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Sto Guide Specification No. 860

Sto Elastomeric and Acrylic Finish Top Coat System for Vertical Above Grade Wall Surfaces

SECTION 099723 CONCRETE AND MASONRY COATINGS

Notes in italics, such as this one, are explanatory and intended to guide the design/construction professional and user in the proper selection and use of materials. This specification should be modified where necessary to accommodate individual project conditions.

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PART 1 - GENERAL

1.01 SUMMARY

- A. Provide StoColor Lastic - Sand or StoColor Lastic and StoColor Acryl Plus for coating vertical, above-grade new uncoated concrete, stucco, and masonry walls.
- B. Related Sections: Other specification sections which relate directly to the work of this section include the following:
 - 1. Section 033000, Cast-In-Place Concrete.
 - 2. Section 034000, Precast Concrete
 - 3. Section 042200, Concrete Unit Masonry
 - 4. Section 092400, Portland Cement Plastering

1.01 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Material Safety Data Sheets.

1.02 REFERENCES

- A. ASTM D 4541, Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
- B. Rule 1113, South Coast Air Quality Management District

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The manufacturer shall be a company with at least thirty-five years of experience in manufacturing specialty coatings and regularly engaged in the manufacture and marketing of products specified herein. The manufacturer shall have an ISO 9001:2008 certified quality system and ISO 14001:2004 certified environmental management system.
- B. Installer's Qualifications: The contractor shall be qualified to perform the work specified by reason of experience. Contractor shall have at least 5 years experience in commercial coating application, and shall have completed at least 3 projects of similar size and complexity. Contractor shall provide proof before commencement of work that he will maintain and supervise a qualified crew of applicators through the duration of the work. When requested Contractor shall provide a list of the last three comparable jobs including the name, location, and start and finish dates for the work.
- C. Mock-ups: The contractor shall install a mock-up of the conditioner/primer, under coat and top coat materials to a wall area of at least 100 sq. ft. (9.29 sq.m.) for evaluation and approval by the design professional, building owner, or owner's representative/quality assurance agent.
- D. Conduct tests in accordance with ASTM D 4541 on mock-up to verify adhesion of installed primer and top coat to prepared substrate. Test at least 3 specimens and report results to design professional, building owner, or owner's representative/quality assurance agent.
- E. Conduct tests during coating installation as directed by design professional, building owner, or owner's representative/quality assurance agent to verify adhesion throughout the course of the installation.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number.
- B. Store products in a dry area with temperature maintained between 50 and 85 degrees F (10 and 29 degrees C). Protect from direct sunlight. Protect from freezing. Protect from extreme heat (>90 degrees F [32 degrees C]).

- C. Handle products in accordance with manufacturer's printed instructions.

1.06 WARRANTY

- A. Provide manufacturer's standard limited warranty.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. **Concrete and stucco substrate primer:** Acrylic-based, tinted, high-pH compatible primer/sealer:
 - 1. 80805 StoPrime Hot, as manufactured by Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, Georgia 30331.
 - 2. Performance and Physical Properties: Meet or exceed the following values for material cured at 73 degrees F (23 degrees C) and 50 percent relative humidity (unless otherwise specified).
 - a. Application: Spray, roller, or brush.
 - b. Working time: 10-20 minutes, depending on ambient conditions.
 - c. Adhesion to concrete: 680 psi (4.69 MPa), ASTM D 4541
 - d. Flame Spread Index: 0, ASTM E 84,
 - e. Smoke Developed: 10, ASTM E 84
 - f. Water vapor transmission: 30 perms (1720 ng/Pa's'sq.m.), tested at 3 dry mils applied in one coat, ASTM E 96, wet cup method.
 - g. VOC: < 100 g/L, EPA 24, complies with SCAQMD Rule 1113
- B. **Concrete masonry substrate primer:** Acrylic-based based, masonry block-filler/primer. Single component acrylic-based primer, containing acrylic polymer, and fine mineral fillers. Product shall comply with the following:
 - 1. 80804 StoPrime as manufactured by Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, Georgia 30331.
 - 2. Performance and Physical Properties: Meet or exceed the following values for material cured at 73 degrees F (23 degrees C) and 50 percent relative humidity (unless otherwise specified).
 - a. Application: Spray, roller, or brush.
 - b. Working Time: 10-20 minutes.
 - c. Flame Spread: < 25, ASTM E 84
 - d. Smoke Developed: < 450, ASTM E 84
 - e. VOC: <100 g/L, EPA 24, Complies with SCAQMD Rule 1113
- C. **Elastomeric Under Coat (Choose one):**
 - 1. StoColor Lastic (80212)– Smooth, elastomeric exterior-grade architectural smooth wall coating, complies with SCAQMD Rule 1113 requirements for architectural finish coatings.
 - 2. StoColor Lastic - Sand (80211) – Textured, elastomeric exterior-grade architectural smooth wall coating, complies with SCAQMD Rule 1113 requirements for architectural finish coatings.
- D. **Acrylic Finish Top Coat: StoColor Acryl Plus (80648):** Single component acrylic-based coating, containing acrylic polymer, and colored pigments, complies with SCAQMD for Rule 1113 for requirements for architectural finish coatings.

PART 3 - EXECUTION

3.01 INSTALLATION

A. General Surface Preparation

1. All surfaces must be clean, dry, sound, and free of frost and contamination such as mildew, dirt, grease, oils, efflorescence and any other contamination that may affect adhesion.
2. Use appropriate repair methods for the substrate to repair pitting, spalls, cracks, peeling, blistering, delamination, water damage, or other defects that may exist. Repair defects in the structure such as failed or omitted sealants, absence of flashing or coping, leaky windows, or other conditions that could allow water to enter into or behind the substrate.
3. Remove any loose, scaling, cracked or peeling paint from previously painted surfaces by chemical or mechanical means. Pressure washing is recommended. Follow necessary safety precautions and adjust pressure to avoid damage to the underlying substrate.
4. Mold & Mildew - Surface areas affected by mold and mildew should be treated with a commercial mildew removal and/or wash product carefully following manufacturer's application and safety directions. Rinse thoroughly with clean water, and allow a minimum of 24 hours to dry thoroughly.
5. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas and landscaping from contact due to mixing, handling, and installation of materials.

B. Mixing

1. Mix Sto products in accordance with published literature for the product. Mix for approximately 3 minutes using a slow-speed drill and paddle to a uniform consistency. Avoid entrapping air in the liquid during mixing.

C. Surface Conditioner or Primer Application:

1. Use mock-ups and testing (refer to 1.04 C, D, and E) as the basis for determining whether a conditioner/primer is needed.
2. Consult Product Bulletins for proper use of conditioner/primer materials

E. Elastomeric Under Coat Application (choose one)

1. Apply 12-14 uniform wet mil coat of StoColor Lastic using brush, roller or proper spray equipment and allow to dry. Minimum final dry thickness shall be 7 mils.
2. Apply 12-14 uniform wet mil coat of StoColor Lastic - Sand using brush, roller or proper spray equipment and allow to dry. Minimum final dry thickness shall be 7 mils.

F. Acrylic Finish Top Coat Application

1. Apply 8-10 uniform wet mil coat of StoColor Acryl Plus finish topcoat to dry StoColor Lastic with brush, roller or proper spray equipment and allow to dry.
2. Apply a second 8-10 uniform wet mil coat of StoColor Acryl Plus after first coat is completely dry, if needed to comply with warranty requirements.
3. Minimum final dry thickness shall be 4.5 mils per coat.

NOTE: maximum warranty period is achieved with two top coats

G. Protection

1. Provide protection of installed materials from water infiltration into or behind them.
2. Provide protection of installed materials from dust, dirt, precipitation, freezing and continuous high humidity until they are fully dry.
3. Provide coping and/or flashing at sills, projecting features, deck attachments, roof/wall intersections, parapets and similar construction details to prevent water entry into wall assembly or into and behind the finish system. Seal penetrations through the finished wall surface with backer rod and sealant or other appropriate means to provide a watertight condition.

END OF SECTION

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