OUTSULATION® SYSTEM
An Exterior Wall Insulation and Finish System
That Incorporates Continuous Insulation

Outsulation System
Specifications
CSI Compliant
INTRODUCTION

This document contains the Manufacturer's Standard Specification for the Outsulation System. By referring to the Manufacturer's edit notes (in parentheses and bolded) the specifier may easily elect the portions of this comprehensive guide specification which are pertinent to his or her project. This guide specification follows the Construction Specification Institute’s MasterFormat and SectionFormat protocols.

Also, it may be prudent to place certain parts of the Dryvit Outsulation Specification in other sections of the project's project manual, such as with sealants and framing. The project design professionals are responsible for verifying that the project specifications are suitable for the project. For assistance in preparing your specification, contact your Dryvit Distributor or Dryvit Systems, Inc.

WARNING

The Outsulation System is designed as a barrier wall system and is detailed to prevent water from entering the System. Specifications should be followed, and proper details adhered to, in order to prevent water intrusion, resulting in possible damage to the System or other building elements. Care should be taken to ensure that all building envelope elements, including without limitations, roof designs, windows, flashings, sealants, etc., are compatible with this system.

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 details, shop drawings, and the like. The Exterior Insulation and Finish System ( EIFS ) Manufacturer has prepared guidelines in the form of guide 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, detail, structural capability, attachment details, 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 comments.

Information contained in this guide specification conforms to standard detail and product recommendations for the installation of the Dryvit Outsulation System products as of the date of publication of this document and is presented in good faith. Dryvit Systems, Inc. assumes no liability, expressed or implied, as to the architecture, engineering or installation of any project. To ensure that you are using the latest, most complete information, visit our website at www.dryvit.com or contact Dryvit Systems, Inc., at:

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* The Trained Contractor Certificate referenced in Sections 1.04.D, 1.06.B.2 and 1.06.B.4 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 Dryvit'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 application of the specified products and assemblies. Dryvit Systems, Inc. assumes no liability for the performance of a trained contractor.
DRYVIT SYSTEMS, INC.
MANUFACTURER’S SPECIFICATION
SECTION 07 24 00
OUTSULATION® SYSTEM
EXTERIOR INSULATION AND FINISH SYSTEM

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes:
   1. This document is to be used in preparing specifications for an Exterior Insulation and Finish System (EIFS).

B. Related Requirements:
   (Note to specifier: Please delete any sections below not relevant to this project, and add others as required.)
   1. 03 30 00 Cast-in-place Concrete
   2. 03 40 00 Precast Concrete
   3. 04 20 00 Unit Masonry
   4. 05 40 00 Cold-formed Metal Framing
   5. 06 11 00 Wood Framing
   6. 06 16 00 Sheathing
   7. 07 26 13 Above-grade Vapor Retarders
   8. 07 90 00 Joint Protection
   9. 08 40 00 Entrances, Store Fronts, and Curtain Walls
   10. 08 50 00 Windows

1.02 REFERENCES
   (Note to Specifier: please delete any standards below not relevant to this project, and add others as required. A table with each of the standards, applicable test methods, and results may be found at www.dryvit.com, DS856.)

A. Reference Standards:

1. ASTM Standards:
   a. ASTM B 117 Standard Practice for Operating Salt Spray (Fog) Apparatus
   c. ASTM C 150 Standard Specification for Portland Cement
   d. ASTM C 297 Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
   f. ASTM C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
   g. ASTM C 1396 Standard Specification for Gypsum Board
   h. ASTM C 1397 Standard Practice for Application of Class PB Exterior Insulation and Finish System (EIFS) and EIFS with Drainage
   i. ASTM D 968 Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
   j. ASTM D 2247 Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
   k. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
   l. ASTM D 4060 Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
Outsulation System Specifications CSI Compliant

A. Pre-Installation Meetings
   (Note to Specifier: Work in this section requires coordination with related sections and trades. A pre-installation meeting of all related sub-contractors is strongly recommended)

B. Sequencing

   1. Provide jobsite grading prior to installation of Exterior Insulation and Finish System so that the system may be terminated at or above 8 in above grade as required by code.

   2. Coordinate installation of foundation waterproofing, roofing membrane, windows, doors, and other penetrations of the exterior walls.

   3. Provide protection of rough openings before installing windows, doors, and other penetrations of the exterior walls.

   4. Coordinate installation of windows and doors with flashing contractor to provide a continuous barrier.
5. Install window and door head flashings immediately after windows and doors are installed.

6. Install diverter flashings wherever water can enter the wall assembly to direct water to the exterior.


8. Attach penetrations through Exterior Insulation and Finish System to structural support and provide water-tight seals at penetrations.

1.04 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

A. Submit product data as required by Section 01 33 00, Administrative Requirements.

B. For panelized EIFS, submit shop drawings showing wall layout, connections, details, expansion joints, and installation sequence.

C. Submit two (2) samples of the Exterior Insulation and Finish System 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 system specified.

E. Submit Owner/Architect-requested test results verifying the performance of the Exterior Insulation and Finish System. Refer to Outsulation Performance Criteria Data Sheet DS856.

F. Submit a copy of the manufacturer’s installation details and application instructions.

1.05 CLOSEOUT SUBMITTALS

A. Submit a copy of the manufacturer’s recommended maintenance and repair manual.

B. Submit a copy of the Exterior Insulation and Finish System manufacturer’s standard warranty.

1.06 QUALITY ASSURANCE

(Note to Specifier: Please delete any qualification below not relevant to this project, and add others as required)

A. Manufacturer’s Qualifications:

(Note to Specifier: Coordinate with section 01 43 00, Quality Requirements)

1. A member in good standing of the EIFS Industry Members Association (EIMA).


B. Contractor Qualifications:


2. Possess a current Outsulation System Trained Contractor Certificate* issued by Dryvit Systems, Inc.

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 Dryvit Systems, Inc., and capable of producing the Expanded Polystyrene (EPS) in accordance with the current Dryvit Specification for Insulation Board DS131.
2. Subscribe to the Dryvit Third Party Certification and Quality Assurance Program.

D. Panel Fabricator Qualifications:

1. Experienced and competent in the fabrication of architectural wall panels.

2. Possess a current Outsulation System Trained Contractor Certificate* issued by Dryvit Systems, Inc.

E. Panel Erector Qualifications:

1. Experienced and competent in the installation of architectural wall panel systems.

2. Shall be:
   a. The panel fabricator or
   b. An erector approved by the panel fabricator or
   c. An erector under the direct supervision of the panel fabricator

F. Mock-Up:

1. Provide the owner/architect with a mock-up for approval.
   a. 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. 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. Available and maintained at the jobsite.

G. Regulatory Requirements:

1. Separate the EPS 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.

H. Inspections:

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

1.07 DELIVERY, STORAGE AND HANDLING

1. Deliver all Exterior Insulation and Finish System components and materials to the job site in the original, unopened packages with labels intact.

2. Inspect all Exterior Insulation and Finish System components and materials upon arrival for physical damage, freezing or overheating. Do not use questionable materials.

3. Store all Exterior Insulation and Finish System 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. **NOTE:** Finishes exposed to temperatures over the published maximum storage temperature for even short periods may exhibit skinning and increased viscosity.

   (Note to Specifier: please refer to specific product data sheets or specifications at [www.dryvit.com](http://www.dryvit.com) for more information.)

4. Protect all products from inclement weather and direct sunlight.
1.08 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 Ameristone™, TerraNeo® and Lymestone™) thereafter, or until the products are completely dry. (Note to Specifier: Please refer to specific product data sheets at www.dryvit.com for more information.)

(Nota to Specifier: The use of dark colors must be considered in relation to wall surface temperature as a function of local climatic conditions. Use of dark colors in high temperature climates can affect the performance of the system.)

1.09 WARRANTY

A. Manufacturer’s Warranty

(Note to Specifier: An extended, single-source warranty is available when Dryvit Outsulation System is paired with specific Tremco Sealants.)

1. Provide manufacturer’s standard warranty.

B. Contractor Warranty

1. Sub-contractor to provide warranty of installation. Manufacturer assumes no liability for installation of Exterior Insulation and Finish System.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers List:


B. Substitution Limitations:

1. All components of the Outsulation System shall be supplied or obtained from Dryvit or its authorized distributors. Substitutions or additions of materials manufactured or supplied by others will void the system warranty.

C. Product Options:

(Note to Specifier: Please select appropriate method of application for your project)

1. Field Applied: The Outsulation System is applied to the substrate system in place.

2. Panelized: The Outsulation System is shop-applied to prefabricated wall panels.

2.02 DESCRIPTION

A. System Description:

1. The Dryvit Outsulation System is an Exterior Insulation and Finish System (EIFS); consisting of:
a. Fluid-applied flashing at all rough openings
b. Adhesive – installed in vertical ribbons to facilitate egress of incidental moisture
c. Rigid plastic foam insulation board
d. Base Coat
e. Reinforcing Mesh
f. Finish Coat

B. Materials:

1. Flashing:
   a. AquaFlash® fluid-applied water-based polymer coating.
   b. AquaFlash polyester reinforcing mesh.
   c. Backstop® Flash & Fill liquid applied flashing membrane and joint filler.
   d. Dryvit Flashing Tape™ polyethylene film on one side with layer of rubberized asphalt adhesive available in rolls 4 in (102 mm), 6 in (152 mm), and 9 in (229 mm) wide by 75 ft (23 m) long.
   e. Dryvit Flashing Tape Surface Conditioner™ water-based surface conditioner and adhesion promoter.

2. Adhesives:
   (Note to Specifier: Used to adhesively attach the EPS insulation board to the approved substrate.)
   a. Liquid polymer-based adhesive field mixed with Portland cement.
      1) Dryvit Primus®
      2) Dryvit Genesis®
   b. Ready mixed dry blend cementitous, copolymer-based adhesive field mixed with water.
      1) Dryvit Primus® DM
      2) Dryvit Genesis® DM
      3) Dryvit Genesis® DMS
      4) Rapidry DM 35-50
      5) Rapidry DM 50-75

3. Insulation Board:
   a. Expanded Polystyrene; minimum thickness 1 in (25 mm); meeting Dryvit Specification DS131 and ASTM E 2430.

4. Base Coat:
   a. Liquid polymer-based adhesive field mixed with Portland cement.
      1) Dryvit Primus
      2) Dryvit Genesis
   b. Noncementitious factory-mixed, fully formulated, water-based product.
      1) NCB
   c. Ready mixed dry blend cementitous, copolymer-based adhesive field mixed with water.
      1) Dryvit Primus DM
      2) Dryvit Genesis DM
      3) Dryvit Genesis DMS
      4) Rapidry DM 35-50
      5) Rapidry DM 50-75

5. Reinforcing Mesh:
   a. Open-weave, glass fiber fabric treated for compatibility with other system materials.
      (Note to Specifier: Reinforcing meshes are classified by impact resistance and specified by weight and tensile strength. Please refer to the table below and/or confer with your manufacturer’s representative to assure specification of mesh appropriate for the anticipated use of your project.)
Outsulation System Specifications

<table>
<thead>
<tr>
<th>Reinforcing Mesh¹/Weight oz/yd² (g/m²)</th>
<th>Minimum Tensile Strengths</th>
<th>EIMA Impact Classification</th>
<th>EIMA Impact Range in-lbs (Joules)</th>
<th>Impact Test Results in-lbs (Joules)</th>
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<tbody>
<tr>
<td>Standard - 4.3 (146)</td>
<td>150 lbs/in (27 g/cm)</td>
<td>Standard</td>
<td>25-49</td>
<td>(3-6)</td>
</tr>
<tr>
<td>Standard Plus - 6 (203)</td>
<td>200 lbs/in (36 g/cm)</td>
<td>Medium</td>
<td>50-89</td>
<td>(6-10)</td>
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<tr>
<td>Intermediate™ - 12 (407)</td>
<td>300 lbs/in (54 g/cm)</td>
<td>High</td>
<td>90-150</td>
<td>(10-17)</td>
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<td>Panzer® 15¹ - 15 (509)</td>
<td>400 lbs/in (71 g/cm)</td>
<td>Ultra High</td>
<td>&gt;150 (&gt;17)</td>
<td>162 (18)</td>
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<tr>
<td>Panzer 20¹ - 20.5 (695)</td>
<td>550 lbs/in (98 g/cm)</td>
<td>Ultra High</td>
<td>&gt;150 (&gt;17)</td>
<td>352 (40)</td>
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<tr>
<td>Detail Mesh® Short Rolls - 4.3 (146)</td>
<td>150 lbs/in (27 g/cm)</td>
<td>n/a</td>
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<tr>
<td>Corner Mesh™ - 7.2 (244)</td>
<td>274 lbs/in (49 g/cm)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

* It shall be colored blue and bear the Dryvit logo for product identification

1. Shall be used in conjunction with Standard Mesh (recommended for areas exposed to high traffic)

6. Site Coated EPS Shapes and Starter Boards: Shall be coated on site utilizing the same materials (EPS, base material mixture, reinforcing mesh, and finish) as specified for the project.

7. Machine Coated EPS Shapes and Starter Boards: Shall be supplied by a manufacturer that subscribes to the Dryvit third party certification and quality assurance program

8. Finish:

a. Water-based, acrylic coating with integral color and texture; formulated with Dirt Pickup Resistance (DPR) chemistry:
   1) Available textures:
      a) Quarzputz® DPR – open texture
      b) Sandblast® DPR – medium texture
      c) Freestyle® DPR – fine texture
      d) Sandpebble® DPR – pebble texture
      e) Sandpebble® Fine – fine pebble texture

b. Hydrophobic (HDP™) Finishes: 100% acrylic coating with integral color and texture and formulated with hydrophobic properties:
   1) Available textures:
      a) Quarzputz® HDP
      b) Sandblast® HDP
      c) Sandpebble® HDP
      d) Sandpebble® Fine HDP
      e) Lymestone™ HDP
      f) Finesse™ HDP

c. Lightweight, water-based acrylic coating with integral color and texture; formulated with Dirt Pickup Resistance (DPR) chemistry.
   1) Available textures:
      a) Quarzputz®
      b) Sandpebble®
      c) Sandpebble Fine®

d. Specialty Finishes and Veneers:
   1) Ameristone – multi-colored quartz aggregate with a flamed granite appearance.
   2) Stone Mist® - ceramically colored quartz aggregate.
   3) Custom Brick™ – acrylic polymer-based finish used in conjunction with a proprietary template system to create the look of stone, brick, slate, or tile.
   4) TerraNeo – acrylic-based finish with large mica chips and multi-colored quartz aggregates.
   5) Lymestone – premixed, acrylic-based finish designed to replicate the appearance of limestone blocks.
   6) Reflectit™ – acrylic coating providing a pearlescent appearance.
   7) Finesse – a smooth 100% acrylic-based dirt pickup resistance finish.
   8) Tibur Stone™: 100% acrylic-based finish with the appearance of Travertine Stone.
   9) NewBrick™: A lightweight insulated brick veneer for use on exterior walls.
   10) Ferros™ Finish: - a water based finish properties that replicates the look of rusting metal.
e. Elastomeric, water-based acrylic coating with integral color and texture; formulated with Dirt Pickup Resistance (DPR) chemistry:

1) Weatherlastic® Quarzputz
2) Weatherlastic® Sandpebble
3) Weatherlastic® Sandpebble Fine
4) Weatherlastic® Adobe

f. Medallion Series water-based, acrylic coating with integral color and texture; formulated with Proven Mildew Resistance (PMR™) chemistry:

1) Quarzputz® PMR
2) Sandblast® PMR
3) Freestyle® PMR
4) Sandpebble® PMR
5) Sandpebble® Fine PMR

g. Coatings, Primers, and Sealants:
1) Demandit® Smooth
2) Demandit® Sanded
3) Demandit® Advantage™
4) HDP™ Water-Repellent Coating
5) Weatherlastic® Smooth
6) Tuscan Glaze™
7) Color Prime
8) Prymit®
9) SealClear™

C. Jobsite-Mixed Materials:

1. Portland cement: verify is Type I or II, meeting ASTM C 150, white or gray in color, fresh and free of lumps.

2. Water: verify is clean and free of foreign matter.

PART 3 – EXECUTION

3.01 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 that wall surface on which Exterior Insulation and Finish System is to be installed is a manufacturer-approved substrate:

   a. Exterior grade gypsum sheathing meeting ASTM C 1396.
   c. Exterior fiber reinforced cement or calcium silicate boards.
   d. APA Exterior or Exposure 1 Rated Plywood, Grade C-D or better, nominal 1/2 in (12.7 mm) minimum 4-ply.
   e. Exterior grade fire retardant treated (FRTW) plywood.
   f. APA Exposure 1 Rated Oriented Strand Board (OSB) nominal 1/2 in (12.7 mm) minimum
   g. Unglazed brick, cement plaster, concrete or masonry.
   h. Pre-engineered metal building panels with an acceptable substrate as noted in Section 1.04.C.1.a through f.

3. Verify the deflection of the substrate does not exceed 1/240 times the span.
4. Verify substrate is flat within 1/4 in (6.4 mm) in a 4 ft (1.2 m) radius.

5. Verify substrate is sound, dry, connections are tight; has no surface voids, projections, or other conditions that may interfere with the Exterior Insulation and Finish System installation or performance. Verify the slope of inclined surfaces is not less than 6:12 (27°), and the length of the slope does not exceed 12 in (305 mm).

6. Verify metal roof flashings have been installed in accordance with Sheet Metal and Air Conditioning Contractors National Association (SMACNA) standards.

7. Verify all rough openings are flashed in accordance with the Exterior Insulation and Finish System manufacturer’s installation details, or as otherwise necessary to prevent water penetration.

8. Verify chimneys, balconies and decks have been properly flashed as necessary to prevent water penetration.

9. Verify windows and doors are installed and flashed per manufacturer's requirements and installation details.

10. Notify general contractor of all discrepancies prior to the installation of the Exterior Insulation and Finish System.

   (Note to Specifier: Design and location of expansion joints in the Exterior Insulation and Finish System is the responsibility of the project designer, and as designated on contract drawings.)

11. 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.
   f. Where the substrate type changes.
   g. Where prefabricated panels abut one another.
   h. In continuous elevations at intervals not exceeding 23 m (75 ft).
   i. Where significant structural movement occurs, such as changes in roof line, building shape or structural system.

   (Note to Specifier: The use and location of vapor retarders within a wall assembly is the responsibility of the project designer and must comply with local building code requirements. Vapor retarders may be inappropriate in certain climates and can result in condensation within the wall assembly. The EIFS manufacturer will perform drawing and specification reviews including water vapor transmission analyses upon request and without charge.)

3.02 PREPARATION

A. Protect the Exterior Insulation and Finish System materials by permanent or temporary means 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 Exterior Insulation and Finish System.

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.
3.03 INSTALLATION

A. Install the system in accordance with ASTM C1397 and the Exterior Insulation and Finish System manufacturer’s application instructions.

B. Apply base coat sufficient to fully embed the reinforcing mesh. The recommended method is to apply the base coat in two (2) passes.

C. Apply sealant only to base coat treated with Dryvit Demandit® Smooth or Color Prime™ coatings.

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 contract drawings.

E. Install Pre-Coated EPS Shapes in accordance with Dryvit Publication DS854.

3.04 SITE QUALITY CONTROL

A. Exterior Insulation and Finish System manufacturer assumes no responsibility for on-site inspections or application of its products.

B. EIFS sub-contractor to certify in writing the quality of work performed relative to the substrate system, details, installation procedures, and as to the specific products used.

C. EPS supplier, if requested, to certify in writing that the EPS insulation board meets the Exterior Insulation and Finish System manufacturer’s specifications.

D. The sealant contractor, if requested, to certify in writing that the sealant application is in accordance with the sealant manufacturer’s and the Exterior Insulation and Finish System manufacturer’s recommendations.

3.05 CLEANING

A. Remove all excess Exterior Insulation and Finish System materials from the job site by the contractor in accordance with contract provisions and as required by applicable law.

B. Leave all surrounding areas, where the Exterior Insulation and Finish System has been applied, free of debris and foreign substances resulting from the EIFS sub-contractor’s work.

END OF SECTION 07 24 00