# SECTION 07 19 00 – Water REPELLENTS

## GENERAL

### SUMMARY

#### Section Includes:

##### Water Repellent Treatment Applied to Exterior Exposed Concrete and Masonry Surfaces.

#### Related Sections:

##### Section 03 01 30.52 – Concrete Cleaning

##### Section 04 01 20.53 – Masonry Cleaning

### References

#### The date of the standard is that in effect as the date of receipt of bids for the project.

#### ASTM International (ASTM):

##### C67- Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.

##### C97- Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.

##### D2369- Standard Test Method for Volatile Content of Coatings.

##### D6490- Standard Test Method for Water Vapor Transmission of NonFilm Forming Treatments Used on Cementitious Panels.

##### D6532- Standard Test Method for Evaluation of the Effect of Clear Water Repellent Treatments on Water Absorption of Hydraulic Cement Mortar Specimens.

##### E96- Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials.

##### G154- Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials.

### SUBMITTALS

#### General: Submit the following according to the Conditions of the Contract and Division 01 General Requirements specification sections.

##### Submit product data including detailed test results of materials applied to surfaces similar to requirements of this Section.

##### Submit manufacturer's instructions for methods and application procedures.

##### Submit manufacturer's certification indicating water repellent treatment conforms to or exceeds requirements stated herein.

### QUALITY ASSURANCE

#### The Contractors involved with work covered by this Section shall have had a minimum of five years experience using specified techniques for water repellent treatment application.

#### Tradesman must be competent and experienced and shall demonstrate reasonable care during performance of operations described in this Section.

#### Tests and Approvals:

##### Sample Area:

###### Contractor shall apply a test area of wall surface from four square feet in size for inspection and approval by the Owner’s Representative after treatment has cured. Test area shall be available for comparison during the specified scope of work.

###### Samples of adjacent materials shall be tested for possible reaction with the water repellent treatment. Such samples shall be available for inspection by the Owner’s Representative.

##### If any part of this work shall be found defective (because of improper preparation of surfaces or application of treatment) at any time before the final acceptance of the item, the Contractor shall, at his own expense, make good such defect to the satisfaction of the A/E.

### PROJECT CONDITIONS

#### Protection:

##### Contractor shall provide, at all times, covered access to premises and necessary utilities, space for storage of material and equipment, etc.

##### All activities shall be in compliance with local and governmental regulations and codes.

##### The surface and atmospheric temperature should be at least 50 degrees Fahrenheit. and rising during application and for eight hours following. Surface and air temperatures should not exceed 90 degrees Fahrenheit.

##### Surfaces should be dry.

##### Apply only in well ventilated areas.

##### All caulking (sealants) should be applied a minimum of 24 hours prior to application, or as required by sealant manufacturer, whichever is greater, before application of water repellent treatment.

##### The Contractor shall require applicators to observe safety precautions as outlined on containers and labels. It is the responsibility of the Contractor to provide well ventilated areas for all workmen as well as to observe safety precautions as stipulated on labels and instructions of all materials used, and as required by governing authorities during application and drying.

## PRODUCTS

### MANUFACTURERS

#### Water-Based, Water Repellent Treatment:

##### Use water-based water repellent for limestone, marble, travertine, and most other traditional masonry surfaces to protect them from water penetration without altering the natural appearance.

##### Physical and Performance Properties:

###### Total Solids per ASTM D2369: Minimum Three (3) percent.

###### Comply with national, state, and district AIM VOC regulations.

###### Water Absorption Reduction (Red Brick) per ASTM C 67: Greater than 91 percent.

###### Water Absorption Reduction per ASTM C97:

Indiana Limestone: Greater than 97 percent.

Cottonwood Limestone: Greater than 91 percent.

Dolomitic Limestone: Greater than 95 percent.

###### Water Absorption Reduction (Mortar) per ASTM D 6532: Greater than 95 percent.

###### Water Vapor Transmission WVT per ASTM D 6490: Minimum 100 percent retention.

###### Durability: Maximum 5 percent loss of water-repellent performance after 2500 hours of weathering according to ASTM G 154 compared to water-repellent-treated specimens before weathering.

##### Approved Products:

###### "Sure Klean Weather Seal Natural Stone Treatment WB"; [PROSOCO, Inc.](http://www.prosoco.com/) (800-255-4255) (Basis of Design).

## EXECUTION

### PREPARATION

#### Verify surfaces to receive water repellent treatment are clean, free of efflorescence, oil, grease, or other foreign matter detrimental to application.

#### Remove loose particles and foreign matter. Remove grease or oil with a solvent, effective alkaline cleaner, or detergent as instructed by water repellent manufacturer. Scrub surfaces with water.

#### Allow surfaces to dry prior to application.

#### Protect all surrounding areas as recommended by the manufacturer or as directed by the Architect.

##### Windows: Windows shall be protected from contact with materials by masking with polyethylene or other approved techniques.

##### All polished stone, metal, or non-masonry surfaces shall be protected from contact with the material by masking with polyethylene.

##### Masonry surfaces must be in good repair. All new construction or repointed surfaces must be allowed to cure for a minimum of 28 days prior to application. Surfaces must be completely dry.

#### Verify all windows, exterior intakes and air conditioning vents are covered and air handling equipment is shut down during application and until vapors have dissipated.

#### Coordination with Sealants: Do not apply water repellent until sealants for joints adjacent to surfaces receiving water-repellent treatment have been installed and cured.

### WATER-Based Water Repellent Treatment APPLICATION (VERTICAL APPLICATION)

#### Test each surface and/or material to be treated to ensure compatibility and water repellent treatment results. The surface to be treated must be clean and free of all foreign matter and as dry as possible to ensure proper penetration of water repellent treatment.

#### Do NOT dilute water repellent treatment.

#### Proceed with application of water repellent treatment in an orderly manner once application rate has been tested; work from bottom to top of each scaffold width and from one end of each elevation to the other.

#### Apply water repellent treatment wet-on-wet to vertical visibly dry and absorbent surfaces and comply with manufacturer's written instructions; use brush or spray application methods, at Contractor's option.

#### Preferred method of application is with low pressure, airless diaphragm-type spray equipment or with a heavily saturated roller or brush. Apply in coverage rate as recommended by manufacturer for type of material.

#### Spray Application:

##### Apply water repellent treatment from bottom- up using a wet-on-wet application, creating a 4 to 8 inch rundown below the spray contact point. Let the first application penetrate into surface then reapply within 3 minutes in the same saturating manner. Apply in accordance with manufacturer recommendation. Do not spray apply at pressures exceeding 50 psi.

#### Roller or Brush Application: For use on small scale applications or when Spray Application is not appropriate

##### Thoroughly saturate the surface uniformly with water repellent treatment. Avoid excessive overlapping. Brush out heavy runs and drips that do not penetrate after a few minutes.

### PROTECTION

#### Protect adjacent surfaces not scheduled to receive water repellent treatment. If applied on unscheduled surfaces, remove immediately, by manufacturer approved method.

#### Protect treated surfaces from rain for 6 hours.

#### Correct damage by cleaning, repairing or replacing, and repainting, as approved by A/E.

END OF SECTIOn 07 19 00