGround KoolFlex®

Poured In Place Aquatic Surfacing

Manufacturer's Specifications

This document provides the specifications for a non-porous poured in place surfacing system composed of a base layer membrane, thermoplastic composite grout filling layer that renders the pad non-porous, and a water-based color seal.

There may be variations in the final specifications as required by the Client and approved by manufacturer.

PART 1 – GENERAL

1.01 Work Included

Provide all labor, materials, and tools necessary for the complete installation of a non-porous poured in place surfacing system as outlined in these specifications. The system should consist of, but not necessarily be limited to, the following:

A. Section includes: Resilient non-porous surfacing poured in place system.

B. Related work: Rubber poured in place surfacing in aquatic or recreational settings.

C. Quality Assurance: Manufacturer should have manufactured and installed poured in place surfaces as noted above in "B" for a minimum of 5 years. The installation of the poured in place product should be completed by FLEXGROUND. Manufacturer's detailed installation procedures should be submitted to the Architect and made part of the Bid Specifications.

1.02 Submittals

Prospective manufacturers and/or installers of the poured in place surfacing system should be required to comply with the following:

A. The manufacturer must be experienced in the manufacturing of a non-porous, poured in place surfacing system and provide references of five (5) specific installations in the last three (3) years.

B. The installer must provide competent and skilled labor in this specific type of poured in place surfacing system installation. The designated supervisory personnel on the project must be competent in the installation of this material, including mixing, spreading and compacting the materials correctly.

C. Manufacturer should provide written instructions for recommended maintenance practices.

D. Manufacturer should submit color samples for customer verification.

E. Performance Requirements: Provide products that have been manufactured, fabricated and installed to meet or exceed the criteria and methodology identified in PARTS 2, 3 and 4 below.

F. Quality Assurance:

G. Test reports: upon request, provide test reports per section 2.E.i. Self-testing of products is not acceptable.

1.03 WARRANTY AND MAINTENANCE

The bidder and/or poured in place safety surfacing manufacturer must provide the following:

A. The poured in place surfacing manufacturer should provide a warranty to the owner that covers defects in materials and workmanship of: 1. the rubber for a period of **FOUR (4) years** from the date of Substantial Completion and 2. the colorseal for a period of **TWO (2) years**. A **TWO (2)** year warranty extension may be added to enire system if an additional colorseal application is completed within 120 days of original warranty's 4 year expiration date.

B. The manufacturer's warranty should include general wear and tear. The warranty should specifically exclude vandalism, high heel punctures, acts of war or acts of nature beyond the control of the owner or the manufacturer.

C. The bidder should provide a warranty to the owner that covers defects in the installation workmanship, and further warrant that the installation was done in accordance with the manufacturer's recommendations.

D. All poured in place warranties should be limited to repair or replacement of the affected areas and should include all necessary materials, labor, transportation costs, etc. to complete said repairs. All warranties are contingent on the full payment by the owner of all pertinent invoices.

E. The owner also agrees to do routine maintenance as outlined in the FLEXGROUND Maintenance manual

F. The installer should clean the jobsite and remove excess materials.

G. The manufacturer should instruct the owner's personnel on proper maintenance and repair of the KOOLFLEX surface.

H. To retain this warranty for its specified duration the owner of the site agrees to notify FLEXGROUND within thirty (30) days of noticing defect.

PART 2 – KOOLFLEX MATERIAL

The KOOLFLEX poured in place surfacing system should be in accordance with the following:

A. A dual durometer poured-in-place system with a base layer membrane and a thermoplastic composite grout filling layer that renders the pad non porous and sealed with a color seal.

B. FLEXGROUND primer is a 100% solids urethane primer/sealer. It is designed to be low viscosity for penetrating abilities, making this an ideal priming urethane.

C. The KOOLFLEX SURFACING base surface should be manufactured from .5 - 6 mm SBR rubber pellets with an elastomeric rubber compound and mixed with urethane binder (110 pounds of rubber to 22 pounds of binder).

D. FlexGrout thermoplastic composite grout should be a thixotropic thermoplastic paste applied at 1 gallon per 30 square feet over wear coarse layer rendering it non porous.

E. FlexGrout thermoplastic composite grout was tested by QAI Laboratories for the following:

   i. *ASTM D 2047-11 Coefficient of Friction: Polish Flooring Surface.* (Test Report #QI1411123-4) FlexGrout has been tested and certified at a friction of .588 dry standard, and .817 wet standard.

   ii. *ASTM D4 12-06ae2 ThermoPlastic Elastomers – Tension*. (Test Report #QI1305148-2) FlexGrout has been tested and certified at a Peak Tensile Strength of 163psi; chlorine soaked at 133psi; and a Tensile Elongation at Break of 132.2%; chlorine soaked at 112.2%.

   iii. *ASTM D624-00(2012) Tear Strength.* (Test Report #QI1305148-2) FlexGrout has been tested and certified with a median Maximum Tear Strength of 75.74lbs; chlorine soaked at 70.03lbs.

F. A water-based composite color seal should be applied at 300 sq. ft. per gallon at one coat and spread evenly to cover entire surface. Recommended two coats of color applied.

G. The system color should be selected from Manufacturer's Color Chart by owner prior to bid.

PART 3 – SITE PREPARATION AND BASE

The KOOLFLEX site preparation and base should be in accordance with the following:

A. Sub base should be concrete, wood or asphalt. Aggregate bases are not acceptable.

B. Ensure that concrete base has proper drainage prior to installation of KOOLFLEX.

C. Slope of concrete base should comply with local health department regulations.

D. New concrete surfacing should be allowed to cure for 28 days prior to KOOLFLEX installation.

E. Hard Base Construction: Concrete surfaces should be shot blast, acid etch or power scarify as required to obtain optimum bond of the cushion layer to the concrete. Remove sufficient material to provide a sound surface, free of glaze, efflorescence, or form release agents. Remove grease, oil, and other penetrating contaminants.

F. Where termination points are required on open surfaces keyway cuts 1.5” wide by 1.5” deep shall be made into the surface at said termination points.

PART 4 – EXECUTION AND INSTALLATION

The poured in place surfacing installer should strictly adhere to the installations procedures outlined under these sections. Any variance from these requirements should only be accepted in writing by the manufacturer’s onsite representative, and submitted to the architect/owner, verifying that the changes do not in any way affect the warranty.

4.01 Primer

A. A urethane primer should be applied to concrete, asphalt or wood surfaces at a rate of 200-250 square feet per gallon. The entire area does not need to be primed at once, instead, prime about 700 square feet at a time, in immediate advance of rubber installation. This procedure should be continued until all areas are complete.

4.02 Base Course Layer

A. The base course layer should be mixed with SBR granules and aliphatic or aromatic urethane binder at a rate of 20% of the total weight of the materials so the granules are covered thoroughly and evenly.

B. The base course layer mix should be spread and trowelled to a depth ranging from 3/8 to 1/2" immediately after the application of primer.

4.03 Grout Sealer

A. The wear course layer should be sealed with a thermoplastic composite grout. FlexGrout should be spread with a trowel at a rate of 1 gallon per 30 square feet. Pressure should be applied to the trowel with enough force to push the grout into the wear course layer, rendering it impermeable. The finished texture should be slip resistant and even.

B. The poured in place surface should be allowed to cure for 24-72 hours or until dry to the touch.

4.04 FlexCoat Color Seal

A. The color seal should consist of a water based composite liquid. Color seal should be rolled (or can be sprayed) to completely cover entire surface. The color seal should be allowed to cure for 24-72 hours or until dry to touch.

Approved product: Grout and Color Seal by
FlexGround, LLC
Contact: Bill Stafford, bill@flexground.com

PART 5 – SITE (GENERAL)

A. Trailer/ Large truck access will be necessary for the installation. In the case that access for trailer/truck is not available the owner or general contractor will be responsible for transporting material to the job site.

B. Crew is responsible for protecting the surface only while on site. General Contractor or owner shall be responsible for the security of the surfacing overnight during installation, as well as during the surfacing's cure period after completion of the install.

C. Crew will leave site clean and shall remove all trash and debris.

D. Owner/General contractor shall provide a dumpster for all waste and trash.