

SECTION 07 24 00

ULTRA-GUARD EIFS™: WOODPECKER-RESISTANT EXTERIOR INSULATION AND FINISH SYSTEM

About this guide specification. This section is written for architects, engineers and specifiers to edit into project manuals. Text in *red italics* is a specifier note: edit or delete it before issuing. Fill in bracketed items [] for the project. Coordinate with Modern Wall Systems on project-specific details before bidding.

PART 1 GENERAL**1.01 SUMMARY**

A. Section includes a drainable, woodpecker-resistant exterior insulation and finish system (EIFS) consisting of:

1. Air- and water-resistive barrier (AWRB) over the substrate.
2. Expanded polystyrene (EPS) continuous insulation, installed in a drainable configuration.
3. Ultra-Guard impact layer: ½ in. cement board fastened through the insulation.
4. Reinforced base coat, fiberglass reinforcing mesh and textured finish coat.
5. Trims, accessories, joint treatment and transitions to adjacent construction.

B. Related sections:

1. 06 16 00 Sheathing.
2. 07 62 00 Sheet Metal Flashing and Trim.
3. 07 92 00 Joint Sealants.
4. 08 50 00 Windows; 08 10 00 Doors and Frames.

1.02 REFERENCES

- A. ASTM C578: Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- B. ASTM C1325: Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units.
- C. ASTM E2568: Standard Specification for PB Exterior Insulation and Finish Systems.
- D. ASTM E2273: Standard Test Method for Determining the Drainage Efficiency of EIFS Clad Wall Assemblies.
- E. ASTM E2486/E2486M: Standard Test Method for Impact Resistance of Class PB and PI EIFS.
- F. ASTM E84: Surface Burning Characteristics of Building Materials.
- G. ASTM C920: Standard Specification for Elastomeric Joint Sealants.
- H. International Building Code (IBC) Chapter 14 and International Residential Code (IRC) Section R703, as adopted by the authority having jurisdiction.
- I. EIMA (EIFS Industry Members Association) guidelines for EIFS installation.

1.03 DEFINITIONS

- A. **Impact layer:** The ½ in. cement board placed over the EPS insulation and under the base coat. It is the component that distinguishes Ultra-Guard from conventional EIFS.
- B. **Lamina:** The base coat, embedded reinforcing mesh and finish coat together.
- C. **Drainable EIFS:** An EIFS with a drainage plane behind the insulation that lets incidental water drain to the exterior.

1.04 SUBMITTALS

- A. Product data: Ultra-Guard EIFS Technical Data Sheet and manufacturer data sheets for each component.
- B. Shop drawings: Project-specific details at terminations, openings, penetrations, expansion joints, roof-to-wall intersections and parapets.
- C. Samples: Finish samples of each selected color and texture (Ultra-Guard color code and texture).
- D. Qualification data: Installer qualifications per Article 1.05.
- E. Warranty: Sample of the Ultra-Guard Certificate of Warranty and component manufacturers' material warranties.

F. Closeout: Ultra-Guard Owner Maintenance Guide.

1.05 QUALITY ASSURANCE

- A. Installer: Modern Wall Systems, Virginia Beach, VA (757-833-4063), the developer and installer of the Ultra-Guard EIFS system.
- B. Mockup: Build a mockup of approximately [4 ft x 4 ft] [size indicated], including a window or penetration detail and a sealant joint, showing color, texture and workmanship. The approved mockup is the standard for the work. [Mockup may remain as part of the work.]
- C. Preinstallation meeting: Conduct at the project site with the contractor, installer, and window, roofing and flashing trades before starting work.

Specifier Note: Retain the mockup paragraph for commercial and multi-family projects. Delete for single-family retrofits.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original unopened packaging with labels intact.
- B. Store wet materials off the ground, protected from weather, and within the temperature range required by the manufacturer. Protect from freezing.
- C. Protect EPS insulation and cement board from sunlight exposure beyond the manufacturer's limits, physical damage, and contact with solvents.

1.07 FIELD CONDITIONS

- A. Apply wet materials only when ambient and surface temperatures are within the manufacturer's limits, and are expected to stay within them during cure.
- B. Do not apply during rain or onto wet or frozen surfaces. Protect fresh work from rain until cured.
- C. Provide temporary protection or enclosure where required to maintain application conditions.

1.08 WARRANTY

- A. Installer labor warranty: Modern Wall Systems one (1) year labor warranty from substantial completion, as stated in the Ultra-Guard Certificate of Warranty.
- B. Material warranties: Component manufacturers' standard material warranties, as issued by each manufacturer for the installed assembly.

Specifier Note: Confirm material warranty availability for the specific component products selected before bid.

PART 2 PRODUCTS

2.01 SYSTEM

- A. Basis of design: **Ultra-Guard EIFS™**, Modern Wall Systems. Substitutions: [Not permitted.] [Per Division 01.]
- B. System type: Drainable (moisture-managed) EIFS with a cement board impact layer.
- C. Performance: Provide a system that drains incidental water to the exterior, accommodates building movement at expansion joints, and resists woodpecker drilling and impact through the cement board impact layer.

Specifier Note: Insert the ASTM E2486 impact classification here when system test results are published.

2.02 MATERIALS

- A. Air- and water-resistive barrier: Fluid-applied or sheet AWRB compatible with the substrate and adhesive, with the manufacturer's detail components for sheathing joints, rough openings and transitions. [Product: _____]
- B. Insulation adhesive: Manufacturer's adhesive applied in vertical notched ribbons to form the drainage plane. [Product: _____]
- C. EPS insulation board: ASTM C578, Type I, aged per the manufacturer's requirements, square-edged.
 - 1. Thickness: [__] in. [As indicated on drawings].
 - 2. Grooved drainage board may be used instead of notched adhesive.
- D. Cement board impact layer: **PermaBASE PLUS® Cement Board**, PermaBASE Building Products, LLC, ½ in. (12.7 mm), ASTM C1325.
- E. Fasteners: Corrosion-resistant screws compatible with the cement board manufacturer's requirements, with length to pass through the board and insulation and engage framing or structural substrate per the fastening design.

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- F. Cement board joint treatment: Alkali-resistant fiberglass joint tape embedded in base coat.
- G. Base coat: Polymer-modified cementitious base coat compatible with cement board. [Product: _____]
- H. Reinforcing mesh: Alkali-resistant, open-weave fiberglass mesh.
 - 1. Standard mesh at all wall areas.
 - 2. [High-impact mesh, under standard mesh, at the first floor and other areas indicated.]
- I. Finish: Factory-tinted 100% acrylic or elastomeric textured finish. Color: [Ultra-Guard UG-____]. Texture: [Fine sand] [Medium sand] [Coarse sand] [Swirl] [Freestyle]. [Product: _____]
- J. Trims and accessories: PVC or aluminum starter tracks with drip and weep provisions, casing beads and expansion joint trims as indicated.
- K. Sealant: ASTM C920, low-modulus sealant compatible with the finish and approved for EIFS, with closed-cell backer rod. See Section 07 92 00.

Specifier Note: Fill in the specific AWRB, adhesive, base coat, mesh and finish products selected for the project, and confirm compatibility with the component manufacturers.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify the substrate is sound, dry, plane and securely attached, and that window, door and roof flashings required before EIFS installation are in place.
- B. Retrofit: Remove damaged EIFS to sound edges. Measure moisture in exposed sheathing and replace wet or deteriorated sheathing and framing before proceeding.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.02 INSTALLATION: AIR- AND WATER-RESISTIVE BARRIER

- A. Treat sheathing joints, inside and outside corners, and rough openings per the AWRB manufacturer.
- B. Apply the AWRB continuously over the full wall area. Lap and integrate it shingle-fashion with window, door and through-wall flashings so water drains to the exterior.

3.03 INSTALLATION: INSULATION

- A. Apply adhesive in vertical notched ribbons so drainage channels run unobstructed to the base of the wall.
- B. Install boards in a running bond with vertical joints staggered and tightly abutted. Fill gaps with insulation slivers or approved foam, not base coat.
- C. Do not align board joints with the corners of openings. Use L-shaped boards at window and door corners.
- D. Rasp the insulation surface flat before installing the cement board.

3.04 INSTALLATION: ULTRA-GUARD IMPACT LAYER

- A. Install cement board over the insulation with ends and edges closely butted but not forced. Stagger end joints, and offset board joints from insulation joints.
- B. Fasten through the insulation into framing or the structural substrate per the fastening design, driving fasteners in the field of the board first and working toward the edges. Set fastener heads flush without crushing the board or insulation.
- C. Treat all board joints with alkali-resistant joint tape embedded in base coat. Do not bridge expansion joints.

Specifier Note: Fastener type, length and spacing through the insulation must be determined for each project by Modern Wall Systems and the design professional, based on framing, insulation thickness and design wind loads.

3.05 INSTALLATION: BASE COAT, MESH AND FINISH

- A. Apply base coat over the cement board and fully embed the reinforcing mesh with no mesh pattern visible. Lap mesh at edges per the manufacturer.
- B. Install diagonal mesh strips at the corners of openings before the full mesh layer. Back-wrap or use trims at all terminations.
- C. Where specified, install high-impact mesh butted (not lapped) under the standard mesh.
- D. Apply finish in the selected texture to the minimum thickness required by the manufacturer. Work to a wet edge and from corner to corner or joint to joint to avoid cold joints. Use material from a single batch on each elevation.

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3.06 JOINTS AND SEALANTS

- A. Provide expansion joints at building expansion joints, floor lines of wood-frame construction, changes in substrate, and where EIFS meets dissimilar materials.
- B. Leave sealant joints at windows, doors, penetrations and terminations at a minimum width of [¾ in.] at expansion joints and [½ in.] at perimeter joints, or as indicated.
- C. Prime the joint substrate as required, install backer rod, and apply sealant to the base coat, not the finish, per Section 07 92 00. Leave weeps open at sill and base terminations.

3.07 FIELD QUALITY CONTROL

- A. Staged inspections: Inspect and document each stage before it is covered:
 - 1. AWRB and flashing integration.
 - 2. Insulation installation and drainage configuration.
 - 3. Cement board fastening and joint treatment.
 - 4. Base coat and mesh embedment.
 - 5. Finish coat and sealant joints.
- B. Correct deficient work before it is covered by the next stage.

3.08 CLEANING AND PROTECTION

- A. Remove spills and overspray from adjacent surfaces. Protect completed work from damage and contamination until substantial completion.
- B. Turn over the Ultra-Guard Owner Maintenance Guide and Certificate of Warranty at completion.

END OF SECTION 07 24 00

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