SECTION 07 19 16

MasterProtect® H 400 Water Repellents (Formerly Enviroseal 40)

NoteS to specifiers:

The purpose of this guide specification is to assist the specifier in developing a project specification for the use of BASF building systems’ products. it is not intended to be a “stand alone” document, nor to be copied directly into a project manual. This guide specification will need to be carefully reviewed for APPROPRIATENESS for the given project and edited accordingly to comply with project-specific requirements.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes:

edit note: Delete application not required.

Water-based alkylalkoxysilane water-repellent sealer for interior vertical and horizontal above-grade surfaces as scheduled.

Water-based alkylalkoxysilane water-repellent sealer for exterior vertical and horizontal above-grade surfaces as scheduled.

Water-based alkylalkoxysilane water-repellent sealer for interior and exterior traffic-bearing horizontal surfaces as scheduled.

edit note: Delete sections below not relevant to this project; add others as required.

* + - * 1. Related Sections:

Section 03 30 00 – Cast-in-Place Concrete.

Section 03 41 00 – Precast Structural Concrete.

Section 04 21 00 – Masonry Assemblies Unit Masonry.

Section 09 24 00 – Portland Cement Plastering.

Section 09 30 19 – Paver Tiling.

Section 09 31 33 – Thin-Set Stone Tiling.

* + - 1. SUBMITTALS
         1. Comply with Section [01 33 00] [\_\_ \_\_ \_\_].
         2. Product Data: Submit manufacturer's technical data sheets.
         3. LEED Submittals: Comply with requirements for each product to achieve points indicated in LEED Project Checklist provided by the architect/engineer.
         4. Submit list of project references as documented in this Specification under Quality Assurance Article. Include contact name and phone number of the person charged with oversight of each project.
         5. Quality Control Submittals:

Provide protection plan of surrounding areas and non-work surfaces.

* + - 1. QUALITY ASSURANCE
         1. Comply with Section [0140 00] [\_\_ \_\_ \_\_].
         2. Qualifications:

Manufacturer Qualifications:

Company with minimum 15 years of experience in manufacturing of specified products.

Company shall be ISO 9001:2015 Certified.

Applicator Qualifications: Company with minimum of 5 years experience in application of specified products on projects of similar size and scope and is acceptable to product manufacturer.

Successful completion of a minimum of 5 projects of similar size and complexity to specified Work.

edit note: A test application is recommended to determine appearance, coverage rate, and performance. Allow 2 to 4 weeks prior to testing for the product to fully react. Delete if not required.

* + - * 1. Field Sample:

Install field sample at project site or other pre-selected area, as directed by architect/engineer.

Provide mockup of at least 100 square feet (9.3 m2) to include surface preparation, sealant joint, and juncture details and allow for evaluation of repellent performance and finish.

Conduct RILEM test on cured field sample. Adjust application until required repellent performance is achieved.

Apply material in accordance with manufacturer’s written application instructions.

Manufacturer’s representative or designated representative will review technical aspects; surface preparation, application, and workmanship.

Field sample will be the standard for judging workmanship on remainder of project.

Maintain field sample during construction for workmanship comparison.

Do not alter, move, or destroy field sample until work is completed and approved by architect/engineer.

Obtain architect/engineer’s written approval of field sample before start of material application, including approval of aesthetics, color, texture, and appearance.

* + - 1. DELIVERY, STORAGE AND HANDLING
         1. Comply with Section [01 60 00] [\_\_ \_\_ \_\_].
         2. Comply with manufacturer’s ordering instructions and lead-time requirements to avoid construction delays.
         3. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
         4. Store in unopened containers in a clean, dry area between 35 degrees F (2 degrees C) and 110 degrees F (43 degrees C).
      2. PROJECT CONDITIONS
         1. Environmental Requirements:

Apply sealer with surface, air, and material temperatures between 40 and 110 degrees F (4 and 43 degrees C) during application.

Do not apply in rain or when rain is expected within 12 hours. Do not apply below 40 degrees F (4 degrees C) or when temperatures are expected to fall below 40 degrees F (4 degrees C) within 12 hours.

1. PRODUCTS
   * + 1. MANUFACTURERs
          1. Subject to compliance with requirements, provide products from the following manufacturer:

BASF Corporation, Construction Chemicals

889 Valley Park Drive

Shakopee, MN 55379 USA

Customer Service: 800- 433-9517

Technical Service: 800-243-6739

Direct Phone: 952-496-6000

Website: www.master-builders-solutions.basf.us

* + - * 1. Substitutions: Comply with Section [01 60 00] [\_\_ \_\_ \_\_].
        2. Specifications and Drawings are based on manufacturer's proprietary literature from BASF. Other manufacturers shall comply with minimum levels of material and detailing indicated in specifications or on drawings. Architect/engineer will be sole judge of appropriateness of substitutions.
      1. MATERIALS
         1. Clear, water-based, 40 percent alkylalkoxysilane penetrating sealer providing protection against moisture intrusion, freeze/thaw cycles, and chloride intrusion.

Acceptable Product: MasterProtect H 400 (formerly Enviroseal 40) by BASF.

* + - * 1. Water-repellent sealer complies with the following requirements:

Compliance: Alberta DOT, Type 1b.

Flash Point, ASTM D3278, SETA: Greater than 200 degrees F (93 degrees C).

Water Absorption, ASTM C 642:

48 Hours: 0.42 percent.

50 Days: 1.2 percent.

Scaling Resistance Rating, ASTM C672, non-air-entrained concrete, 100 cycles treated concrete: 0; no scaling

Resistance to Chloride-Ion Penetration, AASHTO T259 and T260:

Criteria of 1.5 at 1/2 inch (13 mm): Less than 0.52 lbs per cy (0.31 kg/m3).

Criteria of 0.75 at 1 inch (25 mm): 0.00 lbs per cy (0.00 kg/m3).

Water Weight Gain, NCHRP 244 Series II Cube Test: 85 percent reduction, exceeds criteria.

Absorbed Chloride, NCHRP 244 Series II Cube Test: 87 percent reduction, exceeds criteria.

Absorbed Chloride, NCHRP 244 Series IV Southern Climate: 99 percent reduction, exceeds criteria.

Water Repellent Performance, Alberta Transportation and Utilities Procedures Type 1b:

Initial Performance: 89 percent.

Post-Abrasion Performance: 89.4 percent.

Solids and Active Ingredients: 40 percent by weight.

Specific Gravity, 77 degrees F (25 degrees C): 0.95.

Density: 7.9 lbs per gal.

Penetration, average depth, depending upon substrate: 0.24 inch (6.1 mm).

VOC Content, EPA Method 24: Less than 2.92 lbs per gal (350 g/L), less water and exempt solvents.

1. eXECUTION
   * + 1. EXAMINATION
          1. Comply with Section [01 70 00] [\_\_ \_\_ \_\_].
       2. SURFACE PREPARATION
          1. Protection: Protect plant life and surfaces to remain uncoated during application. Use drop cloths or masking as required.
          2. Prepare surfaces in accordance with manufacturer’s instructions.

edit note: Surface cleanliness is critical for blemish or stain-free results, especially on light colored or white surfaces. Concrete should be cured to 80% of design strength prior to application of Sealer.

* + - * 1. Verify substrate has properly cured. Surfaces shall be clean and structurally sound. Remove dust, dirt, oil, grease, chemical films, coatings and other contaminants before application.
        2. Do not apply sealer if standing water is visible on surface to be treated.
      1. application
         1. Apply sealer in accordance with manufacturer’s instructions.
         2. Stir material thoroughly before and periodically during use. Do not dilute.
         3. Apply to saturation.
         4. Apply even distribution of sealer.
      2. PROTECTION
         1. Protect sealer from damage during construction.

END OF SECTION

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