

SECTION 07245

DIRECT APPLIED EXTERIOR FINISH SYSTEM

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes an exterior, textured finish system applied direct to non-insulated exterior ceilings.
- B. Related Sections include the following:
 - 1. Division 7 Section "Sheet Metal Flashing and Trim."
 - 2. Division 7 Section "Joint Sealants" for sealing joints in direct-applied exterior finish system with elastomeric joint sealants.
 - 3. Division 9 Section "Gypsum Board Assemblies" for exterior gypsum board for exterior ceilings.

1.03 SYSTEM DESCRIPTION

- A. Water managed, direct-applied exterior finish system shall be composed of the following:
 - 1. Modified portland cement base coat, not less than 1/16-inch thick, with detailing mesh applied over joints of prepared substrate.
 - 2. Modified portland cement base coat, not less than 1/16-inch thick, with reinforcing mesh applied over entire prepared substrate.
 - 3. Textured finish coat.
- B. System Performance: Comply with the following:
 - 1. Bond Integrity: Free from bond failure within components or between system and supporting wall construction, resulting from exposure to fire, wind loads, weather, or other in-service conditions.
 - 2. Weathertightness: Resistant to water penetration from exterior into system components and assemblies behind it or through them into interior of building that results in deterioration of system components and assemblies behind it, including substrates, supporting wall construction, and interior finish.

1.04 SUBMITTALS

- A. General: Submit in accordance with Section 01300.
- B. Product Data: For each type of product indicated, including installation instructions.
- C. Shop Drawings: Include plans, elevations, sections, details of components, details of penetrations and terminations, flashing details, joint locations and configurations, fastening and anchorage details including mechanical fasteners, and connections and attachments to construction behind system and adjacent Work.
- D. Samples: Submit two 24-inch- (600-mm-) square panels for each type of finish-coat color and texture indicated, prepared using same tools and techniques intended for actual work.
 - 1. Include similar Samples of joint sealants and exposed accessories involving color selection.
- E. Qualification Data: For Installer signed by system manufacturer certifying that Installer is qualified to install manufacturer's system.

- F. Material Test Reports: For each reinforcing mesh, joint sealant, and coating.
- G. Maintenance Data: For system to include in maintenance manuals.
- H. Warranty: Special warranty specified in this Section.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Is licensed by manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
 - 2. Has been engaged in installation of textured wall finishes similar in size and complexity to the Project for a period of not less than 3 years with successful completion.
 - 3. Employs skilled mechanics that are experienced and knowledgeable in textured wall finish application, and familiar with the requirements of the specified work.
- B. Manufacturer Qualifications: Shall have twenty years of experience minimum in manufacturing textured wall finish systems; shall be an ISO 9002 certified manufacturing facility; and shall be a single source manufacturer of surface leveler materials, waterproofing and textured wall finish.
- C. Source Limitations: Obtain textured wall finish and leveling materials through one source from a single manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- B. Protect materials from damage from sunlight, weather, freezing, excessive temperatures, and construction operations. Remove damaged materials from site and replace at no additional cost to Owner.
 - 1. Minimum storage temperature shall be 45 deg F (7 deg C). Materials stored at lesser temperatures shall be removed from site and replaced with new materials at no additional cost to Owner.
- C. Remove and replace liquid materials that cannot be applied within their stated shelf life.
- D. Protect portland cement based materials (bag products) from moisture and humidity. Store under cover off the ground in a dry location.

1.07 PROJECT CONDITIONS

- A. Weather Limitations: Maintain ambient and surface temperatures above 40 deg F (4.4 deg C) for a minimum of 24 hours before and during application of adhesives or coatings and for a period of 72 hours after installation. Do not apply adhesives or coatings during rainfall. Proceed with installation only when existing and forecasted weather conditions and ambient outdoor air and substrate temperatures permit adhesives or coatings to be applied, dried, and cured according to manufacturers' written instructions and warranty requirements.
 - 1. Provide supplementary heat for installation of adhesives and coatings in temperatures less than 40 deg F (4.4 deg C). Prevent concentration of heat on uncured materials and vent fumes and other products of combustion to the outside to prevent contact with installed materials.
- B. Provide protection of surrounding areas and adjacent surfaces not receiving coatings from application of materials.

1.08 COORDINATION AND SCHEDULING

- A. Coordinate installation of system with related units of Work specified in other Sections to ensure that wall assemblies, including water-/weather-resistive barrier, flashing, trim, and joint sealers, are protected against damage from the effects of weather, age, corrosion, and other causes.
- B. Do not commence installation of finish system on stud ceiling assemblies until after the completion of all roof construction and other construction that impose dead loads on the ceiling framing to prevent excessive deflection (and potential cracking) of the substrate.
- C. Install sealant immediately after finish is dry. Do not allow water to penetrate behind flashing.
- D. Attach penetrations through finish to structural support and provide watertight seal at penetrations.

1.09 WARRANTY

- A. General: Special warranties of this Section shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Warranty: Written warranty, signed by direct-applied exterior finish system manufacturer agreeing to replace system materials that do not comply with requirements or that do not remain watertight during specified warranty period.
 - 1. Warranty Period: Manufacturer's standard but not less than 3 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Product: StoSilco Coating System; Sto Corporation.

2.02 SUBSTRATE PREPARATION MATERIALS

- A. Detail Reinforcement Mesh: Manufacturer's standard lightweight, highly flexible reinforcing fabric specifically designed for detail and joint reinforcing.
 - 1. Product: Sto Detail Mesh No. 919.
- B. Fabric Reinforcement: Nominal 4.8 oz/sq. yd (163 g/sq. m) symmetrical, interlaces open weave glass fiber reinforcing fabric made with minimum 25 percent by weight alkaline resistant coating.
 - 1. Product: Sto Mesh No. 920E.
- C. Base Coat: Single component polymer modified cement based high build base coat with less than 33 percent portland cement content by weight and capable of achieving minimum 1/16-inch (1.6-mm) thickness in one pass.
 - 1. Product: Sto BTS Plus

2.03 SYSTEM COATING MATERIALS

- A. Textured Finish: Silicone enhanced textured coating with graded marble aggregate.
 - 1. Color and Texture: As selected by Architect from manufacturer's full range.
 - 2. Product: StoSilco Lit 1.5.
- B. Water: Potable.

2.04 ACCESSORY MATERIALS

- A. Trim Accessories: Type as designated or required to suit conditions indicated and to comply with direct-applied exterior finish manufacturer's written requirements; manufactured from UV-stabilized PVC; and complying with ASTM D 1784, manufacturer's standard Cell Class for use intended, and ASTM C 1063.
 - 1. Control Joints: Prefabricated, one-piece type manufactured with perforated flanges, formed to provide double keying action with protective coating, extending only to face of cement board, with removable tape on plaster face and 1/4-inch (6.4-mm) joint sightlines and bellows configuration.
 - 2. Corner Bead: Prefabricated small-nosed corner bead with perforated flanges extending minimum of 2-7/8 inches (73 mm) from corner.
 - 3. Casing Bead: Prefabricated one-piece type, of depth required to suit thickness of coating, with face leg perforated for bonding to coating and back leg.

2.05 PRODUCT MIXING

- A. General: Comply with manufacturer's requirements for combining and mixing materials. Do not introduce admixtures, water, or other materials except as recommended by manufacturer. Mix materials in clean containers. Use materials within time period specified by manufacturer or discard.
- B. Base Coat: Mix ratio with water: 6-8 quarts (5.7-7.6 L) of clean water per 60 pound (27 kg) bag of base coat. Pour water into a clean mixing pail. Add base coat, mix to a uniform consistency, using a low-speed electric drill mixer, and allow to set for approximately 5 minutes. Adjust mix if necessary with additional base coat or water and remix to a uniform trowel consistency. Avoid retempering. Keep mix ratio consistent and mix each batch separately. Do not exceed maximum amount of water in mix ratio.
- C. Finish: Mix with a clean, rust-free high-speed mixer to a uniform consistency. A small amount of water may be added to adjust workability. Limit addition of water to amount needed to achieve the finish texture.
- D. Mix only as much material as can readily be used.
- E. Do not use anti-freeze compounds or other additives.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for conditions affecting performance of work.
- B. If unacceptable conditions are encountered, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
- C. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

3.02 PREPARATION

- A. Protect contiguous work from moisture deterioration and soiling resulting from application of systems. Provide temporary covering and other protection needed to prevent spattering of exterior finish coatings on other work.
- B. Protect system and substrates from inclement weather during installation. Prevent infiltration of moisture behind system and deterioration of substrates.

3.03 SYSTEM APPLICATION

- A. General: Comply with manufacturer's current published instructions for installation of system as applicable each type of substrate indicated.
- B. Surface mount casings and trim at system terminations.
- C. Surface mount control joints at locations indicated, or if not indicated, as recommended by manufacturer and approved by Architect. Apply base coat and detailing mesh to flanges of trim and accessories.
- D. Joint Preparation: Apply base coat over joints with a stainless steel trowel and with sufficient pressure to ensure intimate contact with the prepared substrate and complete coverage to 1-16 inch (1.6-mm) thickness. Embed detail mesh immediately in wet base coat; avoid wrinkles in mesh and smooth base coat to eliminate trowel marks and allow to cure.
- E. Base Coat Application: Apply base coat over entire field with a stainless steel trowel and with sufficient pressure to ensure intimate contact with the prepared substrate and complete coverage to 1/16 inch (1.6-mm) thickness when dry. Embed reinforcing mesh immediately into wet base coat; avoid wrinkles in mesh and smooth base coat to eliminate trowel marks. Reapply additional base coat if necessary to achieve minimum thickness as soon as the application is dry.
- F. Finish Coat Application: Apply finish directly over primed wall and sill surfaces using a stainless steel trowel. Apply in accordance with the following procedures:
 - 1. Avoid application in direct sunlight.
 - 2. Apply finish in a continuous application, and work to an architectural break in the wall.
 - 3. Do not install separate batches of finish side-by-side.

3.04 PROTECTION

- A. Provide protection of installed materials from water infiltration into or behind them.
- B. Protect finishes from damages by other trades and installation of other building components.

END OF SECTION