



DS1070

OUTSULATION® PLUS MD SYSTEM (EXTERIOR FIRE-BLOCKED)

An Exterior Wall Insulation and Finish System with Moisture Drainage That Incorporates Continuous Insulation, An Air/Water-Resistive Barrier, and Exterior Fire Blocking

SPECIFICATION 07 24 19



Construction Products Group

Tremco CPG Inc.
3735 Green Road
Beachwood, OH 44122

INTRODUCTION

This manufacturer's guide specification is intended for use by design and construction professionals in the development of project specifications. By referring to the manufacturer's "Notes to Specifier" in parentheses and bolded, the specifier may easily select the portions of the comprehensive guide specification which are pertinent to the project. "Notes to Specifier" should then be deleted from the final specification document. This guide specification follows the Construction Specification Institute's MasterFormat and SectionFormat protocols.

It is prudent to place certain parts of the Dryvit Outsulation Plus MD System Specification in other parts of the project's total specification, such as sheathing, air and water-resistive barrier membrane, accessory materials, sealants and framing, as applicable. The project design professional is responsible for verifying that project specifications are suitable for any project. For assistance in preparing your specifications, please contact your Dryvit Distributor, your local Dryvit Technical Sales Representative, or Dryvit Technical Services.

WARNING

The Outsulation Plus MD System is defined as an Exterior Insulation and Finish System (EIFS) with Drainage. The EIFS is intended to discharge incidental moisture should it penetrate and reach the drainage plane. Specifications must be followed, and proper details implemented, to prevent water intrusion which may result in damage to the Outsulation Plus MD System or other building components. Care should be taken to ensure that all building envelope elements, such as roofing, windows, flashings, sealants, etc., are compatible with this EIFS.

The Outsulation Plus MD System is an engineered assembly of numerous compatible components: A fluid-applied air and water-resistive barrier membrane, adhesive, rigid insulation board, base coat, reinforcing mesh, and finish coat.

DISCLAIMER

It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for its intended use. The designer selected by the purchaser is responsible for all decisions pertaining to design, detail, structural capability, attachment, shop drawings, etc. The EIFS Manufacturer has prepared guidelines in the form of specifications, installation details, application instructions and product data sheets to facilitate the design process only. The Manufacturer is not liable for any errors or omissions in design, detailing, structural capability, attachment, project-specific shop drawings, or the like, whether based upon the information prepared by the Manufacturer or otherwise, or for any changes which purchasers, specifiers, designers, or their appointed representatives may make to the Manufacturer's published information.

The information contained in this specification conforms to standard detail and product recommendations for the installation of the Dryvit Outsulation Plus MD System as of the date of publication of this document and is presented in good faith. Tremco CPG Inc. (Dryvit) assumes no liability, expressed or implied, as to the architecture, engineering or construction of any project. To ensure that you are using the latest, most complete information, contact your local Dryvit Technical Sales Representative, visit our website at <https://www.dryvit.com/> or contact Dryvit Engineering at:

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NOTE

The Trained Contractor Certificate referenced in Sections 1.5.D., 1.7.B.2., 1.7.D.2. of this guide specification indicates certain employees of the EIFS sub-contractor company have been instructed in the proper application of Dryvit products and have received copies of this system's Application Instructions and Specifications. The Trained Contractor Program is not an apprenticeship or endorsement. Each trained contractor is an independent company experienced in the trade and bears responsibility for its own quality. Tremco CPG Inc. assumes no liability for the performance of a trained contractor.

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PART 1 GENERAL

1.1 SUMMARY

- A. Provide an Exterior Insulation and Finish System (EIFS) with Drainage that includes the following:
 - 1. An integral fluid-applied air and water-resistive barrier membrane compatible with the substrate surface and adhesive application of the EIFS.
 - 2. Accessory materials required for treating sheathing joints, fasteners, penetrations, rough openings, and material transitions compatible with substrate surfaces and the adhesive application of the EIFS.
 - 3. Exterior fire blocking lamella, compatible with all EIFS components.
 - 4. Joint sealants or expanding, compressive, water-tight joint filler materials compatible with EIFS for use in all exterior envelope joint waterproofing.
 - 5. A comprehensive, single-source, limited EIFS warranty inclusive of EIFS, fluid-applied air and water-resistive barrier membrane, accessory materials, and sealant and/or expansion joint materials.

1.2 RELATED REQUIREMENTS

[Note to Specifier: Delete any sections below not relevant to this project and add others as required.]

- A. 03 30 00 Cast-in-place Concrete
- B. 03 40 00 Pre-cast Concrete
- C. 04 20 00 Unit Masonry
- D. 05 40 00 Cold-formed Steel Framing
- E. 06 11 00 Wood Framing
- F. 06 11 00 Engineered Framing Systems

[Note to Specifier: Engineered framing system components such as parapet nailers and rough opening buck framing are available from Prebuck LLC, a division of Tremco CPG Inc. Coordinated specification of these items can be incorporated into the overall Tremco CPG limited warranty.]

- G. 06 16 00 Sheathing
- H. 07 27 00 Fluid-Applied Air Barriers

[Note to Specifier: This specification contains options for the EIFS fluid-applied air/water-resistive barrier system and accessory materials. Coordinate with Section 07 27 00 as required where an EIFS air/water-resistive barrier system is selected for use behind other claddings as outlined below in Section 2.2.B.]

- I. 07 62 00 Sheet Metal Flashing and Trim
- J. 07 92 00 Joint Sealants

[Note to Specifier: Coordinate 07 92 00 with Section 2.2.C. Be advised that while sealants from other manufacturers are acceptable for use with the Outsulation Plus MD System (in accordance with Dryvit document DS153), the Outsulation Plus MD System Warranty will gain an additional 2-year extension when specifying Tremco sealant materials.]

- K. 08 40 00 Entrances, Store Fronts, and Curtain Walls
- L. 08 50 00 Windows

1.3 REFERENCES

- A. American Society of Testing and Materials (ASTM)
 - 1. ASTM C150 Standard Specification for Portland Cement
 - 2. ASTM C297 Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
 - 3. ASTM C920 Standard Specification for Elastomeric Joint Sealants
 - 4. ASTM C1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
 - 5. ASTM C1305 Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane
 - 6. ASTM C1382 Standard Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS) Joints
 - 7. ASTM C1397 Standard Practice for Application of Class PB Exterior Insulation and Finish System (EIFS) and EIFS with Drainage
 - 8. ASTM D968 Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
 - 9. ASTM D1784 Standard Specification for Rigid PVC and CPVC Compounds
 - 10. ASTM D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
 - 11. ASTM D2247 Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
 - 12. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
 - 13. ASTM D4060 Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
 - 14. ASTM E72 Standard Methods of Conducting Strength Tests of Panels For Building Construction
 - 15. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
 - 16. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
 - 17. ASTM E119 Standard Method for Fire Tests of Building Construction and Materials

18. ASTM E136 Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace 750 °C
 19. ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
 20. ASTM E330 Test Method for Structural Performance of Exterior Windows, Doors and Curtain Walls by Uniform Static Air Pressure Difference
 21. ASTM E331 Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference
 22. ASTM E2098 Test Method for Determining the Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to Sodium Hydroxide Solution
 23. ASTM E2178 Standard Test Method for Air Permeance of Building Materials
 24. ASTM E2273 Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies
 25. ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
 26. ASTM E2430 Standard Specification for Expanded Polystyrene (EPS) Thermal Insulation Boards for use in Exterior Insulation and Finish Systems (EIFS)
 27. ASTM E2485 Standard Test Method for Freeze-Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water-Resistive Barrier Coatings
 28. ASTM E2486 Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)
 29. ASTM E2568 Standard Specification for PB Exterior Insulation and Finish Systems
 30. ASTM E2570 Standard Test Method for Evaluating Water-Resistive Barrier (WRB) Coatings Used Under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage
 31. ASTM G155 Standard Practice for Operating-Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials
- B. National Fire Protection Association (NFPA) Standards:
1. NFPA 268 Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Source
 2. NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components
- C. The American Association of Textile Chemists and Colorists:
1. AATCC 127-08 Water Resistance: Hydrostatic Pressure Test
- D. Dryvit (Tremco CPG Inc.)
1. Outsulation Plus MD Technical Data Sheet, DS445
 2. Outsulation Plus MD Application Instructions, DS218

3. Outsulation Plus MD Technical Bulletin & Details, DS1069
4. Outsulation Plus MD Standard Installation Details, DS110
5. Expansion Joints & Sealants (Compatible with Dryvit), DS153
6. DryvitCARE™ EIFS Repair Procedures, DS498
7. Dryvit Expanded Polystyrene (EPS & GPS) Insulation Board Specifications, DS131
8. Dryvit System Maintenance Guide, DS235

1.4 ADMINISTRATIVE REQUIREMENTS

A. Pre-Construction Meetings

[Note to Specifier: The Outsulation Plus MD System Warranty requires a pre-construction meeting consisting of representatives from the Manufacturer, Applicator, Owner, and Consultant (if applicable) prior to the installation of the Products.]

2. The EIFS installer shall coordinate with the General Contractor to schedule, invite and administer a pre-construction meeting including but not limited to the architect of record, consultant(s), EIFS, sheathing board, accessory materials and sealant manufacturers' representatives and the owner to assure required integration of products selected as specified herein and for proper sequencing and installation detailing.

B. Coordination

1. Coordinate for related specification and integration of selected materials as referenced in Sections 2.2.B. and 2.2.C. herein.

C. Sequencing

1. Provide jobsite grading prior to installation of EIFS so that the system may be terminated at least 6 in above grade [or as required by local code].
2. Coordinate installation of exterior sheathing, accessory materials, flashing, foundation waterproofing, roofing membrane, windows, doors, and other penetrations of the exterior walls to provide a continuous air and water-resistive barrier assembly.
3. Provide protection of rough openings before installing windows, doors, and other penetrations of the exterior walls.
4. Coordinate installation of windows and doors so air and water-resistive barrier membrane accessory materials, transitions, flashings, etc., are connected to them in a manner that provides a continuous barrier.
5. Install window and door head flashing immediately after windows and doors are installed.
6. Install diverter flashings wherever water can enter the wall assembly to direct water to the exterior.
7. Install copings and sealants immediately after installation of the EIFS with Drainage and when EIFS coatings are dry.
8. Attach penetrations through EIFS to structural support and provide water-tight seals at penetrations.

1.5 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

- A. Submit product data as required by Section 01 33 00, Administrative Requirements.
- B. Submit shop drawings for panelized EIFS with Moisture Drainage showing wall layout, connections, details, expansion joints, and installation sequence.
- C. Submit two (2) samples of the EIFS with Drainage for each finish, texture, and color to be used on the project. Use the same tools and techniques proposed for the actual installation. Make the samples of sufficient size to accurately represent each color and texture being utilized on the project.
- D. Submit a current copy of the manufacturer's Trained Contractor Certificate for the Outsulation Plus MD System.
- E. Submit Owner/Architect-requested test results verifying the performance of the EIFS with Drainage.
- F. Submit a copy of the manufacturer's installation details and application instructions.

1.6 CLOSEOUT SUBMITTALS

- A. Submit a copy of the manufacturer's recommended maintenance and repair manual, DryvitCARE™ EIFS Repair Procedures, DS498.
- B. Submit a copy of the EIFS with Drainage manufacturer's comprehensive single source limited warranty.

1.7 QUALITY ASSURANCE

- A. Manufacturer's Qualifications
 - 1. A member, in good standing, of the EIFS Industry Members Association (EIMA).
 - 2. Manufacture EIFS with Drainage materials at a facility covered by current ISO 9001 and ISO 14001 certification. Certification of the facility shall be done by a registrar accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB).
- B. Contractor Qualifications
 - 1. Knowledgeable in the proper installation of the EIFS with Drainage.
 - 2. Possess a current copy of the manufacturer's Trained Contractor Certificate for the Outsulation Plus MD System.
 - 3. Successfully complete a minimum of three (3) projects of similar scope and scale to the specified project.
- C. Insulation Board Manufacturer Qualifications
 - 1. Listed by EIFS Manufacturer, and capable of producing the Expanded Polystyrene (EPS) or Graphite Expanded Polystyrene (GPS) in accordance with the current EIFS Manufacturer's Specification for Insulation Board, Dryvit DS131.
 - 2. Subscribe to the Dryvit Third Party Certification and Quality Assurance Program.

D. Mock-Up

1. Provide the owner/architect with a mock-up for approval. Mock-up shall:
 - a. Be of suitable size as required to accurately represent the products being installed, as well as each color and texture to be utilized on the project.
 - b. Be prepared with the same products, tools, equipment and techniques required for the actual applications. Use finish from the same batch that is being used on the project.
 - c. Include transitions representative of the Project's design, including at least one window, penetration, cladding transition, or any other condition that will require coordination among various trades.
 - d. Be available and maintained at the jobsite.

E. Regulatory Requirements

1. Separate the foam plastic insulation board from the interior of the building by a minimum 15-minute thermal barrier.
2. Comply with local building codes for the use and maximum thickness of EPS insulation board.

F. Inspections

1. Cooperate with independent, third-party inspectors when required by code or by contract documents.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver all EIFS with Drainage components and materials to the job site in the original, unopened packages with labels intact.
- B. Verify all EIFS with Drainage components and materials will be within shelf life in coordination with the Project's construction schedule.
- C. Inspect all EIFS with Drainage components and materials upon arrival for physical damage, freezing or overheating. Do not use questionable materials.
- D. Store all EIFS with Drainage components and materials at the jobsite in a cool, dry location, out of direct sunlight, protected from weather and other sources of damage. Maintain minimum and maximum storage temperature as stated in the product data sheets or specifications for the materials selected.
 1. Minimize exposure of materials to temperatures over 90 °F (32 °C). Finishes exposed to temperatures over the published maximum storage temperature for even short periods may exhibit skinning and increased viscosity and should be inspected prior to use.
- E. Protect all products from inclement weather and direct sunlight.

1.9 SITE CONDITIONS

- A. Ambient Conditions

1. Do not apply wet materials during inclement weather unless appropriate protection is provided. Protect materials from inclement weather until they are completely dry.
2. Verify the minimum air and wall surface temperatures at the time of application as stated in the product data sheets or specifications for the materials selected.
3. Maintain these temperatures with adequate air ventilation and circulation for a minimum of 24 hours (48 hours for specific Specialty Finishes) thereafter, or until the products are completely dry.

1.10 WARRANTY

A. Manufacturers' Limited EIF System Warranty

[Note to Specifier: An additional 2-year EIFS warranty extension is available when Tremco CPG Inc. Joinery and Sealants, as referenced in Section 2.2.C., are used. This increases to a third year when Dryvit Starter Boards are used in conjunction with Tremco Sealants. Amend warranty term below to 12 or 13 years (maximum), as applicable.]

1. The manufacturer shall offer a limited material defect and labor to repair or replace defective material warranty stating the Products will be free from manufacturing defect and will perform as warranted in the manner specified for the stated term measured from the Date of Project Substantial Completion.
 - a. A pre-construction meeting, including representatives of the Manufacturer, the Applicator, the Owner, and the Consultant (if applicable), shall be required prior to installation of the Products.
 - b. The term of this warranty shall be extended for an additional 2 years with involvement on the project of a Manufacturer-approved, third-party consultant ("Consultant") engaged by the Owner or its authorized representative, at the Owner's sole expense. Inspection reports generated by the Consultant shall be made available to the Manufacturer and the Owner.
 - c. The warranty shall be available upon written request.
2. The EIFS warranty shall additionally include the following for the term of the warranty or as specifically noted hereunder.
 - a. The EIF system warranty term shall be 10 [12, 13] years.
 - b. The EIFS will remain in a watertight condition when the EIFS is used in conjunction with compatible Joinery and Sealants.
 - c. The EIFS will drain incidental moisture between the air/water-resistive barrier and the insulation board.
 - 1) Remedy includes repair or replacement of any sheathing or framing member that is damaged because of the EIFS failing to drain incidental moisture between the secondary weather barrier and the insulation board.
 - d. Finish will be UV fade resistant for 10 years, except for specially produced colors.
 - 1) Specially produced colors will be UV fade resistant for 5 years when high-performance colorants are used to formulate.

- e. The EIFS shall be eligible to receive renewal of the original warranty if the Owner satisfactorily completes the specific renovation requirements published by the Manufacturer.
- B. Installer Warranty
 - 1. EIFS Installer shall provide a separate minimum 1-year warranty for all workmanship related to the proper installation and drainage performance of the EIFS application. The Manufacturer shall not be responsible for workmanship associated with the installation of EIFS with Drainage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers
 - 1. Dryvit, www.dryvit.com, (800) 556-7752.
 - a. 200 Frenchtown Road, North Kingstown, RI 02852
 - b. 354 South Acacia Street, Woodlake, CA 93286
 - c. 4827 Milgen Road, Columbus, GA 31907
 - d. 5850 South 116th West Ave., Sand Springs, OK 74063
 - 2. Tremco CPG Inc., 3735 Green Road Beachwood, OH 44122, www.tremcocpg.com, (800) 321-7906.
- B. Substitution Limitations
 - 1. All components of the Outsulation Plus MD System, including the insulation board and fire blocking lamella, shall be supplied or obtained from Dryvit (Tremco CPG Inc.) or an authorized distributor. Substitutions or additions of materials manufactured or supplied by others will void the EIFS warranty.
 - 2. Alternate EIFS manufacturers must demonstrate equivalencies for all elements of EIFS such as but not limited to
 - a. Material component performance, compatibility and testing
 - b. Standard and specialty finishes
 - c. Color and texture matching
 - d. Warranty criteria as specified herein.
 - 3. Submit alternate EIFS manufacturer's complete data highlighting equivalency for review through Substitution Requirements as defined in Division 1.

2.2 DESCRIPTION

- A. System Description
 - 1. The Basis of Design shall be the Dryvit Outsulation Plus MD Exterior Fire-Blocked System. This is an Exterior Insulation and Finish System (EIFS) with Drainage, consisting of
 - a. An Air and Water-Resistive Membrane Barrier

- b. Accessory Materials
- c. Adhesive – installed in vertical ribbons to facilitate egress of incidental moisture
- d. Expanded Polystyrene (EPS) or Graphite Expanded Polystyrene (GPS) insulation board
- e. Rockwool Frontrock Mono Density Mineral Wool, used as a fire blocking lamella
- f. Base Coat
- g. Reinforcing Mesh
- h. Finish Coat
- i. Joint Sealants as specified herein.

B. Materials

1. Fluid-Applied Air and Water-Resistive Barrier

[Note to Specifier: Select air/water-resistive barrier material as required for both the design intent and warranty requirements of Section 1.10.A. herein. Delete the remaining options below that are not applicable once selected for the Project.]

a. Permeable

- 1) Dryvit Backstop® NTX: A vapor permeable, low-temperature, flexible, polymer-based non-cementitious water-resistive and air barrier coating available in Texture and Smooth versions. Backstop NTX can be installed in ambient air and substrate surface temperatures of 25°F (-4°C) and rising for a minimum of 24 hours and exposed for up to 6 months during the construction process. Backstop NTX Texture is additionally used for treatment of sheathing board joints, inside / outside corners and spotting of sheathing fastener heads. The material shall be protected from rain and washout prior to drying.
- 2) Tremco ExoAir® 2000: A vapor permeable, low-temperature, flexible, polymer-based non-cementitious water-resistive and air barrier. ExoAir 2000 can be installed in ambient air and substrate surface temperatures of 25°F (-4°C) and rising for a minimum of 24 hours and exposed for up to 6 months during the construction process. The material shall be protected from rain and washout prior to drying.

2. Accessory Materials for Fluid Applied Air and Water-Resistive Barrier (AWRB)

[Note to Specifier: Compatibility notes are provided below for ease of specification editing based upon air/water-resistive barrier membrane selection in Section 2.2.B. Delete irrelevant materials based on selected air/water-resistive barrier membrane and desired warranty term. Delete notes upon completion of editing.]

- b. Provide compatible accessory materials as required by project conditions for substrate preparation, rough opening and penetration preparation, bridging expansion joints in substrate, material transitions and flashing integration to produce a complete air and water-resistive, water-shedding assembly.

- 1) Dryvit Grid Tape™: An open weave fiberglass mesh tape with pressure sensitive adhesive. Used in combination with Backstop NTX Texture or Backstop NT-VB Texture for treating sheathing board joints and inside/outside corners, and preparing rough openings and penetrations. Backstop NTX Texture or Backstop NT-VB Texture are used alone for spotting fastener heads.
 - 2) Dryvit AquaFlash®: Fluid-applied, water-based polymer transition membrane. Used in preparing rough openings and penetrations, bridging expansion joints in substrate, material transitions and flashing integration. AquaFlash can be installed in ambient air and substrate surface temperatures of 40 °F (4 °C) and rising for 24 hours.
 - a) Dryvit AquaFlash Mesh: Polyester reinforcing mesh for use with AquaFlash.
 - 3) Dryvit Backstop Flash and Fill: A flexible, waterproof, low temperature gun applied material. Used in substrate preparation, treating sheathing board joints, inside/outside corners and fastener heads, preparing rough openings and penetrations and flashing integration. Backstop Flash and Fill can be installed in ambient air and substrate surface temperatures of 32°F (0°C) and rising for 24 hours.
 - a) Dryvit Backstop Flash and Fill may only be used with the Dryvit Backstop NT-VB or Backstop NTX air/water-resistive barrier membranes.
 - 4) Tremco Dymonic® 100: A high-performance, high-movement, single-component, medium-modulus, low-VOC, UV-stable, non-sag, gun applied polyurethane sealant. Used in substrate preparation, treating sheathing board joints and inside/outside corners and fastener heads, preparing rough openings and penetrations, bridging expansion joints in substrate, material transitions and flashing integration. Dymonic 100 can be installed in ambient air and substrate surface temperatures of 40°F (4°C) and rising.
 - a) Where Dymonic 100 must be applied in temperatures below 40°F (4°C), refer to the Tremco Technical Bulletin for Applying Sealants in Cold Conditions (No. S-08-44 rev 1) that can be found at www.tremcosealants.com.
 - 5) Tremco ExoAir® DualFlash: A gun and roller-grade liquid-applied flashing membrane. Used in substrate preparation, treating sheathing board joints and inside/outside corners, sheathing fastener heads, preparing rough openings and penetrations, material transitions, flashing integration, and roof tie-ins. ExoAir DualFlash skins and cures quickly, allowing for expedited construction timelines. ExoAir DualFlash can be installed in ambient air and substrate surface temperatures of 20°F (-6°C) and rising, and must be fully cured before applying the air/water-resistive barrier.
 - 6) Tremco ExoAir® 110AT: An 18-mil composite, impermeable membrane that is comprised of 12 mils of butyl and 6 mils of HDPP facer. Used in limited applications as a membrane flashing that will not interfere with the adhesive application of EIFS.
3. Drainage Components

[Note to Specifier: The Dryvit Drainage Strip is utilized when the EIFS terminations (termination of base coat and reinforcing mesh) are created in-field by the EIFS mechanic. This component is not required when specifying Dryvit-produced Starter Boards, which are pre-back-wrapped with reinforcing mesh and base-coated in a Dryvit manufacturing facility. Dryvit Starter Boards must be sourced directly from the local Dryvit Technical Sales Representative and offer a 2-year EIFS warranty extension. Total EIFS warranty term cannot exceed 20 years. Coordinate this section with Section 1.10.A. and Section 2.2.B.6. Prefabricated Starter Boards shall not exceed 4 in thicknesses when NFPA 285 compliance is required.]

- a. Dryvit Drainage Strip™: Corrugated plastic strip used to drain the EIFS at horizontal floor line terminations.
 - 1) TREMPRO Chem-X® Pro: A single-component, quick-tack hybrid adhesive used to adhere the Dryvit Drainage Strip to the substrate. TREMPRO Chem-X® Pro may be installed when temperatures are 41°F (5°C) and rising with a maximum ambient and substrate temperature of 95°F (35°C) at time of application.
 - b. Pre-coated Starter Boards: Pre-manufactured, pre-based starter boards utilizing adhesive-backed reinforcing mesh. Starter Boards shall be produced by Tremco CPG Inc. (Dryvit) and ordered through the local Dryvit Technical Sales Representative.
 - c. Dryvit Drainage Track: Pre-manufactured PVC drainage track used to divert water drainage above the window head condition to each window jamb behind the insulation board; required at all window head conditions in accordance with Dryvit DS1069.
4. Adhesives
- a. Liquid polymer-based adhesive field mixed with Portland cement.
 - 1) Dryvit Primus®
 - 2) Dryvit Genesis®
 - b. Ready-mixed, dry-blend, cementitious, copolymer-based adhesive field-mixed with water.

[Note to Specifier: Rapidry products are typically used when fast-setting properties are desired based on environmental conditions or restricted Project construction schedule timelines.]

- 1) Dryvit Primus® DM
 - 2) Dryvit Genesis® DM
 - 3) Dryvit Genesis® DMS
 - 4) Rapidry DM™ 35-50
 - 5) Rapidry DM™ 50-75
5. Insulation Board
- a. Expanded Polystyrene (EPS); minimum thickness of 1 in (25 mm) and meeting Dryvit Specification DS131.
 - b. Graphite Expanded Polystyrene (GPS); minimum thickness of 1 in (25 mm) and meeting Dryvit Specification DS131.

- c. Rockwool Frontrock Mono Density Mineral Wool; minimum thickness of 1.5 in (38 mm) and installed in lamella orientation around openings, floor lines, and changes in occupancy.

6. Pre-Coated Insulation Starter Boards, Corners and Shapes

[Note to Specifier & Designer: Refer to “Note to Specifier” in Section 2.2.B.3 for Starter Boards. Additionally, when specifying and/or designing with Pre-Coated Architectural Shapes on Projects that require NFPA 285 compliance, be advised that Architectural Shapes installed over a maximum of 4 in of base-EIFS thickness cannot exceed 8 in of additional thickness (for a total of 12 in thickness) and must be placed at least 2 ft 8 in above window heads unless Standard Plus Reinforcing Mesh is specified for such Shapes to be produced. If Standard Plus Reinforcing Mesh is specified for such Shapes, total EIFS thickness, including the Architectural Shape, shall not exceed 8 in unless placed at the top of a parapet condition, in which case NFPA 285 no longer applies.]

- a. Machine-coated Starter Boards, Corners and Shapes shall be produced by Tremco CPG Inc. (Dryvit) and ordered through the local Dryvit Technical Sales Representative.

7. Base Coat

- a. Liquid polymer-based base coat field mixed with Portland cement.

[Note to Specifier: Dryvit Dryflex is commonly used in isolated conditions where very high exposure to liquid water may be anticipated, such as greatly exposed, sloped EIFS surfaces.]

- 1) Dryvit Primus®
- 2) Dryvit Genesis®
- 3) Dryvit Dryflex

- b. Ready mixed dry blend cementitious, copolymer-based base coat field mixed with water.

- 1) Dryvit Primus® DM
- 2) Dryvit Genesis® DM
- 3) Dryvit Genesis® DMS

[Note to Specifier: Dryvit NCB should be specified when the Custom Brick Finish is specified for the Project.]

- 4) Rapidry DM™ 35-50
- 5) Rapidry DM™ 50-75
- 6) Dryvit NCB™ – Non-Cementitious Base Coat

- c. Liquid polymer-based base coat field mixed with Portland cement when specified.

[Note to Specifier: ShieldIt is applied over an already in-place EIFS Base Coat when a Project may be prone to woodpecker damage, significantly increasing point impact resistance. It is typically specified around pedestrian-prone areas or decorative EIFS trims. If specifying this product, another base coat must also be specified herein.]

- 1) ShieldIt™

8. Reinforcing Mesh

- a. Open-weave, glass fiber fabric treated for compatibility with other EIFS materials.

[Note to Specifier: It is imperative to specify impact resistance level and location with the contract documents. The information below represents both industry standard and Dryvit minimum recommendations. Specify typical mesh requirement in item b. below. Panzer mesh is strongly recommended for the first 8 ft above grade where damage can be common due to pedestrian access to the EIFS in these areas. It is advantageous to delineate locations of higher weight meshes on the Architectural drawings.]

- b. Shall be Dryvit [Standard, Standard Plus, Intermediate] Mesh for the typical field-of-wall condition unless specified otherwise herein or on the Contract Drawings.
 - 1) Mesh used for back-wrapped terminations, edge-wrapped terminations, splicing Starter Boards, splicing Architectural Shapes, etc. may utilize Dryvit Detail Mesh.
- c. Provide for ultra-high impact mesh assembly using Dryvit Panzer [15, 20] mesh for all EIFS clad wall areas within 8 ft 0 in of finished grade and where additionally indicated on contract drawings. Panzer Mesh shall be used in conjunction with Standard Mesh.

Reinforcing Mesh ¹ /Weight oz/yd ² (g/m ²)	Minimum Tensile Strengths	EIMA Impact Classification	EIMA Impact Range in-lbs (Joules)		Impact Test Results in-lbs (Joules)	
Standard - 4.3 (146)	150 lbs/in (27 g/cm)	Standard	25-49	(3-6)	36	(4)
Standard Plus - 6 (203)	200 lbs/in (36 g/cm)	Medium	50-89	(6-10)	56	(6)
Intermediate™ - 12 (407)	300 lbs/in (54 g/cm)	High	90-150	(10-17)	108	(12)
Panzer® 15 ² - 15 (509)	400 lbs/in (71 g/cm)	Ultra-High	>150	(>17)	162	(18)
Panzer 20 ² - 20.5 (695)	550 lbs/in (98 g/cm)	Ultra-High	>150	(>17)	352	(40)
Detail Mesh® Short Rolls - 4.3 (146)	150 lbs/in (27 g/cm)	n/a	n/a	n/a	n/a	n/a
Corner Mesh™ - 9.0 (305)	274 lbs/in (49 g/cm)	n/a	n/a	n/a	n/a	n/a
1. It shall be colored blue and bear the Dryvit logo for product identification						
2. Shall be used in conjunction with Standard Mesh (recommended for areas exposed to high traffic)						

9. Standard Finish

- a. Water-based, acrylic coating with integral color and texture; formulated with Dirt Pickup Resistant (DPR) chemistry.
 - 1) Quarzputz® DPR – open texture
 - 2) Sandblast® DPR – medium texture
 - 3) Freestyle® DPR – fine texture
 - 4) Sandpebble® DPR – pebble texture
 - 5) Sandpebble® Fine – fine pebble texture
 - 6) Mojave DPR™ – medium to medium-large texture
- b. Hydrophobic (HDP™) Finishes: 100% acrylic coating with integral color and texture and formulated with hydrophobic properties.
 - 1) Quarzputz® HDP
 - 2) Sandblast® HDP
 - 3) Sandpebble® HDP
 - 4) Sandpebble® Fine HDP
 - 5) Limestone™ HDP
- c. Lightweight, water-based acrylic coating with integral color and texture; formulated with Dirt Pickup Resistance (DPR) chemistry.
 - 1) Quarzputz® E
 - 2) Sandpebble® E
 - 3) Sandpebble Fine® E

10. Specialty Finishes and Veneers

- a. Ameristone™ – multi-colored quartz aggregates with a flamed granite appearance.
- b. Stone Mist® – colored, ceramic-coated quartz aggregates.
- c. Custom Brick™ – acrylic polymer-based finish used in conjunction with a proprietary template system to create the look of stone, brick, slate, or tile.
- d. TerraNeo® – acrylic-based finish with large mica chips and multi-colored quartz aggregates.
- e. Limestone™ – premixed, acrylic-based finish designed to replicate the appearance of limestone blocks.
- f. Reflectit™ – acrylic coating providing a pearlescent appearance.
- g. Finesse™ – a fine or smooth 100% acrylic-based dirt pickup resistance finish.
- h. Tibur Stone™ – 100% acrylic-based finish with the appearance of Travertine Stone.
- i. Ferros™ – a water-based finish that replicates the look of rusting metal.
- j. Woodgrain – A 100% acrylic-based finish created with a textured finish, a coating, a graining tool and a sealer providing an authentic woodgrain appearance.

[Note to Specifier & Designer: When designing a fire-resistance-rated wall assembly, if NewBrick is specified as the EIFS finish, the EPS thickness beneath the finish is limited to 2 ¼ in thickness (57 mm). This thickness is limited to 4 in (102 mm) when compliance with NFPA 285 is required.]

- k. NewBrick™ – A lightweight insulated brick veneer for use on exterior walls.

[Note to Specifier: NewBrick is composed of a foam plastic insulation board; therefore, if specified, it cannot be designed or installed over areas that are required to be fire-blocked on the exterior using the Rockwool mineral wool lamella.]

11. Elastomeric, water-based acrylic coating with integral color and texture; formulated with Dirt Pickup Resistance (DPR) chemistry
 - a. Weatherlastic® Quarzputz
 - b. Weatherlastic® Sandpebble
 - c. Weatherlastic® Sandpebble Fine
 - d. Weatherlastic® Adobe
12. Mildew-resistant, water-based, acrylic coating with integral color and texture; formulated with Proven Mildew Resistance (PMR™) chemistry
 - a. Quarzputz® PMR
 - b. Quarzputz® E PMR
 - c. Sandblast® PMR
 - d. Freestyle® PMR
 - e. Sandpebble® PMR
 - f. Sandpebble® E PMR
 - g. Sandpebble® Fine PMR
 - h. Sandpebble® Fine E PMR
13. Coatings, Primers, and Sealers (to be specified independently of a finish, not as a replacement)
 - a. Demandit® Smooth
 - b. Demandit® Sanded
 - c. Demandit® Advantage™
 - d. HDP Water-Repellent Coating
 - e. Weatherlastic® Smooth
 - f. Tuscan Glaze™
 - g. Color Prime™
 - h. Color Prime™ W
 - i. Primer with Sand™
 - j. Prymit®
 - k. SealClear™

C. Joint Sealants

[Note to Specifier: Coordinate this section with Section 1.10 herein. Refer to Expansion Joints & Sealants (Compatible with Dryvit), DS153, for additional sealant options. Be advised that Silicone Sealants, manufactured by Tremco CPG Inc., are required for extended warranty.]

1. Silicone Sealants
 - a. Tremco Spectrem® 1: An ultra-low modulus, high-performance, one-part, moisture-curing silicone joint sealant with physical properties making it an ideal sealant for sealing dynamic joints.
 - b. Tremco Spectrem® 3: A general-purpose, low-modulus, high performance, one-part, neutral-cure, non-staining, low dirt pickup, construction-grade silicone sealant.
 - c. Tremco Spectrem® 4-TS: A multi-component, neutral-curing, non-staining, low dirt pickup, low-modulus silicone sealant specially formulated for use in dynamically moving building joints. Spectrem 4-TS offers color flexibility with the opportunity to tint the material on site.
 - 1) Coordination for custom sealant colors is required.
2. Polyurethane Sealant
 - a. Tremco Dymeric® 240FC: A multi-component, chemically curing polyurethane sealant that comes as a kit with a tintable base, curative packet, and a choice of 70 standard colors.
3. Hybrid Polyurethane Sealant
 - a. Tremco Dymonic® FC: A single-component, low-modulus, hybrid polyurethane sealant.
4. Sealant Primer
 - a. TREMprime™ Silicone Porous Primer (for porous surfaces), required when using Spectrem® 1, Spectrem® 3, Spectrem® 4-TS, or Dymonic® FC.
 - b. TREMprime™ Non-Porous Primer (for metals or plastics), required when using Spectrem® 1, Spectrem® 3, Spectrem® 4-TS, or Dymonic® FC.
 - c. Vulkem® Primer #171 (for porous surfaces), required when using Dymeric 240FC.
- D. Jobsite-Mixed Materials
 1. Portland cement – verify is Type I, II, or IL, meeting ASTM C150, white or gray in color, fresh and free of lumps.
 2. Water – verify is clean and free of foreign matter.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions
 1. Verify access to electric power, clean water and a clean work area at the location where the Dryvit materials are to be applied.
 2. Verify the deflection of the substrate does not exceed 1/240 times the span. Verify substrate is flat within 1/4 in (6.4 mm) in a 4 ft (1.2 m) radius.
 3. Verify substrate is sound, dry, connections are tight and has no surface voids, projections, or other conditions that may interfere with the EIFS with Drainage installation or performance.

4. Verify the slope of inclined surfaces are not less than 6:12 (27°) where the length of the slope does not exceed 12 in (305 mm) or 3:12 (14°) where the length of the slope does not exceed 4 in (102 mm).
5. Verify metal roof flashings have been installed in accordance with Sheet Metal and Air Conditioning Contractors National Association (SMACNA) standards.
6. Verify all rough openings are flashed in accordance with the EIFS with Drainage manufacturer's installation details, or as otherwise necessary to prevent water penetration. Verify chimneys, balconies and decks have been properly flashed as necessary to prevent water penetration.
7. Verify windows and doors are installed and flashed per manufacturer's requirements and installation details.
8. Notify the general contractor of all discrepancies prior to the installation of the EIFS with Drainage.
9. Verify that expansion joints are installed
 - a. Where expansion joints occur in the substrate system
 - b. Where building expansion joints occur
 - c. At floor lines in wood frame construction
 - d. At floor lines of non-wood framed buildings where significant movement is expected
 - e. Where the EIFS abuts dissimilar materials
 - f. Where the substrate type changes
 - g. Where prefabricated panels abut one another
 - h. In continuous elevations at intervals not exceeding 75 ft (23 m)
 - i. Where significant structural movement occurs, such as changes in roof line, building shape or structural system.
10. Vapor Retarders: The use and location of vapor retarders within a wall assembly shall be the responsibility of the project designer and shall comply with local building code requirements. The type and location shall be noted on the project drawings and specifications. Vapor retarders may be inappropriate in certain climates and can result in condensation within the wall assembly. EIFS installer shall not deviate from what is depicted in the contract drawings.
11. Exterior Fire Blocking: Rockwool Mono Density must be installed in lamella orientation to fully interrupt the foam plastic insulation (EPS) in the following locations, at minimum:
 - a. Around wall openings, for a height of not less than 4 inches (102 mm)
 - b. In alignment with the slab edge, for a height of not less than 8 inches (203.2 mm), and at maximum intervals of 20 feet (6096 mm) vertically
 - c. Between different occupancy groups, horizontally or vertically, as applicable

3.2 PREPARATION

- A. Protect the EIFS with Drainage materials from inclement weather and other sources of damage prior to, during, and following application until completely dry.

- B. Protect adjoining work and property during installation of the EIFS with Drainage.
- C. Prepare the substrate to be free of foreign materials, such as oil, dust, dirt, form-release agents, efflorescence, paint, wax, water repellants, moisture, frost, and any other condition that may inhibit adhesion.

3.3 INSTALLATION

- A. Install the Rockwool Mono Density mineral wool fire blocking in lamella orientation at all locations prescribed in 3.1.A.11. The Dryvit cementitious adhesive must be installed as a monolithic ribbon on the backside of the lamella at all locations in accordance with DS1069. Temporary support of the lamella is required for a period of 24 hours after installation while the adhesive cures.
- B. Install the EIFS in accordance with ASTM C1397 and the Dryvit Outsulation Plus MD System Application Instructions, DS218. Apply base coat in sufficient thickness to fully embed the reinforcing mesh.
 - 1. When installing the air/water-resistive barrier membrane over Nudura ICF systems, rasp the surface of the formwork prior to application of the membrane and detail components.
- C. Apply sealant to base coat surface prepared in accordance with Expansion Joints & Sealants (Compatible with Dryvit), DS153.
- D. Install high impact reinforcing mesh as specified at ground level, high traffic areas and other areas exposed to or susceptible to impact damage as designated on the contract drawings.
- E. Install Machine Coated Dryvit EPS Shapes in accordance with Dryvit Publication Architectural Shapes Application Instructions, DS1038.

3.4 SITE QUALITY CONTROL

- A. Exterior Insulation and Finish System with Moisture Drainage manufacturer assumes no responsibility for on-site inspections or application of its products.
- B. Insulation board supplier, if requested, shall certify in writing that the insulation board meets the EIFS with Drainage manufacturer's specifications.
- C. The sealant contractor, if requested, shall certify in writing that the sealant application is in accordance with the sealant manufacturer's and the EIFS with Drainage manufacturer's recommendations.

3.5 CLEANING

- A. Remove all excess EIFS with Drainage materials from the job site in accordance with contract provisions and as required by applicable law.
- B. Leave all surrounding areas, where the EIFS with Drainage has been applied, free of debris and foreign substances resulting from the EIFS sub-contractor's work.