

SECTION 07240 – ArcusStone Finish over Exterior Insulated Finish
System with Fabricated Cast Shape

07240.1 GENERAL

07240.11 Description and Scope

- A. Provide all labor, material and equipment necessary to install the field or panel applied wall systems.
- B. Description of system:
The System: an exterior insulation and finish system consisting of adhesive mixture, insulation board, reinforcing mesh, fabricated cast shapes, and ArcusStone finish.
- C. Definitions:
 - 1. Trained applicator/contractor: the contractor who applies the system to the substrate.
 - 2. Adhesive: An acrylic-based product.
 - 3. Insulation board: Expanded polystyrene insulation board.
 - 4. Reinforcing Mesh: A glass fiber mat embedded into, and used to strengthen the basecoat.
 - 5. Finish: A modified cement plaster with integral color composed of portland cement, natural minerals, special additives, and proprietary ingredients.
 - 6. Sealer: An acrylic based emulsion, all purpose sealer applied to finish coat.

07240.12 Quality Assurance

- A. Qualifications:
 - 1. Manufacturer shall have marketed a commercial exterior insulation and finish systems in the United States for at least 5 years. Shall be a member, in good standing of the Exterior Insulation Manufacturers Association. Shall have completed projects of the same building type, size and substrate type as this project. Shall provide personnel at the national/local level to service this account.
 - 2. EIFS Manufacturer shall provide a comprehensive quality assistance program during the entire installation to provide assurances that all products and techniques employed are acceptable to the EIFS Manufacturer and will assure the issuance of the required warranty.
 - 3. EIFS Manufacturer shall provide a five (5) year written warranty for exterior insulation and finish wall system, with warranty for the installation against defects in materials for a five (5) year period from date of substantial completion.
 - 4. System shall have current Factory Mutual Listing.
 - 5. On rated walls, assembly shall have been tested by: the Modified ASTM E-108 or ASTM E-119 (hourly rated walls).
 - 6. System shall have current code agency listing.
 - 7. EIFS Manufacturer must publish results of Impact Test as defined by EIMA Standard 101.86.
 - 8. Contractor shall be "listed" and prequalified in writing by the EIFS Manufacturer as qualified for installation of the system indicated. Contractor shall provide "proof" to demonstrate that he has completed a minimum 50,000 SF of similar, equally complex work within previous two years. Shall also hold current state and local licenses.
 - 9. Installer is to submit with his bid, written certification that the manufacturer will issue the extended warranty for manufacturer's materials and installer workmanship. Bids not including this document are subject to rejection.
 - 10. Pre-installation Conference shall be required at the project site to address project concerns and to comply with EIFS Manufacturer's Quality Assistance Program.
 - 11. E.I.F.S. Manufacturer will provide, upon request, field service support to the applicator.
 - 12. Owner shall be supplied with the EIFS Manufacturer's "Owners Quality Maintenance Handbook."
- B. Design and Detailing:

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1. General: at all locations the insulation board shall be completely encapsulated by the lamina or substrate.
2. The slope of inclined surfaces shall not be less than 6:12.
3. Substrates:
 - a) Refer to bulletin # CS 205 for appropriate substrates, and fastening systems.
4. Expansion Joints:
 - a) Where system abuts dissimilar materials.
 - b) Where deflection exceeds L/240
 - c) Where system traverses dissimilar substrates.
4. Architectural details: As indicated in design documents.
5. All ground floor applications, and all facades exposed to abnormal stress or deliberate impacts, shall have the base coat reinforced with two layers of reinforcing mesh consisting of a minimum 15 oz/yd² first layer and a minimum 4.3 oz/yd² second layer.
5. Shall not exceed planar irregularities greater than ¼" in 4' radius.

C. Fire Performance Characteristics:

Provide materials and construction that are identical to those tested for the following fire performance characteristics, per test method indicated below, by testing and inspecting organizations acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting organizations.

1. Flame Spread of Insulation Board and Finish Coats: 25 or less, smoke developed rating no more than 450 for insulation board, and 20 or less, smoke developed less than or equal to 10 for coatings when tested individually per ASTM E 84.
2. Full-Scale Multi-Story Fire Test: Tested mock-up, representative of completed multi-story wall assemble of which system is a part, complies with Uniform Building Code Standard No. 17-6 for test method and required performance characteristics of exterior nonload-bearing wall panel assemblies containing foam plastic insulation.

D. Fire Resistance Characteristics:

Provide materials and installation acceptable to governing authorities, Owner and Architect, that have proved to meet or exceed the requirements for testing in accordance with the FM (Factory Mutual) corner test, or other testing acceptable to the Owner and his representatives, to comply with requirements for insurance coverage of the existing structure.

07240.13 Submittals

- A. Samples - two 8.5"x11" samples, of each finish, texture, and color, used on the project, shall be submitted to the architect. Each sample shall be prepared using the same tools and techniques proposed for the actual installation by the applicator/contractor.
- B. Product Data - Submit EIFS Manufacturer's product data for each component of EIFS, including certification, fire test reports and research or evaluation reports, indicating compliance with local building authorities.
- C. Mock-up - Upon approval of system, and 8.5"x11" verification samples, applicator/contractor shall erect a 7' x 7' sample wall panel that shall fully represent of completed EIFS, demonstrating proposed range of color, textures and workmanship and all ancillary details (v-joints, expansion joints, window abutments, etc.). This panel be approved, in writing by the architect, and retained throughout the construction process to serve as a guide for completed EIFS work.

07240.14 Job Conditions

- A. Material shall not be applied or stored under ambient conditions contrary to the EIFS Manufacturer's printed recommendations.

07240.15 Limited Warranty

- A. After satisfactory completion, and upon request, the EIFS Manufacturer shall offer a 5 year limited warranty for materials, and a lifetime warranty against rust.

07240.2 **PRODUCTS**

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07240.21 General

- A. All components of the system shall be obtained from the named manufacturer or its authorized suppliers. The approved component manufacturer of the system shall be approved by Architect prior to project bid date. Approved applicator/contractor shall have been trained at time of bid and certified by the manufacturer.

07240.22 Materials

- A. Adhesives (determined based on substrates);
 1. EIFS Manufacturer's base coat-adhesive/Leveling-Parge Base Coat shall be compatible with the insulation board and reinforcing mesh.
 2. The bond strength to plywood or sheathing shall meet or exceed required tensile bond to resist negative pressures of 180 psf without loss of bond to substrate, when tested under ASTM E-330.
 3. Latex Adhesive for adhesion to plywood/oriented-strand board.
- B. Insulation Board:
 1. EIFS Manufacturer Approved Insulation Board; 1 pcf average density.
 2. Shall be manufacturer approved.
 3. Shall meet current EIFS Manufacturer's board specifications.
 4. Where applies, shall be inspected and marked by a third party, under prevailing model code agency rules (RADCO or UL).
- C. Reinforcing Mesh:
 1. Shall be supplied by EIFS Manufacturer.
 2. EIFS Manufacturer Standard mesh (all conditions) 4.3 oz./SY.
 3. EIFS Manufacturer "Heavy Duty" mesh (impact prone areas) 20.0 oz./SY or 15.0 oz./SY.
- D. Basecoat:
 1. EIFS Manufacturer's standard formulation designed for indicated use, compatible with specified substrate
 2. EIFS Manufacturer's Portland Cement Based Base Coat, or Leveling/Parge Base Coat.
 3. EIFS Manufacturer's Non-Cementitious Base Coat.
- E. Fabricated Cast ArcusStone Shape
 1. A lightweight limestone part that has encapsulated an expanded polystyrene board (EPS) foam core shape, to be applied over an approved substrate.
- F. Available Finishes: ArcusStone Products, Inc.
 1. [ArcusStone Coat] [and] [ArcusStone Plaster] finish materials, including basic finish, accent coloring, grouting, accessory products, and sealers shall be as manufactured or recommended by ARCUSSTONE PRODUCTS, INC.
 2. Basic finish shall be a polymer-modified cement plaster with integral color composed of Portland cement, natural minerals, special additives and proprietary ingredients. It shall be non-combustible, with a minimum compressive strength of 4650 PSI at 3/8" thickness after 28 days.
 3. ArcusStone Stone and ArcusStone Plaster materials, (cementitious), must be used in their pure form without any additional additives, other than color pigments, unless approved by the manufacturer.
 4. ArcusStone coat color and texture shall be selected from Standard ArcusStone color chart. Color-Texture and Coursing patterns shall be indicated on prints. See CS 210 for color-texture selection.
 5. ArcusStone Coat Finish (3/8" Thickness) Textures:
 - a. Chateau Polished
 - b. Chateau Stone
 - c. Dune
 - d. Tuscan
 - e. Sandstone

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- f. Weathered
- 1. ArcusStone Plaster Finish (3/16" Thickness) Textures
 - a. Sanded
 - b. Dune
 - c. Tuscan
 - d. Skip Trowel
- 1. ArcusStone Plaster color and texture shall be _____ and _____, respectively. Patterns shall be _____ as indicated on prints. Present 8.5"x11" Color/Texture samples for final approval by architect/owner.
- 2. Grouts used in [ArcusStone] finish [es] shall be Weatherall 1010 Chinking® grout with integral color _____, or approved equal. Refer to CS205 Installation and Maintenance Guide.
- 3. Sealers with water repelling properties used over ArcusStone Finishes should be used in cold climates. Refer to CS205 Installation and Maintenance Guide.

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Mixing and Preparation

A. Primus/Adhesive or Genesis:

- 1. Base Coat/Adhesive & Leveling/Parge Coat, shall be mixed in equal parts (by weight) with Portland Type 1 cement (ASTM C-150).
- 2. Shall be prepared in accordance with EIFS Manufacturer printed recommendations.
- 3. Base Coat/Adhesive Dry Mix, mix with water, in accordance with bag's directions.
- 4. Non-Cementitious Base Coat, stir only, do not add water, except to adjust spread ability.

B. Latex Adhesive:

- 1. Stir only, add no water, except to adjust workability, and spread ability.

C. Finish:

- 1. Finish shall be mixed until homogenous adding only enough water for workability. same amount of water shall be added to each pail.

- 1. Mixing with Goldblatt Jiffler mixer powered by ½" drill at min. 400-500 rpm.

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Application of Fabricated Cast ArcusStone Shapes

- 1. Application - Using a stainless steel trowel, install a ribbon of Adhesive mixture, 51 mm (2") wide by 10 mm (3/4") thick around the entire perimeter of the shape. Place eight dabs of Adhesive mixture 10 mm (3/4") thick by 102 mm (4") in diameter approximately 204 mm (8") on center to the interior area. Alternatively, a notch trowel may be used to install a continuous coat of the Adhesive mixture on the entire back of the shape. The beads shall stand out 10 mm (3/4") from the surface of the shape. The 51 mm (2") wide by 10 mm (3/4") thick ribbon must be installed around the entire perimeter of the shape. CAUTION: Do not install Adhesive on the substrate using the notch trowel. Immediately place the shape on the substrate and slide into position. Do not allow the Adhesive mixture to form a skin before positioning the insulation board on the substrate.
- 2. Drying Time - When bonding shape to an approved substrate, a period of 24 hours must elapse to allow the Adhesive to form a positive bond. The shape should not be worked on while the Adhesive is curing. Drying of the Adhesive is dependent on the air temperature and relative humidity. Under average drying conditions [21 °C (70 °F), 55% R.H.] protect work from rain for at least 24 hours.

07240.3

EXECUTION

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Inspection

A. Examination of substrate: applicator shall inspect the substrate:

- 1. To insure substrate is appropriate for building type.
- 2. To insure substrate is attached as per EIFS Manufacturer's printed recommendations.

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3. To insure that it is free of all foreign materials which would affect the adhesion of the system.
4. For planar irregularities which would effect the acceptance of the system by the architect.
5. Correct planar irregularities greater than ¼ " in 4' radius.

In the event that the above parameters are not met, the EIFS Manufacturer representative and the applicator/contractor shall submit a written report to the architect, general contractor, and the owner, listing conditions detrimental to the performance of the EIFS System. No work shall be started until unsatisfactory conditions have be corrected.

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INSTALLATION

- A. General Conditions:
 1. Contractor shall not attempt application of system in adverse weather conditions (refer to Installation Handbook).
- B. EIFS Manufacturer Insulation Board:
 1. Shall be applied to the substrate surface starting from the bottom and supported by permanent or temporary means.
 2. Shall be staggered and interlocked at corners.
 3. Shall be rasped to relieve planar irregularities prior to application of basecoat and mesh.
- C. EIFS Manufacturer basecoat and mesh:
 1. Shall be applied in accordance with EIFS Manufacturer's instructions.
- D. ArcusStone Finish:
 1. Finish shall be applied in accordance with manufacture's instructions.
 2. Finish shall be applied in accordance with architect's exterior elevation notations.
 3. Finish shall be applied to match approved submittals.
- E. Safety:
 1. Contractor shall provide safe working environment, OSHA approved staging and scaffold.
 2. Contractor shall provide proof of liability and workman's compensation insurance coverages.
- F. Field Quality Control
 1. EIFS Manufacturer assumes no responsibility for on-site inspections EIFS Manufacturer . and / or its distributors will provide field service support if reasonably requested by the Applicator. The Designer, general contractor, or their appointed representative and/or the EIFS Manufacturer distributor should make periodic on-site inspections to ensure that the EIFS Manufacturer materials are being installed in strict accordance with EIFS Manufacturer's specifications, The Applicator shall be responsible for the proper application of the EIFS Manufacturer materials.
 2. As part of the Quality Control Program, the Applicator and/or Panel Fabricator/Erector (when applicable) shall certify in writing to the E.I.F.S. manufacturer that all materials were installed in accordance with the Manufacturer's specifications, written recommendations, and project specifications.
 3. The Insulation Foam supplier shall certify in writing that the foam meets the EIFS Manufacturer's specifications.
- F. Clean-up:
 1. Contractor shall provide clean-up, removal of all excess systems materials, removal of masking materials, and removal of staging equipment, in a timely and safe manner.
 2. Contractor shall provide EIFS Manufacturer's Five-Year Limited Warranty, issued to the job.