SECTION 09 05 61

SELF-MITIGATING WATERPROOF ACOUSTIC FLOORING INSTALLATION SYSTEM

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\*\* NOTE TO SPECIFIER \*\* Aquaflex ; Self-Mitigating Waterproof Acoustic Flooring Installation System.  
This section is based on the products of Aquaflex , which is located at:  
1790 Boyd St.  
Santa Ana, CA 92705  
Toll Free Tel: 800-359-3201  
Email: [request info (info@aquaflexinc.com)](https://arcat.com/rfi?action=email&company=Aquaflex%252B&message=RE%253A%2520Spec%2520Question%2520(09056afx)%253A%2520&coid=54051&spec=09056afx&rep=&fax=)  
Web: <https://aquaflexinc.com>   
 [ [Click Here](https://arcat.com/company/aquaflex-54051) ] for additional information.  
Aquaflex is the world's first patented waterproof acoustic flooring installation system. This revolutionary system consists of the Aquaflex adhesive, a moisture vapor barrier and adhesive in one; Aquaflex Patch & Skim, a silica-free concrete repair mortar; the patented Aquaflex CBD trowel; and the Aquaflex Remover Kit, a bio-based presoaked sponge for easy clean-up. ALL MATERIALS ARE MADE IN THE USA!

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Waterproof silica-free concrete repair mortar.
    2. Waterproof self-mitigating acoustic flooring adhesive.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 03 39 00 - Concrete Curing.
    3. Section 03 54 13 - Gypsum Cement Underlayment.
    4. Section 07 16 00 - Cementitious and Reactive Waterproofing.
    5. Section 07 26 00 - Vapor Retarders.
    6. Section 09 60 00 - Flooring.
    7. Section 09 80 00 - Acoustic Treatment.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ACI Committee 201 Report "Guide to Durable Concrete."
       1. ACI RAP Bulletin 2, "Crack Repair by Gravity Feed with Resin."
    2. ASTM International (ASTM):
       1. ASTM C109 and C109M - Standard Test Method for the Compressive Strength of Hydraulic Cement Mortars.
       2. ASTM C856 - Standard Practice for Petrographic Examination of Hardened Concrete.
       3. ASTM C1583/ACI 503.1R - Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method).
       4. ASTM D1308 - Chemical Resistance of Finishes.
       5. ASTM D7234 - Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Tester.
       6. ASTM E96 - Standard Test Method for Water Vapor Transmission of Materials; 1995.
       7. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems using a Radiant Heat Energy Source.
       8. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
       9. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
       10. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
       11. ASTM F3191 - Standard Practice for Field Determination of Substrate Water Absorption (Porosity) for Substrates to Receive Resilient Flooring.
    3. International Concrete Repair Institute (ICRI):
       1. Guide 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays and Concrete Repair.
    4. South Coast Air Quality Management District (SCAQMD):
       1. SQAQMD Rule No 1113 - Architectural Coatings.
    5. United States Green Building Council (USGBC):
       1. LEED certification or other sustainability certification.
  1. DEFINITIONS
     1. MVE: Moisture Vapor Emission.
     2. MVER: Moisture Vapor Emission Rate; measured in lbs per1000 ft2 / 24 hours.
     3. RH: Relative Humidity; measured in percentage.
     4. VOC: Volatile Organic Compound; measured in grams/liter.
     5. CSP: Concrete Surface Profile defined by ICRI.
     6. Delta IIC: Delta Impact Insulation Class; shows what the product adds.
  2. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.
     3. Informational Submittals:
        1. Certificate of Compliance: Certification that installed products meet specified performance requirements.
  3. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum five years documented experience with projects of similar scope and complexity.
     3. Provide third party verification testing of low emitting compliance to CDPH 01350 small-chamber requirements.
     4. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. The intent of a mock-up is to demonstrate quality of workmanship and visual appearance.
       2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
       3. Retain mock-up during construction as a standard for comparison with completed work.
       4. Do not alter or remove mock-up until work is completed or removal is authorized.
    2. Inspection of warranted installation by manufacturers approved representative.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor, Owner, and/or Construction Manager, Installer, Manufacturer and involved trades.
     2. Agenda is to Include:
        1. Schedule, responsibilities, critical path items and approvals.
        2. Project conditions, manufacturer requirements, delivery, and storage, staging and sequencing, and protection of completed work.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
        1. Store products in manufacturer's unopened packaging until ready for installation.
           1. Record product codes and batch numbers and shelf life.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
        1. Store products in a dry area with temperature maintained between 50 degrees F (10 degrees C) and 90 degrees F (32 degrees C) and protect from direct sunlight.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. WARRANTY
     1. Manufacturers standard "Life of the Floor" waterproof and alkali resistant adhesive warranty.
        1. Warranty to include repair or replacement of flooring materials damaged during warranty period at no cost to Owner.
        2. Underwriters Insurance Coverage with A rating:
           1. Limit per Occurrence: 4,000,000 dollars.
     2. Installer's 2-year installation workmanship warranty.
  5. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Aquaflex , which is located at:  
         1790 Boyd St.  
         Santa Ana, CA 92705  
         Toll Free Tel: 800-359-3201  
         Email: [request info (info@aquaflexinc.com)](https://arcat.com/rfi?action=email&company=Aquaflex%252B&message=RE%253A%2520Spec%2520Question%2520(09056afx)%253A%2520&coid=54051&spec=09056afx&rep=&fax=);Web: <https://aquaflexinc.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.

\*\* NOTE TO SPECIFIER \*\* Delete article not required.

* 1. MATERIALS
     1. Aquaflex Patch and Skim: Waterproof Hydraulic Cement-Based Concrete Surface Repair Mortar. A hydraulic Portland/CSA cement compound for fast-track resurfacing and smoothing of concrete prior to flooring installation. For interior and exterior applications on, above or below grade. Can be installed from a 1/32 to 1/2 inch (1.5 to 13 mm) thick.
        1. Exterior rated, no moisture limit, trowel grade mortar to repair concrete prior to application of MVE Control Adhesive.
        2. Features:
           1. Foot Traffic: Less than one hour.
           2. Waterproof.
           3. Silica free. Sanding will not produce respirable crystalline silica (RCS).
           4. Self-healing properties.
           5. Formulated with low CO Green cement.

\*\* NOTE TO SPECIFIER \*\* Prepares surface of concrete to receive moisture sensitive adhesives and floor coverings. MVE Control System will protect finished flooring from moisture and pH Alkalinity.

* + 1. Aquaflex Adhesive: Self-Mitigating Waterproof Acoustic Flooring Adhesive. A moisture-cure adhesive that has the triple function of reducing MVER, contribute to acoustic attenuation, and providea waterproof adhesive bond.
       1. Exterior rated, no moisture limit, trowel grade MVE Control Adhesive.
       2. Features:
          1. Type: One component, zero VOC content,100 percent solids, waterproof adhesive.
          2. Relative Humidity per ASTM F2170: Resistant to 100 percent exposure.
          3. Alkalinity Resistance per ASTM F710: Tolerant to 14 pH exposure.
          4. Resistant to topical "standing" water intrusions or flood.
          5. Sub-slab vapor retarders or sheet materials that minimize the transmission of moisture or water vapor from the sub-slab support system into a concrete slab per ASTM E1745: not required.
          6. Moisture Vapor Emissions Rate per ASTM F1869: Moisture vapor emissions reduction up to 80 percent of measured MVER.
          7. CHPS Certified (01350), Declare RED LIST Free, LEEDv4 Material.
          8. Provides acoustic attenuation with a Delta IIC 14.

1. EXECUTION
   1. EXAMINATION
      1. Verify floors maintain floor levelness of 1/4 inch (6.35 mm) in 10 feet (3.048 m), or in accordance with flooring manufacturers recommendation.
         1. Do not begin installation until the substrate has been properly prepared.
      2. Allow at least 3 days after placement of concrete to begin work.
      3. Concrete substrates must be structurally sound, solid, and meet industry standards as defined in ACI Committee 201 Report "Guide to Durable Concrete."
      4. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
      5. Proceed with installation only after unsatisfactory conditions have been corrected. Installation of the Aquaflex; Self-Mitigating Waterproof Acoustic Flooring Installation System indicates acceptance of surfaces and conditions.
   2. PREPARATION
      1. Pre-installation Testing by independent Testing Agency: Not Required.
      2. Mechanically profile surface to porosity meeting ASTM F3191: Not Required.
      3. Clean surfaces of dust, debris and contaminates by vacuum, followed by mopping.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
         1. Apply Aquaflex Patch and Skim: Waterproof Hydraulic Cement-Based Concrete Surface Repair Mortar in accordance with manufacturer's instructions, matching adjacent surfaces at a maximum depth of 1/2-inch.
            1. For 2 inch (13 mm) thickness, apply in two-coats allowing the first coat to set before applying a second.
         2. Apply Aquaflex Adhesive: Self-Mitigating Waterproof Acoustic Flooring Adhesive using notched trowel in accordance with manufacturer's instructions.
   4. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
    2. Perform required inspection and install materials required to maintain manufacturer's warranty.
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturers recommendations.
        1. Use mineral spirits to clean equipment before the adhesive cures to a hardened state. Cured adhesive found on flooring material can only be removed with provided sponge remover.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION