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This specification specifies **SURFISEAL CONCRETE & BRICK SEALER**. This product is manufactured by Marflex Waterproofing & Building Products. Revise section number and title below to suit project requirements, specification practices and section content. Refer to CSI MasterFormat for other section numbers and titles.

This specification utilizes the Construction Specifications Institute (CSI) Manual of Practice, including MasterFormat™, SectionFormat™ and PageFormat™. This is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

SECTION 071923 SILOXANE WATER REPELLENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Siloxane Water Repellents.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

- B. Related Sections:
1. Section 042200 – Masonry

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
1. ASTM E-514 Water Penetration Through Masonry – Average reduction in Leakage Rate - 83%
- B. National cooperative Highway Research Program:
2. N.C.H.R.P. Report 244 Series 2 – 77% Reduction in Chloride Ion Content

1.03 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit manufacturer's product data and installation instructions.
- C. Quality Assurance/Control Submittals: Submit the following:
1. Certificates: Submit certificate that applicator complies with requirements of this section.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 1 Quality Assurance Section.

1.04 QUALITY ASSURANCE

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.

- A. Applicator should follow manufacturers installation instructions.

Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 1 Product Requirements Section.

1.05 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Shelf life for an unopened container is one year. Keep containers tightly sealed when not in use. Store in a dry location with a temperature range between 40 - 100°F (4 - 38°C).

1.06 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Comply with application temperature range of 40 - 100°F (4 - 38°C).
- B. Surface should be completely dry. Allow at least 24 hours with sunshine for drying if the surface was wet.
- C. Do not apply if rain is expected within 3 hours.
- D. Do not apply during very windy conditions. High winds can cause excessive application rate.

1.07 WARRANTY

- A. Manufacturer's material warranty available.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 Siloxane Water Repellent

Specifier Note: Paragraph below is an addition to CSI SectionFormat. Retain or delete paragraph below per project requirements and specifier's practice.

- A. Manufacturer: Marflex Waterproofing & Building Products
 - 1. Contact: PO Box 8256 Carlisle, OH 45005, Telephone: (800) 498-1411, (513) 422-7285; Fax: (513) 422-7282
 - 2. E-mail: info@Mar-flex.com; Website: www.Mar-flex.com
- B. Proprietary Products/Systems should be purchased through an Authorized Dealer of Marflex Products.
- C. Siloxane Water Repellents and related products, including the following:

Specifier Note: Select method of application to suit project requirements and specify below.

- 1. Surfiseal Concrete & Brick Sealer:
 - a. Material: Water-based emulsion siloxane water repellent
 - b. Color: Milky White dries to clear, transparent film
 - c. Total Solids: 7-10% Siloxane
 - d. Vapor Transmission: Excellent – No Moisture retained after 21 days
 - e. Application Method: [Spray] [Brush] [Roll]
 - f. Coverage Rate:
 - i. Clay Brick 100-150 ft²/gal
 - ii. Concrete Cast in Place 80-150 ft²/gal
 - iii. Precast 125-150 ft²/gal
 - iv. Exposed Aggregate 100-150 ft²/gal
 - v. Stucco 100-150 ft²/gal
 - vi. Rough Stone 100-150 ft²/gal
 - vii. Smooth Stone 150-175 ft²/gal
 - viii. Glazed Brick 150-175 ft²/gal
 - ix. Concrete Block 60-90 ft²/gal
 - g. Drying Time: 1-2 hrs @ 70°F (21°C)
 - h. Full Chemical Reaction: 3 days
 - i. Freeze Point: 32°F
 - j. Water Penetration Through Masonry – Average reduction in Leakage Rate - 83%

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.03 LIMITATIONS

- A. Will not prevent water infiltration through cracks, defects or open joints.
- B. New concrete must be cured a minimum of 28 days before application.
- C. Tuck-pointing must be cure a minimum of 3 days and caulking(s) should be fully cured before application.
- D. Surface pores must be opened up sufficiently to allow immediate penetration of SurfSeal.

2.04 TESTING

- A. Always test each substrate with an application of SurfSeal to a minimum of 3' x 3' area to check for performance, water repellency and to verify proper absorption.

PART 3 EXECUTION

Specifier Note: Article below is an addition to the CSI SectionFormat. Revise article below to suit project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the most current written installation instructions and recommendations of the waterproofing manufacturer.

3.02 EXAMINATION

- A. Site Verification of Condition:
 - 1. Verify that site conditions are acceptable for application of the waterproofing system.
 - 2. Do not proceed with application until unacceptable conditions are corrected.

3.03 PREPARATION

- A. Surface Preparation:
 - 1. If absorption test failed, cleaning of the substrate may be necessary. See manufacturer for detailed cleaning procedures.
 - 2. Remove all traces of curing compounds.
 - 3. Concrete surfaces should be cleaned and free of dirt, oil, grease and other contaminants.
 - 4. Cover and protect all glass, aluminum, metal, grass, shrubs, plants and vegetation from overspray of the SurfSeal.
 - 5. Agitate SurfSeal before application.
 - 6. Do not dilute product.

3.04 APPLICATION

- A. For vertical application [Spray] [Broom] [Roll]
 - 1. Apply a single application of SurfSeal with low pressure spray equipment (15 psi or .1 MPa) roller or broom.
 - 2. Use a fan spray nozzle for greatest efficiency, mist spraying will only waste material.
 - 3. Apply material from the bottom of the wall upwards so that it will run down the surface at least 6 inches (15cm) below the spray pattern.
 - 4. For porous vertical substrates or for maximum protection, apply two "wet-on-wet" applications of SurfSeal.
- B. For horizontal application [Spray] [Broom] [Roll]
 - 1. Material should be sufficiently applied to completely flood the surface; approximately 125 ft²/gal (3 M²/L) depending on the porosity of the surface.
 - 2. Typically the surface can be re-opened to traffic in 1-2 hours, if the temperature is 72°F (22°C) or above. Full chemical reaction will take 3 days.

3.05 CLEANING

- A. Equipment – Clean with soap and water.
- B. Adjacent construction – Clean using soap and water before dry.