

*SPEC NOTE: 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.*

## PART 1 GENERAL

### 1.1 SUMMARY

- .1 Provide acrylic-based primer and finish coating for vertical, above-grade, new, uncoated concrete, stucco, and masonry walls.
- .2 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

### 1.2 SUBMITTALS

- .1 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

- .1 American Society of Testing and Materials (ASTM)
  - .1 ASTM C 926 Specification for Application of Portland Cement-based Plaster
  - .2 ASTM D 412 Tensile Strength
  - .3 ASTM D 522 Mandrel Bend Flexibility
  - .4 ASTM D 4541 Direct Tensile Bond
  - .5 ASTM E 84 Flame Spread and Smoke Developed
  - .6 ASTM E 96 Water Vapor Permeability
- .2 U.S. Environmental Protection Agency (EPA)
  - .1 EPA Method 24, VOC
- .3 South Coast Air Quality Management District (SCAQMD) Rule 1113
  - .1 SCAQMD Rule 1113

## 1.4 QUALITY ASSURANCE

- .1 **Manufacturer's Qualifications:** The manufacturer shall be a company with at least twenty years experience 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 Environmental Management System.
- .2 **Installer's Qualifications:** The contractor shall be qualified to perform the work specified by reason of experience.

## 1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
- .2 Store products in a dry area with temperature maintained above freezing and below 90 degrees F (32 degrees C). Protect from direct sunlight. Protect from freezing.
- .3 Handle products in accordance with manufacturer's printed recommendations.

## PART 2 PRODUCTS

### 2.1 MATERIALS

- .1 **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).
    - .1 Application: Spray, roller, or brush.
    - .2 Working time: 10-20 minutes, depending on ambient conditions.
    - .3 Adhesion to concrete: 680 psi (4.69 MPa), ASTM D 4541
    - .4 Flame Spread Index: 0, ASTM E 84,
    - .5 Smoke Developed: 10, ASTM E 84
    - .6 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.
    - .7 VOC: < 100 g/L, EPA 24, complies with SCAQMD Rule 1113
- .2 **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 (select one):**
  - .1 80804 StoPrime as manufactured by Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, Georgia 30331.

- .2 81520 StoPrime Block Surfacer HP as manufactured by Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, Georgia 30331.
- .3 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).
  - .1 Application: Spray, roller, or brush.
  - .2 Working Time: 10-20 minutes.
  - .3 Flame Spread: < 25, ASTM E 84
  - .4 Smoke Developed: < 450, ASTM E 84
  - .5 VOC: <100 g/L, EPA 24, Complies with SCAQMD Rule 1113
- .3 Finish Coating: Single component acrylic-based coating, containing acrylic polymer, and colored pigments. Product shall comply with the following:
  - .1 80202 StoColor Coat, 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).
    - .1 Working Time: 10-20 minutes, depending on ambient conditions.
    - .2 Application: Spray, roller, or brush.
    - .3 Tensile Strength: 310 psi (2.14 MPa), minimum, ASTM D 412.
    - .4 Flexibility Mandrel Bend: No cracking at 70 degrees F (32 degrees C), ASSTM D 522
    - .5 Water Vapor Permeability: 54 perms (3090 ng/Pa.s.sq.m.), tested at 2.5 dry mils applied in one coat, and 39 perms (2260 ng/Pa.s.sq.m.) tested at 6 dry mils applied in two coats, ASTM E 96, wet cup method.
    - .6 Adhesion to Concrete: 420 psi (2.90 MPa), ASTM D 4541
    - .7 VOC: <50 g/L, EPA 24, Complies with SCAQMD Rule 1113

## PART 3 EXECUTION

### 3.1 INSTALLATION OF PRIMER AND COATING

- .1 Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.
- .2 Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas and landscaping from contact due to mixing and handling of materials.
- .3 Surface Preparation: Comply with manufacturer's printed instructions and the following.
  - .1 Clean surfaces of bond-inhibiting materials including oil, mildew, dust, and dirt.

- .2 Surface must be dry at time of application.
- .3 Cast-in-place concrete and precast concrete surfaces to receive 80805 StoPrime Hot shall be properly cured and at least 7 days old.
  - .1 Stucco surfaces to receive 80805 StoPrime Hot shall be moist cured minimum 48 hours in accordance with ASTM C 926 and allowed to dry an additional 48 hours before applying primer. Stucco surface shall be minimum 7 days old when finish coating is applied.
  - .2 Concrete masonry surfaces to receive 80804 StoPrime shall be properly cured and at least 28 days old.
- .4 Mixing: Comply with manufacturer's printed instructions and the following.
  - .1 Precondition to temperature of 70 plus or minus 5 degrees F (21 plus or minus 2.5 degrees C) prior to application.
  - .2 Mix using a mechanical mixer to achieve a uniform consistency immediately prior to use.
- .5 Application: Comply with manufacturer's printed instructions and the following:
  - .1 Apply when ambient and surface temperatures are 40 degrees F (4 degrees C) and expected to remain above 40 degrees F (4 degrees C) for 24 hours after application.
  - .2 Do not apply in freezing conditions or during precipitation.
  - .3 Do not apply if the surface temperature is less than 5 degrees F (2.8 degrees C) above the ambient dew point temperature.
  - .4 Prime Substrate: Select one of the options below:
    - .1 Cast-in-place concrete, precast concrete and stucco substrates: Apply 80805 StoPrime Hot in one coat by brush, roller, or spray to a uniform thickness of 5 wet mils.
    - .2 Concrete masonry substrates: Apply 80804 StoPrime in one coat by brush, roller, or spray to a uniform thickness of 4 – 8 wet mils. Apply second coat of primer if required to achieve void-free surface on rough or highly porous substrates.
  - .5 Allow primer to dry completely before applying finish coating.
  - .6 Apply Finish Coat: Select one of the options below, depending on type construction, weather exposure and required level of performance:
    - .1 Apply one uniform coat, 4 – 6 wet mils, 80202 StoColor Coat to primed surface.
    - .2 Apply two uniform coats, 4 - 6 wet mils, per coat, 80202 StoColor Coat to primed surface. Allow first coat to dry completely before applying second coat.
  - .7 Protect installed materials from rain, freezing, and continuous high humidity until completely dry.
  - .8 Do not overcoat with solvent-based materials.

END OF SECTION 09 91 13

#### ATTENTION

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