

MANUFACTURED / SYNTHETIC STUCCO

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Exterior Stucco Systems.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete: Structural concrete walls.
- B. Section 04220 - Concrete Masonry Units: CMU exterior walls.

1.3 REFERENCES

- A. ASTM B 117-90, Practice for Operating Salt-spray (Fog) Apparatus, American Society for Testing and Materials.
- B. ASTM C 226-97a, Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing, American Society for Testing and Materials.
- C. ASTM C 473-84a, Standard Test Method for Physical Testing of Gypsum Panel Products, American Society for Testing and Materials.
- D. ASTM C 920-98, Standard Specification for Elastomeric Joint Sealants, American Society for Testing and Materials.
- E. ASTM D 1037-87, Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particleboard Materials, American Society for Testing and Materials.
- F. ASTM D 2247-97, Standard Practice for Testing Water Resistance of Coatings in 100 Relative Humidity, American Society for Testing and Materials.
- G. ASTM E 72-80, Standard Test Methods for Conducting Strength Tests of Panels for Building Construction, American Society for Testing and Materials.
- H. ASTM E 84-98ε1, Standard Test Method for Surface Burning Characteristics of Building Materials, American Society for Testing and Materials.
- I. ASTM E 228-85, Standard Test Method for Linear Thermal Expansion of Solid Materials with a Vitreous Silica Dilatometer Test, American Society for Testing and Materials.
- J. ASTM E 330-90, Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference, American Society for Testing and Materials.
- K. ASTM G 23-81, Standard Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials, American Society for Testing and Materials.
- L. ASTM G 26-96, Standard Practice for Operating Light-Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials, American Society for Testing and Materials.

- M. MIL-STD-180F, Test Method Standard for Environmental Engineering Considerations and Laboratory Tests, January 1, 2000, Department of Defense.
- N. NFPA 268-96, Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source, National Fire Protection Association.
- O. NFPA 285-98, Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior, Non load-bearing Wall Assemblies Containing Combustible Components Using the Intermediate-scale, Multistory Test Apparatus, National Fire Protection Association.

SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. [[Product Data](#)]: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Provide manufacturer's approved shop drawings for all flashing conditions and construction methods found on the project.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns. (Applicator to provide)

1.2 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Products listed in this section shall be provided by a single manufacturer with at least ten (10) years experience in manufacturing stucco.
- B. Installer Qualifications: Products listed in this section shall be installed by a single organization certified by the manufacturer or demonstrate at least five (5) years experience successfully installing stucco on projects of similar type and scope as specified in this section.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Recycle product buckets in accordance with standards set by local authorities.

1.4 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.5 WARRANTY

- A. Provide products that are guaranteed with respect to uniformity and quality within printed specifications.
- B. At project closeout, provide to the owner an executed copy of the manufacturer's limited warranty protecting the applicator from delaminating caused by manufacturing defect for a period of five (5) years.
- C. Fill-out and mail project completing form provided by manufacturer.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: ORO International., which is located at: PO BOX 13554 Chandler, AZ. 85248; Toll Free Tel: 888.676.2683; Fax: 888.6762683; Email: info@oro coatings.com; Web: www.oro coatings.com
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 APPLICATIONS/SCOPE

- A. ICF Coating System:
 - 1. Substrate: Insulated Concrete Form (ICF) Block.
 - 2. ORO Base Coat.
 - 3. ORO Reinforcement: Fiberglass Mesh.
 - 4. ORO Primer
 - 5. ORO TopCoat.

2.3 MATERIALS

- A. ORO Base: 47.5 lb/bucket; coverage 80 square feet per 5 gallons (85 wet mils).
 - 1. Color: Grey.
 - 2. Physical Performance. (SEE ORO SYSTEM)
- B. ORO Primer: 47.5 lb/ bucket; coverage 500 square feet per bucket.(15 wet mils)
 - 1. Color: Off White (best results if tented with finish color).
 - 2. Physical Performance. (SEE ORO SYSTEM)
- C. ORO TopCoat: 56lb/ bucket; coverage 100 square feet per bucket. (72 wet mils)
 - 1. Color: "To be specified here".
 - 2. Physical Performance. (SEE ORO SYSTEM)
- D. ORO System 24 Stock colors Custom colors available
 - 1. Color: "To be specified".
 - 2. Current Physical Performance.(additional test complete 3/1/08)
 - 3. Mildew Resistance MIL STD 810C No growth of mildew
 - 4. Resistance to Wind Driven Rain U. S. Federal Specifications TT - C-555B4.47 Exceeds 98 mph wind driven rain. No signs of penetration

5. Effects of Household Chemical on Coating ASTM D - 1308 No visual effects
6. Scrub Resistance ASTM D - 2486 No deleterious effects
7. Adhesion of Organic Coating ASTN D - 2197 Exceeds requirements
8. Flexibility - Air Dried Coatings CGSB 1GP - 71 Method 119.5
9. Freeze - Thaw Stability CGSB 1GP - 71 Method 31.1
10. Alkali Resistance Taber Abraser Model 503 with H - 18 wheels and 500 g. riders Exceeds industry standard for these type of products
11. Instrumental Color Difference ASTM D - 2244 No Change
12. Blistering ASTM D - 714 None
13. Chalking ASTM D - 659 None
14. Checking ASTM D - 660 None
15. Cracking ASTM D - 661 None
16. Peeling Visual examination None
17. Erosion ASTM D - 662 Exceeds 98 mile per hour wind driven rain. No signs of penetration.
18. Combustibility U.L.C Can4 - S102 Surpassed all requirements for: flame spread, smoke development, fuel contribution
19. Flanking ASTM D - 772 None
20. Rusting ASTM D - 610 None
21. Stay - in Place Fire Test U.L.C - S101 15 min. "Stay- in - Place" Passed requirements for Knotchec trowel or ribbon and dab method applications.
22. Full Scale Flame Spread IRC Full Scale Flame Spread Test Exceeds industry standard

2.4 REINFORCEMENT MATERIALS

- A. ORO Fiberglass Mesh:
 1. Weight per unit area = 4.5 ounces / m².
 2. Strand count tex = warp 2 x 136 weft 300.
 3. Thread count / 10 cm = warp 24 weft 23. Mesh size = 4 x 4.
 4. Acrylic copolymer resin coating > 15%.
 5. Average tensile strength = > 200 lbs / inch. Average retained tensile strength after 8 days in a 5% NaOH solution = > 120 lbs / inch.
 6. Flame retardant. Alkali resistant.
 7. Highly flexible. Rolls sizes = 38" x 150'.

EXECUTION

2.5 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

2.6 PREPARATION

- A. Clean surfaces thoroughly prior to installation. Surfaces shall be free of all grease, oil, paint, dirt, dust, sealers, or other foreign materials that may hinder proper bonding.
- B. Prepare surfaces using the methods recommended by the manufacturer for

achieving the best result for the substrate under the project conditions.

- C. Proper expansion joints should be installed according to applicable local building codes.
- D. Inspect surfaces for proper drainage.

2.7 GENERAL APPLICATION REQUIREMENTS

- A. Install in accordance with manufacturer's instructions.
- B. Do not install when temperatures are outside of the manufacturer's recommended limits.
- C. Install only when forecasted weather permits. Do not install during inclement weather.

2.8 EXTERIOR ICF STUCCO SYSTEM APPLICATION

- A. Apply base coat of ORO Base with a sprayer or trowel.
- B. Embed ORO Mesh in base coat and trowel to ensure complete coverage.
- C. After first coat dries, apply a second (skim) coat to ensure a consistent and level base coat. Allow the base coat to dry completely before applying ORO Primer.
- D. Mix/Stir/Shake ORO Primer with finish color tint just prior to application to ensure uniformity of color and consistency.
- E. Mix color tint with ORO TopCoat and apply with a trowel or sprayer depending on the desired finish. Allow at least 24 hours to cure. (See installation instructions)

2.9 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION