SECTION 09350
WATER & STAIN REPELLENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Exterior water and stain repellent coatings for:
      a. Cast in place concrete.
      b. Precast concrete.
      c. Prestressed concrete.
      d. Brick
      e. Natural stone.
      f. CMU block
   2. Extended written warranty.

B. Related Items:
   1. Admixture for concrete block units: Refer to Section 04200

1.02 SUBMITTALS

A. Comply with Section 01300, unless otherwise indicated. Substitution requests must be submitted 14 days prior to bid date.

B. Product Data: Manufacturer’s specifications and technical data including the following:
   1. Detailed specification of construction and fabrication.
   2. Manufacturer’s installation instructions.
   3. Certified test reports indicating compliance with performance requirements specified herein.

C. Quality Control Submittals:
   3. Field Quality Control Submittals as specified in Part 3.
   4. Manufacturer’s field reports.

1.03 QUALITY ASSURANCE

A. Manufacturer’s Qualification: Not less than 5 years of experience in the actual production of specified products.

B. Installer’s Qualifications: Firm experienced in installation or application of systems similar in complexity to those required for this Project, plus the following:
   1. Acceptable to or licensed by manufacturer.
   2. Not less than 3 years of experience with systems.
   3. Successfully completed not less than 5 comparable scale projects using this system.

C. Product Qualifications: The water and stain repellent shall conform to the following characteristics:
   1. Color: clear
   2. Density: 8.3 lbs/gallon
   3. Volatile Organic Compound (VOC) content: less than 25 grams per liter
   4. Resistance to stains before and after accelerated weathering (ASTM G85 & D4587 2000 hours)
      Motor Oil – excellent
      Transmission fluid – excellent
      Engine coolant – excellent
      Ketchup – excellent
      Alcoholic Beverages-excellent
Mustard – excellent
Wine – excellent
Vegetable oil – excellent
5. Slip Resistance – UK Slip Resistance Standards
   - Dry conditions > 60 Four S Pendulum Units
   - Wet conditions > 45 Four S Pendulum Units
   - None
7. Fire Propagation – UK BS 479 Part 6
   - Fire Propagation Index less than 4.0

D. Regulatory Requirements: Products shall comply with State and local regulations concerning AIM
(Architectural, Industrial and Maintenance) coatings regarding Volatile Organic Content (VOC).

1.04 DELIVERY STORAGE AND HANDLING

A. Packing and Shipping: Deliver products in original unopened packaging with legible manufacturer’s
identification.

B. Storage and Protection: Comply with manufacturer’s recommendations.

1.05 PROJECT CONDITIONS

A. Environmental Requirements:
   1. Maintain ambient temperature above 40 degrees F during and 24 hours after installation.
   2. Do not proceed with application on materials if ice or frost is covering the substrate.
   3. Do not proceed with application if ambient temperature of surface exceeds 100 degrees F.
   4. Do not proceed with the application of materials in rainy conditions or if heavy rain is anticipated
   with 4 hours after application.

B. Sealer Coordination:
   1. Verify compatibility with curing compounds, patching materials, repair mortar, paints, sealants, etc.
      to be used on masonry surfaces to ensure compatibility with the water and stain repellent.

1.06 SPECIAL WARRANTIES

A. When applied by a pre-approved “Certified Contractor” with an “Certified” Engineer/Consultant, making
all inspections, approving required surface preparation, moisture testing, issuing written reports, and
completing the required tests, Evonik shall furnish the Owner a written single source performance
warranty that the water and stain repellent will be free of defects related to workmanship or material
deficiency for a ten (10) year period from the date of completion of the work provided under this section
of the specification.

B. All defective areas shall be retreated by the system manufacture as determined by the
Engineer/Consultant. The required written warranty shall be provided by the system manufacturer.

C. The manufacturer shall be responsible for providing material to treat areas of the substrate where sealer
effectiveness does not meet the specified limits.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Water and stain repellent shall be a ready-to-use, single component, non-solvent-
borne, surface applied product meeting or exceeding the physical and performance
characteristics of the following approved product:
1. Protectosil® AQUA-TRETE SG, Evonik 1-800-828-0919, fugitive dye or an anti-microbial may be added if required

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.
   1. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Protection: Install coverings to protect adjacent surfaces.

B. Surface Preparation:
   1. All caulking, joint sealants, repairing, and patching of concrete surfaces shall be installed and cured before application of repellent.
   2. Prior to application of stain repellent, surfaces shall be cleaned by high pressure water and mild chemical cleaners (as needed) of all dust, dirt, debris, grease, oil, grout, mortar and other foreign matter.
   3. Contaminated areas and new surfaces shall be prepared as recommended by the repellent manufacturer and acceptable to the Engineer/Consultant.

3.03 FIELD QUALITY CONTROL

A. Spray Test: After water and stain repellent has dried, spray coated surfaces with water.
   1. After surfaces have adequately dried, recoat surfaces that show water absorption.

B. Manufacturer's Field Services:
   1. Furnish written certification that surface preparation method and final condition has manufacturer’s approval and comply with the warranty.
   2. Test area: Furnish results of test area absorption on each type of substrate. Test results shall determine application rate.

C. Test Area: Before application of water and stain repellent will be accepted, a test panel will be applied to the building to verify that no discoloration, darkening or sheen is imparted to the concrete. Core tests required as appropriate for quality assurance according to Engineer/Consultant.

3.04 APPLICATION

A. Product shall be applied as supplied by the manufacturer without dilution or alteration.

B. Apply with in accordance with manufacturer’s recommendations using either spray, brush, or roller.

C. Treat horizontal surfaces in a flooding application until the material ponds on the surface. After 10 or 15 minutes sweep, squeegee, or mop any remaining puddles to dry areas.

D. Apply at temperature and weather conditions recommended by the manufacturer or written in this specification.

E. Follow manufacturer’s recommendations concerning protection of glass, metal and other non-porous substrates. Contractor will be responsible to clean all surfaces that are contaminated by the water and stain repellent.

F. Follow manufacturer’s recommendation concerning protection of plants, grass and other vegetation.
Contractor will be responsible for replacing all plants, grass or vegetation damaged by the water and stain repellent.

3.05 CLEANING

A. As work progresses: Clean spillage and overspray from adjacent surfaces using materials and methods as recommended by water and stain repellent manufacturer.

B. Remove protective coverings from adjacent surfaces when no longer needed.

3.06 COMPLETION

A. Work that does not conform to specified requirements shall be corrected and/or replaced as directed by the Owners Representative at contractor’s expense without extension of time.

END OF SECTION