COREV AMERICA
MANUFACTURER'S SPECIFICATION

DIRECT-APPLIED EXTERIOR FINISH SYSTEM ON CEMENT BOARD

COREV

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:

1. Corev America's Direct-Applied Exterior Finish System (DEFS) applicable to cement board in exterior wall and soffit applications

1.2 SYSTEM DESCRIPTION

A. The Direct-Applied Exterior Finish System typically consists of:

1. UNIBASE basecoat mixture, an acrylic-modified cementitious mixture prepared at the jobsite by mixing UNIBASE acrylic modifier and Portland cement Type 1 or 2
2. COREVNET-DT strip reinforcing mesh embedded in basecoat mixture and applied to joints in cement board
3. COREVNET-ST reinforcing mesh embedded in basecoat mixture and applied to all cement board surfaces
4. COREV-CORNER reinforcing mesh embedded in basecoat mixture and applied at all inside and outside corner condi tions, unless PVC corner beads are used
5. PINTUPRIME acrylic primer (optional), tinted to match the color of the finish coating
6. COREV integral color textured finish coating

1.3 RELATED SECTIONS

A. Sections directly related to the building envelope, such as:

1. Concrete	Division 3
2. Unit Masonry	Division 4
3. Cold-formed metal framing	Division 5
4. Sheathing	Division 6
5. Sealants and Flashing	Division 7

1.4 DESIGN REQUIREMENTS

A. Corev America's DEFS on cement board does not serve as a weather barrier. Therefore, the system should be applied over substrates that serve as weather barriers, such as DensGlass coated with IMPERCOREV water-resistive barrier. Planar irregularities in the framing or sheathing will not be hidden by application of Corev America's DEFS. Variations in plane, the use of decorative elements, and the use of larger aggregate finishes reduce the visibility of such irregularities. Constituent elements of the cement board related to hydration may result in visible efflorescence on the surface of the DEFS finish coating.

B. Substrate systems should be designed to withstand applicable loads, including live, dead, positive and negative wind and seismic etc. Bond strength, fastener strength and connection strength shall be analyzed and engineered, and appropriate factors of safety shall be used. Maximum deflection of substrate systems shall not exceed L/240th of the span.

C. Dimensional tolerances:

1. Structural steel framing used to support the DEFS system shall meet the requirements of the American Institute of Steel Construction.
2. Brick, masonry and concrete substrates shall be flat within ¼" depth within any 4' radius.

D. Light Gauge Steel Framing

1. Thickness shall be determined by loads using accepted engineering practices with minimum thickness being 20 gauge at maximum 16" stud spacing.

2. Section properties of members shall meet the latest AISI standards.
3. All stud, track, bridging and bracing connections shall be electric fusion welded. Field erected framing shall be screw fastened.
4. Framing will include stud, track, bridging and bracing and be galvanized or painted with rust-resistant primer.
5. When light gauge steel framing is continued past the floorline, the stud cavity flue shall be continuously firestopped at the floorline. The space between the edge of the floor and the slab shall be sealed with safing material as per building code requirements.

E. Acceptable substrates:

1. Inorganic fiberglass mat faced water-resistant gypsum sheathing meeting ASTM C 1177, when coated with IMPERCOREV water-resistive barrier (see related Corev America literature)
2. Sound unpainted unglazed concrete.
3. Sound unpainted unglazed unit masonry.
4. Application to substrates other than those listed above shall be approved in writing by Corev America. Additionally, testing should be conducted on such substrates in order to verify adhesion.

F. The minimum slope of inclined surfaces shall be not less than 6” (150 mm) of rise in 12” (300 mm) of horizontal projection. In clined areas defined as roof shall not use the DEFS system.

G. Terminations

1. Windows must be designed with the proper sill pan, end dams, or other design elements to ensure that any water penetrating the window assembly is diverted to the exterior of the building.
2. The DEFS shall terminate at least 6” above grade.
3. At rooflines, balconies and other terminations, adequate flashing, including diverter flashing, shall be designed and installed to prevent water infiltration into the wall assembly.

1.5 SUBMITTALS

A. Samples:

1. Two 1’ X 1’ samples of the DEFS system, representative of the proper finish coating, texture and color, shall be prepared using the same tools and techniques as required by the job.
2. One sample shall remain at the jobsite for comparison of texture and color.

B. Shop Drawings of details not provided by the Architect shall be submitted showing the DEFS system, connections, expansion joints, wall layout, terminations and other details necessary for clarity.

C. Certification:

1. A trained applicator shall submit his current Corev America registered installer certification letter to the Architect prior to the application of the product.

D. Maintenance:

1. Upon request by the client, a maintenance kit shall be provided. This kit will include 8 ft2 of Corevnet-ST, one five-gallon bucket of UNIBASE™ and one five-gallon bucket of the appropriate finish coating(s).
2. The kit shall be delivered to the location where the DEFS system is being installed.

1.6 QUALITY ASSURANCE

A. Installation Company:

1. Shall be a Company specializing in the Work of this section and approved by Corev America.
2. Shall have a minimum five years experience in the installation of DEFS, with experience with projects of the scope and complexity of the specified project.
3. Shall employ installation personnel qualified in the trowel trades and experienced in DEFS installation.

B. Sealant Contractor:

1. The General Contractor or Owner shall ensure that the sealant contractor is qualified to perform the sealant work in accordance with the sealant manufacturer's specifications.
2. The applicator shall be properly trained so that a competent installation of the specified sealant system is achieved.

1.7 MOCK-UP

A. Construct jobsite mock-up, using jobsite materials, to include:

1. Range of color and finish textures and joint configurations.
2. Method of attachment to substrate.
3. Typical terminations, windows and other wall penetrations.
4. Flashings, copings and sealants installed.
5. Once accepted, the mock-up shall be the standard of comparison for the remainder of the Work.
6. Install mock-up as directed by Architect, and remove from jobsite after completion of the Project.

B. The mock-up shall demonstrate adequate design and coordination of construction elements to ensure a water-tight wall assembly.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the jobsite in Corev America's original unopened packaging with labels intact.

B. Protect materials from damage by storing in a cool, dry space, protected from direct sun and freezing temperatures. Buckets shall not be stacked more than three containers high.

1.9 JOB CONDITIONS / ENVIRONMENTAL REQUIREMENTS

A. Materials shall not be applied to a substrate with a temperature lower than 40° F or higher than 100° F.

B. The ambient air temperature will be a minimum of 40° F and rising at the time of installation and remain so for twenty-four (24) hours thereafter.

C. For DEFS installation in ambient temperatures lower than 40° F, enclose the area and apply supplementary heat during installation and for a minimum of twenty-four (24) hours after the installation of materials is complete.

D. Do not install DEFS materials during rain or other inclement weather, and after such weather, wait until surfaces are completely dry before resuming work.

E. Adjacent areas and materials shall be protected to preclude damage during materials installation.

F. The DEFS assembly shall be protected from weather immediately after installation through use of flashing. Plastic should be used to cover areas that may be exposed to moisture prior to drying.

G. Proper scheduling of the installation will be coordinated with the General Contractor and the job will be staffed to maintain the schedule established.

H. The General Contractor shall provide access to electric power and clean water where the DEFS system is to be installed.

1.10 WARRANTY

Corev America will provide a written 5-year limited warranty against defective materials. Corev America shall make no other warranties, expressed or implied. Corev America does not warrant workmanship associated with the installation of the DEFS system.

1.11 DESIGN RESPONSIBILITY

The specifier and the purchaser are responsible to determine whether a product is suitable for its intended use. Corev America's specifications, application details, and product data sheets are intended only to guide the design process; the designer shall be responsible for the proper coordination and integration of the DEFS system in the building construction documents. Corev America is not liable for any errors or omissions in design, detail, structural capability, attachment details, shop drawings, or the like, whether based upon the information prepared by Corev America or otherwise.

PART 2 MATERIALS

2.1 MATERIALS

A. UNIBASE™ acrylic polymer cement modifier: An element of the basecoat mixture.

1. UNIBASE Basecoat mixture: A combination of UNIBASE acrylic polymer cement modifier and Portland cement, mixed at the jobsite. Used as the matrix for the COREVNET reinforcing mesh of the UNIBASE lamina.

B. REINFORCEMENT MESHES

1. COREVNET-DT™ 9" Strip Reinforcing Mesh (Detail): A Corev-supplied treated glass-fiber reinforcing mesh in the UNIBASE lamina used at all cement board joints. 4.4 oz./SY
2. COREVNET-ST™ Reinforcing Mesh (Standard): A Corev-supplied treated glass-fiber reinforcing mesh in the UNIBASE lamina used over all cement board surfaces. 4.4 oz./SY
3. COREV-CORNER™: A Corev-supplied treated glass-fiber reinforcing mesh to add increased impact resistance to corners. 7.0 oz./SY

C. PINTUPRIME: Factory-mixed, acrylic polymer based primer tinted to the color of the finish coat.

D. FINISH COAT MATERIALS: Factory-mixed, acrylic polymer based finish coatings containing integral color and available in various textures.

E. CEMENT BOARD conforming to ASTM C1325 (Type A Exterior) in minimum thickness of ½".

F. PORTLAND CEMENT: ASTM C 150 Type I or II Portland cement, gray color, with fine powder consistency and free of lumps.

G. SEALANTS: Compatibility testing with Corev materials and systems has been conducted on the products listed below. Sealant shall be installed per the sealant manufacturer's specifications, using accessories and components approved by that manufacturer. Backer rods shall be closed cell. Bond breaker tape shall be of a type recommended by the manufacturer. The use of other sealants is subject to compatibility testing and written approval from Corev America.

1. Dow Corning 790, 791 or 795.
2. Pecora 890.
3. GE Silpruf SCS 2000

H. ACCESSORIES: Starter track, corner beads, soffit vents, control joints and other PVC components manufactured by Plastic Components, Inc.

I. WATER: Clean and clear, free of foreign matter, and potable.

PART 3 EXECUTION

3.1 EXAMINATION

A. Prior to installation of the DEFS system, the substrate shall be examined by a Corev America registered installer or representative to ensure the following:

1. The substrate is appropriate for use with the DEFS System.
2. The substrate is as specified in the construction plans and is sound, tight, and otherwise ready for the installation.
3. The surface of the substrate is free of foreign materials such as paint, wax, glazing, moisture, dust, dirt or oil.
4. The dimensional correctness of the substrate is as specified in this document.
5. Any discrepancies shall be immediately brought to the attention of the General Contractor and Architect and Work shall not proceed until unsatisfactory conditions have been rectified.

3.2 INSTALLATION

A. Install Corev America's DEFS System per written instructions.

B. CEMENT BOARD shall be installed in accordance with this document and the manufacturer's written instructions.

1. Locate corrosion resistant steel screws maximum 8" o.c. along framing members or closer (if required by design loads). Screws should be driven in such that heads are flush with the surface of the cement board. Screws should be positioned 3/8" from board edges.
2. Cement board joints should be butted, and vertical joints should be staggered in a running bond pattern. All cement board edges shall be on framing members.
3. Cut cement board into L shapes for installation at all corners of openings – board joints must never align with such corners.
4. Over surfaces sheathed with DensGlass, cement board joints should be offset from such DensGlass joints by a minimum of 1'0".
5. Expansion joints: The designer is responsible for the design and location of expansion joints. They are required at a minimum at the following locations:

    a. Where expansion joints are specified by the Architect.
    b. Where building expansion joints occur.
    c. Where expansion joints occur in the substrate.
    d. Where prefabricated panels abut one another.
    e. Where the DEFS abuts dissimilar materials.
    f. Where a change in the substrate type occurs, unless specifically approved in writing by Corev America.
    g. Where significant structural movement occurs or can be expected to occur.

C. COREVNET- DT™ 9" Strip Reinforcing Mesh (Detail)

1. Embed COREVNET-DT in UNIBASE basecoat mixture at all cement board joints and for diagonal reinforcement on all corners of openings.
2. Use a stainless steel trowel to apply a uniform coat of UNIBASE mixture to surfaces of cement board. Using a trowel, immediately embed the COREVNET-DT mesh in the UNIBASE mixture, working from the center to the edge, ensuring that the mesh is entirely embedded in the basecoat.
3. COREVNET-DT reinforcing mesh sheets shall overlap by 2", leaving no areas uncovered. The nominal thickness of the basecoat lamina shall be 1/16".
4. Allow the UNIBASE lamina to dry twenty-four hours prior to application of the finish coating. During this period, the surface should be protected from damage and weather.

D. COREV-CORNER™

1. COREV-CORNER shall be used at all inside and outside corners, unless PVC corner beads are used.
2. Use a stainless steel trowel to apply a uniform coat of UNIBASE mixture to surfaces of cement board. Using a trowel, immediately embed the COREV-CORNER mesh in the UNIBASE mixture, working from the center to the edge, ensuring that the mesh is entirely embedded in the basecoat.

E. COREVNET-ST™ Reinforcing Mesh (Standard)

1. Embed COREVNET-ST in UNIBASE basecoat mixture over all surfaces of cement board.
2. Use a stainless steel trowel to apply a uniform coat of UNIBASE mixture to surfaces of cement board. Using a trowel, imediately embed the COREVNET-ST mesh in the UNIBASE mixture, working from the center to the edge, ensuring that the mesh is entirely embedded in the basecoat.
3. COREVNET-ST reinforcing mesh sheets shall overlap by 2”, leaving no areas uncovered. The nominal thickness of the basecoat lamina shall be 1/16”.
4. Allow the UNIBASE lamina to dry twenty-four hours prior to application of the finish coating. During this period, the surface should be protected from damage and weather.

F. PINTUPRIME is optional and may be used to avoid light/dark color effect, particularly under smaller aggregate finish coatings. PINTUPRIME should be tinted to match the color of the finish coating. Apply PINTUPRIME per the manufacturer’s instructions and allow to dry overnight prior to application of the finish coating.

G. FINISH COATING

1. A clean stainless steel trowel shall be used for application and a wet edge shall always be maintained. To ensure uniform appearance, sufficient labor and material must be employed.
2. The material shall be worked from one side of the UNIBASE lamina to the opposite side, maintaining a wet edge.
3. The coating shall first be applied to the substrate and leveled, and then it shall be textured.
4. Consult individual finish coating product data sheets for additional details on installation techniques
5. Drying rate will vary depending on weather conditions. Until dry, the finish coat shall be protected from the weather. Flashing and other waterproofing systems shall be completed immediately after installation of the finish to protect the entire wall assembly from weather and to prevent water infiltration.
6. Avoid applying finish in direct sunlight or over hot basecoat surfaces.
7. Consistency of texture requires that applicators use the same tools and hand motions.
8. Do not install finish in sealant joints. Install sealants when the finish is completely dry.

3.3 FIELD QUALITY CONTROL

A. Prior to commencing the project, the DEFS installation company, General Contractor, substrate contractor and other trades whose work affects the building envelope shall meet at the jobsite to review and coordinate the work of their sections.

B. The DEFS installation company shall be responsible for the proper handling of materials and installation of the system per Corev’s specifications and all related documents.

C. Unless otherwise specifically agreed to in writing prior the commencement of the project, Corev America may conduct manufacturer site inspections but is not required to do so.

PART 4 MAINTENANCE

4.1 MAINTENANCE

A. BASIC CLEANING

1. Power-wash at low pressure (never more than 600 PSI) with clean water. In particularly difficult areas, lightly scrub with a soft bristle brush. Never exceed pressure recommendation and never use hard bristle brushes or hard scrubbing on DEFS finishes. Doing so may damage the finish coat and may void the manufacturer’s warranty.

B. CLEANING MILDEW AND ALGAE

1. Mix water with household bleach in a ratio of 3:1, in an amount adequate to liberally cover the entire are to be cleaned.
2. Cover vegetation and other materials that may be damaged by the bleach prior to spraying.
3. Spray the mixture on the affected wall and lightly scrub with a soft bristle brush as necessary.
4. After successful cleaning, rinse the entire wall surface thoroughly with clean water. Do not use solvent-based products as they are not compatible with DEFS components.

C. Sealants and Flashings: It is critical that sealants and flashings be inspected on a regular basis for soundness and performance in preventing water infiltration. Where there is any question of soundness or performance, sealants and flashings shall be re placed or repaired.

This document conveys system, product and installation information related to the DEFS system and applicable as of the date of this document. Corev America assumes no liability, expressed or implied, for workmanship. The “approved” designation conferred by Corev America on selected installation companies does imply any endorsement or sponsorship of that installation company by Corev America. Installation companies are independent contractors and are entirely responsible for their workmanship.

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