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80648R StoColor™ Acryl Plus
Acrylic-Based, Vertical Above-Grade Exterior Wall Coating for
Recoating Prepared, Previously Painted Surfaces

Section 09 01 90.92
COATING RESTORATION

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

1.1 SUMMARY

- A. Provide acrylic-based primer and finish coating for recoating vertical, above-grade, prepared painted concrete, stucco, and masonry walls.

IMPORTANT: This guide specification covers recoating prepared substrates which have previously been coated with acrylic-based coatings. See Sto Specification No. 81366 for recoating weathered Dow Allguard substrates. This specification does not mean and methods to correct existing construction defects or distress. It does not address air sealing, construction detailing, flashing and other important aspects of design and construction that must be taken into consideration to prevent water infiltration, to prevent condensation caused by air leakage or water vapor diffusion, and to comply with applicable fire safety requirements. Consult with a qualified design professional for overall design of the wall assembly.

- B. Related Sections: Other specification sections which relate directly to the work of this section include the following:
1. Section 07 92 00, Joint Sealants

1.2 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.

1.3 REFERENCES

- A. ASTM International (ASTM)
- | | |
|-------------|----------------------------------|
| ASTM D 412 | Tensile Strength |
| ASTM D 522 | Mandrel Bend Flexibility |
| ASTM D 2247 | Moisture Resistance |
| ASTM D 3273 | Mold Resistance |
| ASTM D 4541 | Direct Tensile Bond |
| ASTM D 6904 | Resistance to Wind Driven Rain |
| ASTM E 84 | Flame Spread and Smoke Developed |
| ASTM E 96 | Water Vapor Permeability |
- B. U.S. Environmental Protection Agency (USEPA)
- | | |
|-----------|-----|
| Method 24 | VOC |
|-----------|-----|
- C. South Coast Air Quality Management District (SCAQMD)
- Rule 1113
- D. European Standards
- | | |
|---------|--------------------------|
| EN 1062 | Carbon Dioxide Diffusion |
|---------|--------------------------|

- E. NCHRP (National Cooperative Highway Research Program)
NCHRP 244 Chloride Ion Penetration Reduction

1.4 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 using proposed application means and methods to a wall area of at least 25 sq. ft. (2.32 sq.m.) for evaluation and approval by the design professional, building owner, or owner's representative/quality assurance agent. Mock-up shall be sufficient size to adequately demonstrate proposed application means and methods.
 - 1. 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.
 - 2. 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.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number, and shelf life.
- 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.

1.6 WARRANTY

- A. Provide manufacturer's standard limited warranty.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Surface Conditioner – for chalked or highly absorbent existing painted surfaces

1. Provide StoPrime Conditioner: water-based surface conditioner

NOTE: Use surface conditioner as dictated by surface condition.

B. Primer: (Choose one)

1. StoPrime Hot (80805): Vertical, above grade primer for properly prepared stucco, concrete and masonry where surface pH is 10 or greater(e.g. fresh concrete, stucco or masonry).
2. StoPrime (80804): Vertical above grade primer for use over prepared and fully cured concrete, concrete masonry, stucco, and EIF. Use StoPrime for filling porous, open texture surfaces (e.g. concrete masonry).

NOTE: Use primer as dictated by surface conditions and project warranty requirements.

C. Finish Coating: Single component acrylic-based coating, containing acrylic polymer, and colored pigments. Product shall comply with the following:

1. 80648 StoColor Acryl Plus, as manufactured by Sto Corp.
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. Working Time: 10-30 minutes, depending on ambient conditions.
 - b. Application: Spray, roller, or brush.
 - c. Resistance to wind-driven rain: No water penetration, weight gain less than 0.02 lbs. (0.01 kg), ASTM D 6904
 - d. Tensile Strength: 386 psi (2.7 MPa), minimum at break, ASTM D 412
 - e. Elongation at Break: 306% minimum, ASTM D 412
 - f. Flexibility Mandrel Bend Elongation: No cracking (% elongation greater than 32) at -14 degrees F (-26 degrees C), ASTM D 522.
 - g. Moisture Resistance: No adhesion loss, discoloration, blistering, cracking, flaking, ASTM D 2247, 14 day exposure.
 - h. Mold Resistance: No Mold Growth at 90 days, ASTM D 3273
 - i. Adhesion to Concrete: 320 psi (2.20 MPa), ASTM D 4541
 - j. Water Vapor Permeability: 25 perms (1434 ng/Pa.s.sq.m.), tested at 10 dry mils applied in one coats, ASTM E 96, wet cup method.
 - k. Carbon Dioxide Diffusion Resistance Coefficient: 1,400,000, EN-1062
 - l. Carbon Dioxide Diffusion Resistance: 200 m
 - m. VOC: <50 g/L, EPA 24, Complies with SCAQMD Rule 1113
 - n. Chloride Ion Penetration Reduction: 90.7%, NCHRP-244, Phase 1 method.
 - o. Solids Content: 53%, by volume.

PART 3 EXECUTION

3.1 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, salts, 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. Application

1. Surface Conditioner Application: (delete if surface conditions do not require a conditioner. Use mock-ups and testing as determined by the approving authority.)
 - a. Apply StoPrime Conditioner evenly with brush, roller or proper spray equipment to properly prepared mildly chalking substrates.
 - b. Follow application instructions on StoPrime Conditioner, read product bulletin carefully.

IMPORTANT: *Do not apply products to StoPrime Conditioner if it dries to a gloss. Remove gloss with mechanical abrasion.*

2. Primer: (select "a" or "b" depending on surface conditions. Use mock-ups and testing as determined by the approving authority)
 - a. Apply 5-7 uniform wet mil coat of StoPrime Hot with brush, roller or proper spray equipment to prepared surface and allow to dry. Minimum final dry thickness shall be 2.7 mils.
 - b. Apply 4-6 uniform wet mil coat of StoPrime with brush, roller or proper spray equipment to prepared surface and allow to dry. Minimum final dry thickness shall be 1.8 mils.

3. Finish Top Coat: Apply two coats of StoColor Acryl Plus at 8--10 wet mils, per coat, by brush, roller, or appropriate spray equipment. Apply first coat directly to primed substrate and allow to dry completely before applying second coat. Final thickness of StoColor Acryl Plus shall be 4.2 – 5.3 dry mils, per coat.

D. 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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