

SECTION 07240

EXTERIOR INSULATION AND FINISH SYSTEM

PART GENERAL

SECTION INCLUDES

Exterior Insulation and Finish System (EIFS), Class PB,  
as defined by EIFS Industry Members Association (EIMA).

RELATED SECTIONS

Section 03300 - Cast-In-Place Concrete.

Section 04810 - Unit Masonry Assemblies.

Section 05400 - Cold-Formed Metal Framing.

Section 06100 - Rough Carpentry.

Section 06115 - Sheathing.

Section 07210 - Building Insulation.

Section 07600 - Flashing and Sheet Metal.

Section 07900 - Joint Sealers.

REFERENCES

ASTM B 117 - Operating Salt Spray (Fog) Apparatus.

ASTM C 1063 - Installation of Lathing and Furring to  
Receive Interior and Exterior Portland Cement-Based  
Plaster.

ASTM D 968 - Abrasion Resistance of Organic Coatings by  
Falling Abrasive.

ASTM D 1784 - Rigid Poly(Vinyl Chloride) (PVC) Compounds  
and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds.

ASTM D 2247 - Testing Water Resistance of Coatings in 100  
Percent Relative Humidity.

ASTM E 84 - Surface Burning Characteristics of Building

Materials.

ASTM E 96 - Water Vapor Transmission of Materials.

ASTM E 108 - Fire Tests of Roof Coverings.

ASTM E 283 - Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

ASTM E 330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

ASTM E 331 - Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

ASTM G 23 - Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials.

BOCA National Building Code Radiant Heat Exposure Test of Exterior Wall Assemblies.

EIMA Standard 101.86.

Mil Standard 810B.

UBC 26-9.

#### SYSTEM DESCRIPTION

##### Design Requirements:

Deflection of Substrate System: Not exceeding 1/240 times the span.

Substrate Flatness: Within 1/4 inch (6.4 mm) in a 4 foot (1.2 m) radius.

Slope of Inclined Surfaces: Not less than 6:12, length not exceeding 12 inches (305 mm).

Zones requiring Impact Resistance Classification higher than Level 1 (as defined by EIMA Standard 101.86): Detailed and described in Contract Documents.

##### Performance Requirements:

EIFS tested for durability as follows:

Abrasion Resistance: ASTM D 968; no deleterious

effects after 132 gallons (500 L).

Absorption, Freeze-Thaw: 60 cycles, soak at 68 degrees F (20 degrees C) 4 days, then 14 degrees F (-10 degrees C) 2 hours, then 68 degrees F (20 degrees C) 2 hours; no checking, cracking, or splitting.

Accelerated Weathering: ASTM G 23 (Federal Test Standard 141A, Method 6151); 2,000 hours; no deterioration.

Mildew Resistance: Mil Standard 810B; passes.

Moisture Resistance: ASTM D 2247 (Federal Test Standard 141A, Method 6201); 14 days, no deleterious effects.

Salt Spray Resistance: ASTM B 117 (Federal Test Standard 141A, Method 6061); 5 percent concentration, 300 hours, no deleterious effects.

Air Leakage: ASTM E 283; less than 0.001 CFM/sq. ft. (0.301 L/min/sq. m), classified as Type III air barrier by National Research Council of Canada.

Water Penetration: ASTM E 331; no water penetration to innermost surface of test specimen.

Moisture Drainage Efficiency: Modified ASTM E 331; 95 percent efficiency.

Water Vapor Transmission: ASTM E 96, Procedure B, Standard lamina; 14 grams/hour-sq. ft. (10 g/hr-sq. m).

EIFS tested for structural performance as follows:

Tensile Bond Strength, Backstop to Exterior Grade Gypsum Sheathing: 9.1 psi (67.7 kPa), sheathing facer failure.

Tensile Bond Strength, Backstop to Fiberglass Mat-Surfaced Gypsum Sheathing: 28.8 psi (198.6 kPa), sheathing facer failure.

Tensile Bond Strength, Primus to Backstop: 12.6 psi (86.9 kPa).

Tensile Bond Strength, Genesis to Backstop: 15.1 psi (104 kPa), sheathing facing failure.

Full-Scale Structural Tests: ASTM E 330; minimum failure load under positive or negative load of 90 psf (4.3 kPa) unless otherwise specified; substrate failure.

Impact Resistance: EIMA Standard 101.86; \_\_\_\_\_ inch-pounds (\_\_\_\_\_ J).

EIFS tested for fire performance as follows:

Flame Spread/Smoke Developed, EPS Insulation Board: ASTM E 84; 25/450.

Flame Spread/Smoke Developed, Adhesives and Coatings: ASTM E 84; 20/10.  
Full Scale Fire Test: ASTM E 108 (Modified); passed.  
Intermediate Scale Multi-Story Test (ISMA): UBC 26-9; passed.  
Ignitability Characteristics: BOCA National Building Code Radiant Heat Exposure Test of Exterior Wall Assemblies; passed.

#### SUBMITTALS

Submit under provisions of Section 01300.

Product Data: Manufacturer's descriptive literature for each specified product.

#### Quality Assurance Submittals:

Certificates: Contractor's certification that: Products of this Section, as provided, meet or exceed specified requirements.

Manufacturers of products of this section meet specified qualifications.

Applicator of products of this section meets specified qualifications.

#### Manufacturer's instructions:

Printed installation instructions for each specified product.

Manufacturer's Safety Data Sheets (M.S.D.S.) for each specified product.

Closeout Submittals: Warranty documents, issued and executed by manufacturer of EIFS materials.

#### QUALITY ASSURANCE

#### Qualifications:

Manufacturer of EIFS Materials: Minimum five (5) years documented experience producing EIFS materials specified in this section, sponsor of applicator certification program, sponsor of certification and quality assurance program for manufacturers of materials for EIFS installations not produced by EIFS materials manufacturer, and certified by ISO 9001.

Contractor: Knowledgeable in the proper installation of EIFS materials specified in this section, experienced and competent in the installation of EIFS, and possessing current Trained Contractor

Certificate issued by the EIFS manufacturer.  
Manufacturer of Insulation Materials: Manufacturer having insulating board product listed as meeting EIFS materials manufacturer's insulation board specification, and as participant in EIFS manufacturer's third-party certification and quality assurance program.  
Panel Fabricator: Experienced and competent in the fabrication of architectural wall panels.  
Installer: Experienced and competent in the installation of architectural wall panels; the Panel Fabricator, approved by the Panel Fabricator, or under direct supervision of the Panel Fabricator.

Regulatory Requirements:

Separate expanded polystyrene from building interior with 15-minute minimum thermal barrier.  
Expanded polystyrene use and maximum thickness shall be in accordance with applicable building codes.

Mock-ups:

Construct mock-up of size indicated on drawings; locate on project site as directed by Architect. Prepare substrate and apply finish as specified in this section.  
Maintain mock-up at project site until Architect directs its removal.

DELIVERY, STORAGE, AND HANDLING

Packing, Shipping, Handling and Unloading: Deliver products to project site in manufacturer's labeled and sealed packaging.

Acceptance at Site: Accept only products in sealed, unopened manufacturer's packaging with labels intact.

Storage and Protection:

Store products in manufacturer's unopened packaging until installation.  
Maintain dry storage area at minimum 45 degrees F (7 degrees C) for products until removal for installation.  
Protect product from weather and direct sunlight.

PROJECT/SITE CONDITIONS

Environmental Requirements:

Applying products of this section during periods of inclement weather is prohibited, except where surfaces to receive products are protected from weather during application and until applied products are cured.

Apply products of this section only above minimum ambient temperature of 45 degrees F (7 degrees C) and when ambient temperature will remain minimum 45 degrees F (7 degrees C) for following 24 hour period.

#### WARRANTY

Manufacturer's Warranty: Supply EIFS materials manufacturer's 7-year warranty against defects in materials only. Manufacturer shall have no liability for application of materials.

The Installer shall separately warrant EIFS against failure due to workmanship for a period of 5 years from the date of Substantial Completion.

#### PART PRODUCTS

##### MANUFACTURERS

Acceptable Manufacturer: Dryvit Systems, Inc.; One Energy Way, P.O. Box 1014, West Warwick RI 02893; ASD. Tel: (800) 556-7752 and (401) 822-4100; Fax: (401) 822-1980.

Requests for substitutions will be considered in accordance with provisions of Section 01600.

Substitutions: Not permitted.

Supply all products specified in this section from a single manufacturer, or that manufacturer's authorized distributor.

#### MATERIALS

Air/Weather Barrier:

Dryvit Backstop: 100 percent acrylic, field-mixed.

Dryvit Grid Tape: Open-weave fiberglass mesh tape, pressure sensitive adhesive.

Dryvit Flashing Tape: High-density polyethylene backed tape with rubberized asphalt adhesive.

Dryvit Flashing Tape Surface Conditioner: Water-based surface conditioner and adhesion promoter for Flashing Tape.

Adhesive/Base Coat: Dryvit Genesis(R) fiber-reinforced, acrylic modified; field-mixed with Portland cement in 1:1 ratio.

Adhesive/Base Coat: Dryvit Primus(R) acrylic polymer-based; field-mixed with Portland cement in 1:1 ratio.

OMD Insulation Board: Expanded polystyrene meeting EIFS manufacturer's specification for insulation board.

Thickness: As indicated on drawings, 2 inches (50 mm) minimum.

Back Side: 1/4 inch by 1 inch (6 x 25 mm) vertical grooves at 12 inches (305 mm) on center.

OMD Insulation Board Closure Blocks: Expanded polystyrene meeting EIFS manufacturer's specification for insulation board.

Height: 6 inches (150 mm) minimum.

Starter Strip: Expanded polystyrene meeting EIFS manufacturer's specification for insulation board.

Height: 6 inches (150 mm) minimum

Configuration: To receive OMD Insulation Board.

Vent Assembly: Formed aggregate matrix material encased in piece of insulation board which provides drainage capability.

Track: ASTM D 1784 and C 1063; "J"-shaped.

Vent Track: ASTM D 1784 and C 1063; "J"-shaped with drainage slot.

Standard Weight Reinforcing Mesh:

Acceptable Product: Dryvit Standard(tm) Mesh.

Product Description: Glass-fiber fabric, balanced and treated for compatibility with other EIFS materials; weight 4.3 ounces per square yard (146 g/sq m).

Medium Weight Reinforcing Mesh:

Acceptable Product: Dryvit Standard Plus(tm) Mesh.

Product Description: Glass-fiber fabric, balanced and treated for compatibility with other EIFS

materials; weight 6.0 ounces per square yard (203 g/sq. m).

Intermediate Weight Reinforcing Mesh:

Acceptable Product: Dryvit Intermediate(R) Mesh.  
Product Description: Glass-fiber fabric, balanced and treated for compatibility with other EIFS materials; weight 12.0 ounces per square yard (407 g/sq. m).

Heavy Weight Reinforcing Mesh:

Acceptable Product: Dryvit Panzer(R) 15 Mesh.  
Product Description: Glass-fiber fabric, balanced and treated for compatibility with other EIFS materials; weight 15.0 ounces per square yard (509 g/sq. m).

Extra Heavy Weight Reinforcing Mesh:

Acceptable Product: Dryvit Panzer(R) 20 Mesh.  
Product Description: Glass-fiber fabric, balanced and treated for compatibility with other EIFS materials; weight 20.5 ounces per square yard (695 g/sq. m).

Detail(R) Reinforcing Mesh:

Acceptable Product: Dryvit Detail Short Roll.  
Product Description: Glass-fiber fabric, balanced and treated for compatibility with other EIFS materials; weight 4.3 ounces per square yard (146 g/sq. m).

Corner Reinforcing Mesh:

Acceptable Product: Dryvit Corner Mesh.  
Product Description: Glass-fiber fabric, balanced and treated for compatibility with other EIFS materials; weight 7.2 ounces per square yard (244 g/sq. m).

Finish:

Type: Standard DPR (Dirt-Pickup Resistant) Finish.  
Texture: Dryvit \_\_\_\_\_.  
Color: Selected from full range of manufacturer's standard colors.  
Color: \_\_\_\_\_.  
Color: Specified in SCHEDULES Article of this Section.

Finish:



Type: Elastomeric DPR (Dirt-Pickup Resistant)  
Finish.  
Texture: Dryvit Weatherlastic \_\_\_\_\_.  
Color: Selected from full range of manufacturer's  
standard colors.  
Color: \_\_\_\_\_.  
Color: Specified in SCHEDULES Article of this  
Section.

Finish:  
Type: Medallion Series PMR(tm) (Proven Mildew  
Resistance) Finish.  
Texture: Dryvit \_\_\_\_\_.  
Color: Selected from full range of manufacturer's  
standard colors.  
Color: \_\_\_\_\_.  
Color: Specified in SCHEDULES Article of this  
Section.

Finish:  
Type: Specialty Finish.  
Texture: \_\_\_\_\_.  
Color: Selected from full range of manufacturer's  
standard colors.  
Color: \_\_\_\_\_.  
Color: Specified in SCHEDULES Article of this  
Section.

Finish:  
Type: Specialty Finish.  
Texture: \_\_\_\_\_.  
Color: Selected from full range of manufacturer's  
standard colors.  
Color: \_\_\_\_\_.  
Color: Specified in SCHEDULES Article of this  
Section.  
Coating: Dryvit Demandit(R).  
Coating: Dryvit Weatherlastic Smooth(tm).  
Coating: Dryvit Revyvit(R).  
Primer: Dryvit Color Prime(tm).  
Primer: Dryvit Prymit(R).  
Sealer: Dryvit Ultra-Tex Sealer.  
Sealer: Dryvit SealClear(tm).

Joint Sealer Primer: Dryvit Demandit.

Joint Sealer Primer: Dryvit Color Prime.

Joint Sealers: Specified in Section 07900.

#### MIXES

Prepare materials requiring field-mixing for application in accordance with manufacturer's printed installation instructions.

#### PART EXECUTION

##### EXAMINATION

###### Verification of Conditions:

Substrates to receive EIFS are listed in manufacturer's printed installation instructions as acceptable.

Expansion joints are located and sized as indicated on drawings.

Products indicated to be installed in surfaces to receive EIFS are installed in correct locations.

###### Installer's Examination:

Examine conditions under which construction activities of this Section are to be performed; submit written notification if such conditions are unacceptable.

Transmit two copies of Installer's report to Architect within 24 hours of receipt.

Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.

Beginning construction activities of this section indicates Installer's acceptance of conditions.

##### PREPARATION

Protection: Mask surfaces of adjacent materials to prevent damage to finishes.

Surface Preparation: Prepare surfaces to receive EIFS in accordance with manufacturer's printed installation instructions.

##### APPLICATION

Air/Weather Barriers: Apply in accordance with manufacturer's printed installation instructions for

project substrate types.

Adhesive/Base Coats: Apply types specified in manufacturer's printed installation instructions for project substrate types to prepared surfaces.

OMD Insulation Board: Apply indicated thicknesses, and to form indicated profiles; maintain joint spacing specified in manufacturer's printed installation instructions.

Base Coats: Apply types and number of coats specified in manufacturer's printed installation instructions sufficient to fully embed mesh.

Reinforcing Mesh: Apply types specified to building areas indicated on drawings, and as recommended in manufacturer's printed installation instructions.

Finishes: Apply specified finishes and colors in accordance with manufacturer's printed installation instructions.

Sealer: Apply specified sealers to indicated finishes in accordance with manufacturer's printed installation instructions.

Joint Sealer Primer: Apply to finish surfaces to receive joint sealers in accordance with manufacturer's printed installation instructions.

Installation of joint sealers is specified in Section 07900.

Installation of flashing and sheet metal is specified in Section 07600.

## PROTECTION

Maintain protection of unsealed edges of EIFS finishes from weather until installation of flashings and joint sealers.

Protect EIFS finishes from damage by subsequent construction activities until Substantial Completion.

Repair EIFS finishes damaged by subsequent construction activities in accordance with manufacturer's printed

installation instructions; replace EIFS finish to extent of nearest adjacent termination each way at areas where repair to finish is judged unacceptable.

Architect will be sole judge of acceptability of repaired finishes.

#### SCHEDULES

Location: \_\_\_\_\_ .  
Texture: \_\_\_\_\_ .  
Color: \_\_\_\_\_ .

Location: \_\_\_\_\_ .  
Texture: \_\_\_\_\_ .  
Color: \_\_\_\_\_ .

Location: \_\_\_\_\_ .  
Texture: \_\_\_\_\_ .  
Color: \_\_\_\_\_ .

END OF SECTION