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energex® One Coat Stucco System E 710

PART 1—GENERAL

1.01 SUMMARY

A. Section description: Section includes installation of Energex One Coat Stucco base and Energex finish as an exterior wall cladding. Products installed but not supplied under this section:

B. Joint sealant: Refer to Energex Joint Sealant Specifications Page E 270 . Installation of joint sealant shall be by coating applicator or a separate installer under direct supervision and control of applicator. Joint sealant installer shall be experienced and competent in the installation of elastomeric construction sealants.

1.02 STUCCO BASE DESCRIPTION

A. Description of Energex One Coat Stucco:

1. Energex One Coat Stucco: A proprietary mixture of Portland cement, sand, glass fibers, proprietary ingredients installed over wire fabric or metal lath, and Energex acrylic or elastomeric finish as an exterior wall cladding.

C. Energex One Coat Stucco functional criteria:

1 General: Stucco application shall be to vertical substrates or to substrates sloped for positive drainage. Non -vertical surfaces shall have additional protection from weather exposure that might be harmful to coating performance.

2 Substrate conditions:

a. Substrates shall be sound, dry, and free of dust, dirt, laitance, efflorescence, and other harmful contaminants.
b. Substrate dimensional tolerances: Flat with 1/4 in. (6.4mm) within any 4 foot (1219mm) radius.
c. Maximum deflection of substrate system under positive or negative design loads shall not exceed L/360 of span.

4. Expansion and control joints: Continuous expansion and control joints shall be installed at locations in accordance with manu facturer's recommendations.

a. Substrate movement and expansion and contraction of Energex One Coat Stucco and adjacent materials shall be taken into account in design of expansion joints, with proper consideration given to sealant properties, installation conditions, temperature range, coefficients of expansion of materials, joint width to depth ratios, and other material factors. Minimum width of expansion joints shall be as recommended by coating manufacturer.

b. In accordance with ASTM C 1063, expansion and contraction joints shall be installed in walls not more than 144 sq. ft. (13.4m2) in area, and not more than areas of 100 sq. ft. (9.30m2) for all non -vertical applications. The distance between joints shall not exceed 18 ft. (5.5m) in either direction or a length to width ratio of 2.5:1.

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1.03 SUBMITTALS

A. General: Submit samples, evaluation reports and certificates in accordance wi th Division 1 General Requirements submittal section.

1 Samples: Submit samples for approval. Samples shall be of materials specified and of suitable size as required to accurately represent each color and texture to be used on project. Prepare each sample using the same tools and techniques as for actual project application. Maintain and make available, at job site, approved samples.
2 Manufacturer's warranty: Submit sample copies of manufacturer's warranty indicating single source responsibility.

1.04 QUALITY ASSURANCE

A. Qualifications:

1 Manufacturer: Shall have marketed stucco systems in the United States for at least five years; shall have completed projects of the same building size and type as this project.
2 Applicator: Shall be experienced and competent in the installation of stucco like materials, shall provide evidence of a minimum of five years experience in work similar to that required by this section and provide Certificate of completion for the Energex Quality Applicator Program

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver coating products in original packaging with manufacturer's identification.

B. Storage: Store Energex One Coat Stucco products in a dry location off the ground and protected from moisture conditions harmful to product performance.

1.06 PROJECT/SITE CONDITIONS

A. Environmental conditions: Comply with manufacturer's recommendations of environmental conditions affecting product performance.

1 Installation ambient air temperature: Minimum of 40°F (4°C) and rising, and remaining so for 24 hours thereafter.
2 Substrate temperature: Do not apply Energex One Coat Stucco to substrates whose temperature is less than 40°F (4°C) or contains frost or ice.
3 Inclement weather: Do not apply Energex One Coat Stucco during inclement weather unless appropriate protection is employed, wh ich Would negate manufacturer's warranty for installation.
4 Sunlight exposure: When possible, avoid installation of Energex One Coat Stucco and the finish coat in direct sunlight. Schedule finish Coat application at times when wall surfaces are in the s hade or not exposed to direct sunlight.
5 Energex One Coat Stucco materials shall not be applied if ambient temperature exceeds 120°F (49°C) or falls below 40°F (4°C) within 24 hours of application. Protect stucco from uneven and excessive evaporation, es pecially during hot, dry weather.
6 Prior to installation, the wall shall be inspected for surface contamination or other defects that may adversely affect the p erformance of Energex One Coat Stucco, and shall be free of residual moisture.

B. Coordination and scheduling:

1. Coordination: Coordinate Energex One Coat Stucco installation with other construction operations.

1.07 WARRANTY

A. Warranty: Upon request, Prior to start of installation, provide Energex Warranty Requirements Pages, W19, W20 and W21

PART 2—PRODUCTS

2.01 MANUFACTURERS

A. Manufacturer: Energex Wall Systems 2960 Woodbridge Avenue Edison, New Jersey 08837 Office (888) 343 -7463

1. Energex One Coat Stucco

a. Stucco base: Premixed fiber reinforced stucco, factory blended Portland cement, chopped fiber strands, and proprietary additives.
b. Prime coat: Energex Enerprime, acrylic polymer coating, tinted to match textured finish color.

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2. Energex finish
   a. Type: _____ _____
   b. Texture: _____
   c. Color: _____

2.02 MATERIALS

A. Stucco materials: Fiber Reinforced Stucco (Concentrate): Energex One Coat Stucco is a proprietary mixture of Portland cement, glass fibers and proprietary ingredients. Five to seven gallons (19 –27L) of clean, potable water and approximately 225 lb. (102kg) of sand, complying with ASTM C 144, is to be field added.

B. Leveling and reinforcing coat

1 Energex Enermix: 100% acrylic polymer base, requiring the addition of Portland cement.
2 Energex Enermix Dry: Copolymer based factory blend of cement and proprietary ingredients.
3 Energex Enermix Plus: Copolymer based factory blend of cement and proprietary ingredients.
4 Energex Standard Mesh 4.5: Weight 4.5 oz. per sq. yd. (153g/m2) coated for protection against alkali.

C. Energex primers:

1 Enerprime: 100% acrylic based coating to prepare surfaces for Energex finishes.
2 Enertex: 100% acrylic based coating to prepare surface for Energex finishes.

D. Energex finish:

1 Energex Finish: Factory blended, 100% acrylic polymer–based synthetic finish, integrally colored. Finish type, texture, and color as selected by architect.

2.03 RELATED MATERIALS

A. General: Related materials shall conform to the requirements of ICBO ES Evaluation Report No. 4658 and shall conform to this specification.

B. Substrate materials:

1 Gypsum sheathing: Gypsum sheathing board: Minimum ½ in. (12.7mm) thick, core treated, weather resistant, exterior gypsum sheathing complying with ASTM C 79 or ASTM C 1177 and complying with U.B.C. Standard No. 47 10.
2 Cement board sheathing conforming to ASTM C 1186.
3 Fiberboard: Minimum ½ in. (12.7mm) thick fiberboard complying with U.B.C. Standard No. 25 24.
4 Plywood: Minimum 5/16 in. (7.9mm) thick exterior grade or exposure 1 plywood for studs spaced 16 in. (406.4mm) and 3/8 in. (9.5mm) thick exterior type plywood minimum for studs spaced 24 in. (609.6mm) Plywood shall comply with U.B.C. Standard No. 25 9.
5 Oriented Strand Board (OSB): Minimum 7/16 in. (11mm) thick, exposure 1, may be used with framing as for plywood.
6 Concrete (poured or pre-cast) and masonry.

C. Water Resistive Barriers:

1. For non wood based sheathing shall be either:
   a. 1 layer of Energex Enershield with Energex 4” 4.5 mesh embedded at sheathing joints plus 1 layer of asphalt saturated Kraft building paper conforming to Federal Standard UU B790a or U.B.C. Standard No. 14 1 or other non adhering recognized equivalent.
   b. 1 layer Grade D asphalt saturated Kraft building paper as above.
   c. 1 layer asphalt saturated felt complying with ASTM D226 Type I.
   d. Other recognized equivalent.

2. For wood based sheathing shall be either:
   a. 1 layer of Energex Enershield with Energex 4” 4.5 mesh embedded at sheathing joints plus 1 layer of asphalt saturated Kraft building paper as above, or other non adhering recognized equivalent.
   b. 2 layers of Grade D asphalt saturated Kraft building paper as above or recognized equivalent

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3. For wood based sheathing with foam plastic insulation installed over the water resistive barrier shall be either:

A 1 layer of Energex Enershield with Energex Enermite 4.5 4" mesh embedded at sheathing joints plus 1 layer of Grade D aspha lt saturated Kraft building paper as above, or other non adhering recognized equivalent.
B 1 layer of 60 minute moisture resistance rated Grade D asphalt saturated Kraft building paper as above or other recognized equivalent.
C Air Barrier (Optional):

1. For all sheathing types, a combination air/water resistive barrier shall be one layer of the Energex Enershield with Energex 4" 4.5 mesh embedded at sheathing joints plus 1 layer of non adhering recognized water resistive barrier.

E. Lath: Lath and accessories as specified in ASTM C 847 and ASTM C 1063 and Appendix.

F. Seals, sealants, and bond breakers: Sealants shall conform to ASTM C 920, Grade NS, Class 25, Use NT. Backer rod shall be Closed cell polyethylene foam.

PART 3—EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's instructions for installation of one coat stucco.

REMINDER: ENERGEX ONECOAT STUCCO IS INSTALLED OVER DRAINAGE WRAP BUILDING PAPER. ONECOAT STUCCO PERFORMANCE IS DEPENDENT UPON—AMONG OTHER FACTORS—THE IMPORTANCE OF PROPER FLASHING AND JOINT SEALING AND ATTENTION TO PROPER FLASHING AND JOINT SEALANT DETAILS INDICATED ON DRAWINGS.

B. Substrate examination: Examine prior to Energex One Coat Stucco installation as follows:

1 Substrate shall be of a type approved by Energex. Plywood and OSB substrates shall be gapped 1/8 in. (3mm) between panels, except that the 4foot edges of OSB panels shall be gapped ¼ in. (6.4mm).
2 Substrate shall be examined for soundness and other harmful condi tions.
3 Substrate shall be free of dust, dirt, laitance, efflorescence, and other harmful contaminants.

C. Advise contractor of discrepancies preventing the installation of the Energex One Coat Stucco. Do not proceed with the one coat stucco work until unsatisfactory conditions are corrected.

D. Correction of unsatisfactory conditions of substrates installed by other trades shall be the responsibility of the contractor .

3.02 RELATED MATERIALS INSTALLATION

A. General: Installation of related mater ials shall conform to this specification.

B. Substrate materials:

1 Substrate construction in accordance with substrate material manufacturer's specifications and applicable building codes.
2 Maximum deflection of the substrate shall be limited to L/360.

C. Weather resistive barrier: The weather resistive barrier is placed over all substrates except concret e or masonry.

D. Lath and accessories: Install in accordance with ASTM C 1063 and Appendix and applicable building codes.

E. Sealants and backer rod: To be installed, where required, in accordance with the sealant manufacturer's specifications and published literature, and using the sealant manufacturer's recommended primers.

3.03 PREPARATION

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3.04 INSTALLATION

A. General: Energex One Coat Stucco installation shall conform to this specification and to Energex product data sheets.

B. Stucco:

1 The Energex One Coat Stucco mixture shall be applied in one or two coats to a minimum thickness of 3/8 in. (9.5mm) by hand Troweling or machine spraying the mixture to the wire lath in accordance with Energex One Coat Stucco product data sheet. The maximum thickness applied in one pass is 5/8 in. (16mm).

2 If Portland cement stucco finish coat is being used and is not applied within 48 hours, a bonder shall be sprayed on the base coa t or added to the Portland cement finish stucco mix for additional bonding.

3 Keep stucco moist for at least 24 hours (longer in dry weather) by lightly fogging walls. Start light fogging after initial s et of 1–2 hours.

4 Allow Energex One Coat Stucco to dry thoroughly to a pH of 9.5 or lower before applying acrylic primers or finishes.

C. Optional leveling coat:

1. Using a stainless steel trowel, apply Energex Enermix, Enermix plus or Enermix Dry over the Energex One Coat Stucco at a thickness of 1/16–3/32 in. and trowel smooth.

D. Optional leveling and reinforcing coat:

1 Using a stainless steel trowel, apply Energex Enermix, Enermix plus or Enermix Dry over the Energex One Coat Stucco at a thickness of 1/16–3/32 in.

2 Immediately embed the Energex Enermite 4.5 Standard Reinforcing Mesh into the wet base coat material with a trowel until the reinforcing mesh is fully embedded and the base coat thickness is approximately 1/16 in.

3 The color of the reinforcing mesh should not be visible at the sur face of the base coat.

E. Finish: Apply according to Energex Product Data Sheet.

3.05 CLEANUP

A. Removal: Remove and legally dispose of Energex One Coat Stucco installation debris material from job site.

END OF SECTION

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