

OUTSULATION® PLUS MD SECUROCK® EXOAIR® 430 SYSTEM



**An Exterior Wall Insulation and Finish System with Moisture Drainage
That Incorporates Continuous Insulation and An Air-Water-Resistive Barrier**

DS901

Outsulation Plus MD Securock ExoAir 430 System Application Instructions

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I. General Installation Requirements

A. Project Conditions

1. Storage of Dryvit Materials
 - a. Materials shall be stored at the job site, and at all times, in a cool, dry location, out of direct sunlight, protected from weather and other sources of damage. Minimum storage temperature shall be as follows:
 - 1) DPR, PMR™, HDP™, Weatherlastic®, and E Finishes™, Color Prime™, Primus®, Genesis® and NCB™: 40 °F (4 °C).
 - 2) For all other products, refer to specific product data sheets.
 - b. Maximum storage temperature shall not exceed 100 °F (38° C). **NOTE: Minimize exposure of materials to temperatures over 90 °F (32 °C). Finishes exposed to temperatures over 110 °F (43 °C) for even short periods may exhibit skinning, increased viscosity and should be inspected prior to use.**
 - c. Protect all products from inclement weather and direct sunlight.
2. Storage of Securock ExoAir 430 Materials
 - a. All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements.
3. Application General
 - a. This document provides the basic and typical instructions for the installation of Outsulation Plus MD Securock ExoAir 430 System to qualify for the Outsulation Plus MD Securock ExoAir 430 Warranty. Jobsite-specific details require the review and approval of a local Sales Representative or Technical Services.
4. Application of Dryvit Materials
 - a. Application of wet materials shall not take place during inclement weather unless appropriate protection is provided. Protect materials from inclement weather until they are completely dry.
 - 1) At the time of Dryvit product application, the air and wall surface temperatures shall be from 40 °F (4 °C) minimum to 100 °F (38° C) maximum for the following products:
 - a) DPR, PMR, HDP, Weatherlastic and E Finishes, Color Prime, Primus, Genesis and NCB: 40 °F (4 °C).
 - b) For all other products, refer to specific product data sheets.
 - b. These temperatures shall be maintained with adequate air ventilation and circulation for a minimum of 24 hours (48 hours for Weatherlastic Finishes, Ameristone™, TerraNeo® and Limestone™) thereafter, or until the products are completely dry. Refer to published product data sheets for more specific information.
5. Application of Securock ExoAir 430 Materials
 - a. This panel shall be installed in accordance with GA-253 Application of Gypsum Sheathing, ASTM C1280 Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing and the requirements of USG and Tremco published literature.
 - b. Proper detailing of joints must be completed before the Outsulation Plus MD Securock ExoAir 430 system is installed or 12 months after the date of installation of the panels or whichever comes first.
 - c. Ensure substrates are clean, dry and free of dust or debris that could prevent adhesion of sealant.
 - d. Securock ExoAir 430 is not approved for use as a nail base.
 - e. Details and requirements pertaining to framing and application limitations shall be controlled by the Outsulation Plus MD Securock ExoAir 430, structural or fire-resistant-rated systems, and must be approved by the design professional of record.
 - f. Always wear appropriate personal protective equipment when handling and installing glass mat panels, such as gloves, safety glasses, hearing protection and a NIOSH-approved dust mask.

B. Flashing at System Terminations

1. General
 - a. Ensure that flashing is installed in accordance with applicable code requirements and the contract documents. As a minimum, opening preparation is required as shown in the Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS903.
2. Transition at Roof Lines
 - a. Ensure the roof has positive drainage, i.e. all runoff shall be directed to the exterior and away from the structure.
 - b. Roof flashing (by others) shall be installed in accordance with industry guidelines, manufacturer's instructions and contract documents.
 - c. Runoff diverters (i.e. kickouts, crickets and saddles) (by others) shall be installed in accordance with industry guidelines, manufacturer's instructions and contract documents. Particular attention must be paid to the eaves/chimney intersections and sloped roof/wall intersections. Refer to the Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS903.
 - d. Hold system a minimum of 6 in (152 mm) above flat roofs; 2 in (51 mm) above sloped roofs.
3. Openings
 - a. Heads, jambs and sills of all openings shall be prepared as described in Section III.H. For proper application, refer to the Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS903.
 - b. Continuous flashing at heads of openings as indicated in contract documents. **NOTE: For windows or doors that do not have integral flashing, a field-applied flashing shall be installed (by others) in accordance with industry**

guidelines, manufacturer's instructions and contract documents. Refer to the Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS903.

- c. Individual windows that are ganged to make multiple units require the heads to be continuously flashed and the joints between the units to be fully sealed.
4. Decks and Patio
 - a. Wood decks shall be properly flashed prior to system application. See the Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS903.
 - b. Verify that the Dryvit system terminates above poured decks, patios, landings, etc. and that they are properly sloped and waterproofed to direct water away from the walls.
5. Utilities
 - a. Provisions must be made to ensure that the system terminates properly at lighting fixtures, electrical outlets, hose bibs, dryer vents, etc. Refer to the Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS903 for general information and guidance.
6. Grade Level Terminations
 - a. Hold system a minimum of 6 in (152 mm) above finished grade.

C. Sealants

1. Dryvit materials shall be completely dry prior to installation of sealant materials (typically 48 - 72 hours). Humid or cool conditions may require longer drying times.

D. Pre-Construction Meeting

1. A pre-construction meeting with all parties involved in the overall building envelope shall be held prior to any installation activities. This meeting is crucial and will ensure that installation sequencing, system connectivity and product compatibility are properly addressed.

Notify the general contractor and/or architect and/or owner of all discrepancies. Do not proceed until all unsatisfactory conditions have been corrected.

II. Materials Required for Completing Installation of the Outsulation Plus MD Securock ExoAir 430 System

A. Materials Supplied by Dryvit Systems, Inc.

1. AP Adhesive™
2. Drainage Track
3. Drainage Strip™
4. Starter Strip™- optional
5. Genesis, Genesis DM, Genesis DMS, Primus, Primus DM, Dryflex®
6. NCB
7. Rapidry™ DM 35-50, Rapidry™ DM 50-75, RapidPatch™
8. Standard Mesh, Standard Plus Mesh, Intermediate Mesh, Panzer® 15, Panzer 20, Corner Mesh, and Detail Mesh®
 - a. It shall be colored blue for product identification bearing the Dryvit logo.
9. Dryvit Finishes
10. Dryvit Coatings and Primers

NOTE: Materials listed above are those contained or referenced in the Outsulation Plus MD Securock ExoAir 430 Specification, DS902. Typically, the project specification will identify the specific materials necessary to complete application.

B. Materials Supplied by USG / Tremco

1. Dymonic® 100 (green) – A high-performance, medium-modulus, low-VOC, UV stable, non-sag polyurethane sealant that can be used for detailing fasteners, board joints, around penetrations, as angle beads in transition areas, in control/expansion joints with break metal, for terminating ExoAir® 110AT, and under all the Vulkem Coating Systems and TREMproof Waterproofing Membranes.
2. Dymonic® Simple Seal is a medium modulus, preformed polyurethane extrusion specifically designed to bridge joints under elastomeric wall coatings. Dymonic Simple Seal is typically bonded with Dymonic 100 Polyurethane Sealant to a wide range of substrates to provide a watertight seal.
3. Securock® ExoAir® Reinforcing Mesh – A mesh that is fully embedded in ExoAir 230 in light orange for transition areas.
4. ExoAir® 230 (light orange) – A fluid-applied, synthetic, vapor-permeable air barrier designed for use in commercial construction applications. It can be sprayed, rolled or trowel-applied to common substrates. ExoAir 230 can be used as an air barrier membrane on adjacent substrates such as concrete or CMU and can also be used in conjunction with Securock ExoAir Reinforcing Mesh as a transition material.

C. Materials Supplied by Others

1. Portland Cement: Type I or II
2. Clean Potable Water
3. Expanded Polystyrene Insulation Board meeting [DS131](#)

III. Securock ExoAir 430 System Installation

A. Framing

1. Securock ExoAir 430 Panel shall be installed on either wood or steel framing. The framing system shall be sized and designed to meet the requirements of the intended application.
2. The maximum spacing for framing members is 24" o.c.
3. Framing shall be straight and true, attached securely following accepted engineering practices and as required for the intended design.
4. The surfaces to which abutting edges or ends of the panels are to be attached shall not be less than 1¼" for steel framing, and 1½" for wood framing.
5. Bearing surfaces shall not be less than 5/8" for internal corners or angles.
6. Framing members shall be installed so the surface will be in an even plane, unless otherwise specified, after the panel(s) has been applied. The fastening surface shall not vary more than 1/8" from the plane of the faces of adjacent framing members.
7. If wood blocking is desired in steel stud construction for setting windows, doors, etc., position dimensional lumber flush with exterior surface of steel stud and mechanically anchor every 12" o.c. Minimum dimensional size of wood blocking to be nominal 2x4 lumber.

B. Panel Cutting and Applications

1. Securock ExoAir 430 Panel may be applied with long dimensions parallel or perpendicular to framing members, orange side to exterior. Panel orientation may be governed by local code, or by the requirements of shear or fire- rated construction. Consult local codes and site-specific construction documents prior to construction to ensure such requirements are met for every assembly.
2. Securock ExoAir 430 Panel shall be cut to size by scoring the panel face with a utility knife, or by sawing. Separate by snapping the panel away from the score line to fracture the core, and then by scoring the back mat with a utility knife. If a power saw is used, a cordless, low rpm saw will generate less airborne debris than a corded power saw.
3. The cut edges and ends of the panel shall be trimmed to obtain neat-fitting joints and flush with framing edges in rough opening if panel is used in rough opening.
4. Holes for pipe penetrations, fixtures or other small openings shall be scored on the orange face side before removing the cutout with a saw or special tool designed for this purpose.
5. Where Securock ExoAir 430 Panels meet projecting surfaces, the panel shall be scribed and cut neatly.
6. All vertical ends and edge joints shall abut over the centers of framing members and shall be offset a minimum of one framing bay between adjacent rows of panels.
7. Panel joints shall be offset a minimum of 4" from the edge of any opening.
8. Panels shall be detailed at openings to prevent any water intrusion beyond the membrane of the panel.
9. Center panel joints on framing members. Fit panels closely at edges and ends but do not force the panels together. Gaps between boards shall not exceed 1/8". Gaps greater than 1/8" but less than 1/2" shall be filled with Dymonic 100 (green) as fill material prior to detailing board joint as seen in section 8. If gap exceeds 1/2", panel must be repositioned or repaired per repair instructions listed in section 22.
10. Hold panels in firm contact with framing members and secure with fasteners as specified.
11. Fasteners shall be driven so the head is seated flush to the membrane of the panel surface without breaking or punching through the surface. Wafer or modified truss head fasteners shall be driven so the underside of the head is flush against the panel surface without breaking or punching through the surface.
12. Fasteners shall be driven without stripping the fastener or the framing member around the screw shank. Should a fastener miss or strip out of the framing member, DO NOT remove the fastener; an additional fastener shall be properly installed minimum 1" and maximum 2" from damaged area.
13. Fasteners shall be located not less than 3/8" and not more than 1" from the ends and edges of the panel and shall be placed 8" maximum o.c.
14. Fasteners can be either bugle or wafer head.
15. All fastener heads shall be detailed after installation with minimum 1/16" thickness (40 mils) and 3/4" minimum diameter quantity of Dymonic 100 (green) sealant.
16. Unless superseded by a more stringent specification, the minimum requirements for panel fasteners shall be as follows:
FASTENER SPECIFICATION
Corrosion Resistance: 48 hour per
ASTM B 117 Head Diameter:
0.325"
Shank: #6
Minimum length: 1 5/8" for wood installations. 1 1/4" for steel installations.
17. Supplementary use of a panel adhesive to adhere the panel to the framing will strengthen the connection and bridge minor irregularities between the panel and the framing. The use of an adhesive, however, will not reduce the number of fasteners required by the specification. For optimal bond, apply adhesive in accordance with the adhesive manufacturer's instructions. Care should be taken so excess adhesive does not contaminate board joints. Framing must be free from oil and dirt, and panel must be clean and dry.

C. Soffit Construction

1. The roof must be dried in prior to horizontal installation of panels in all soffit applications.

2. Maximum fastener spacing for soffits is 8" o.c.

D. Board Joints

1. In Plane Board Joints

- a. Ensure board joints are in compliance with section III.B.9.
- b. For in plane board joints apply and tool Dymonic 100 (green) sealant ensuring minimum overlap of 3/4" onto each panel at a 1/16" (40 mils) thickness.
- c. For intersections of vertical and horizontal board joints, caution should be taken to not remove or disturb existing sealant when overlapping.
- d. Feather sealant on horizontal joints out onto panel.

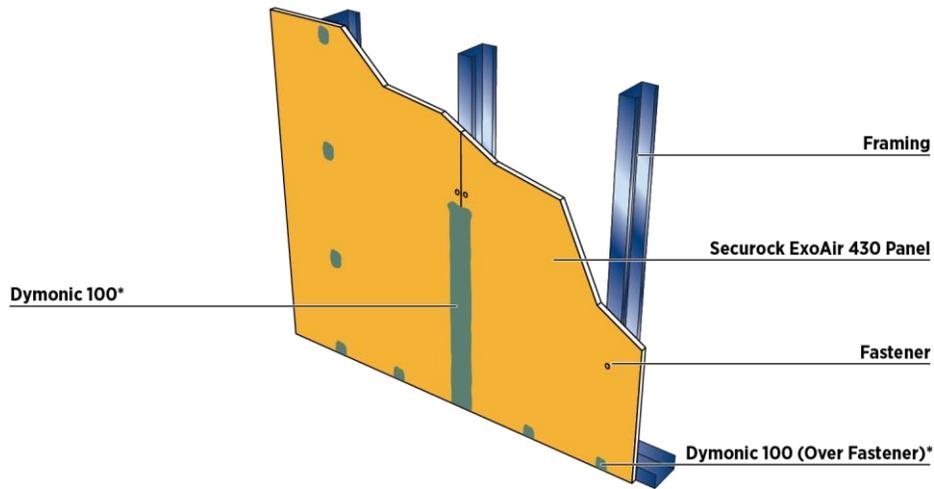


Figure 1: In Plane Board Joints

E. Corners

1. Inside Corners

- a. Ensure boards joints are in compliance with section III.B.9.
- b. Install minimum 1/2" wide bond breaker tape centered on joint.
- c. Apply 1/2" bead of Dymonic 100 (green) sealant bead over bond breaker tape.
- d. Tool to achieve cove bead, minimum 1/4" bond beyond edge of bond breaker tape to panel surface on each side of joint.

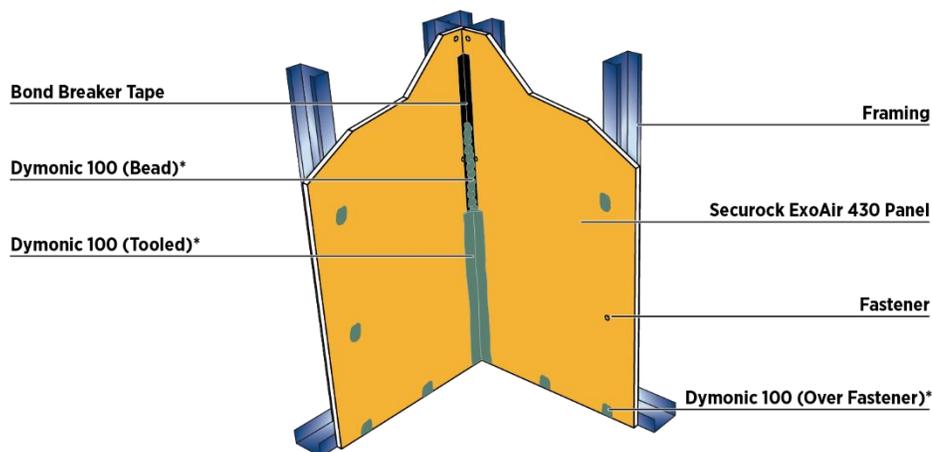


Figure 2: Inside corner

2. Outside Corners

- a. Ensure boards joints are in compliance with section III.B.9.
- b. Apply a continuous bead of Dymonic 100 (green) sealant in a zigzag pattern or a straight bead on each side of the joint. Tool Dymonic 100 sealant over the corner joint so that sealant grips the Securock ExoAir 430 membrane a minimum of 1" on both sides. Ensure there are no holes or gaps in the sealant and feather it on both sides. Using a mil gauge, ensure that a minimum of 40 wet mils have been applied; if not, reapply sealant to achieve 40 wet mils.

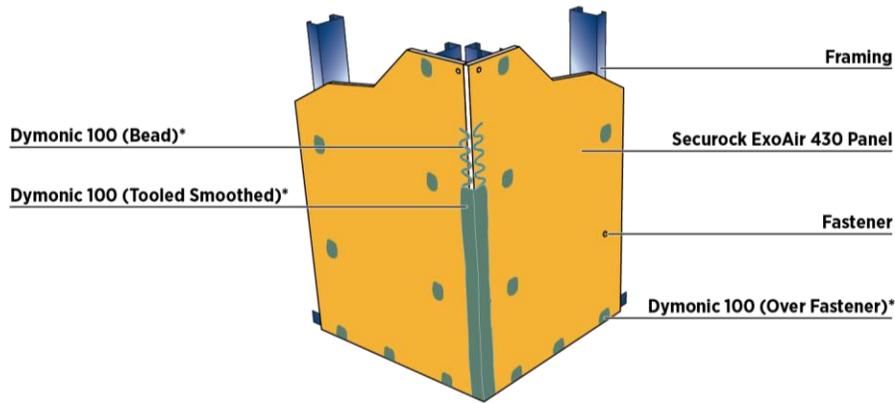


Figure 3: Outside corner

F. Expansion / Control Joints

- 1. The design and placement of control joints is the responsibility of the design professional of record.
- 2. Locate all control joints as per cladding system requirements, or in accordance with ASTM C1280 Standard Specification for Application of Gypsum Panel Products for Use as Sheathing, whichever is more stringent.
- 3. Proglaze ETA Connections
 - a. Friction fit closed cell backer rod flush with the surface of the Securock ExoAir 430 Panel.
 - b. Bonding of Dymonic Simple Seal component is achieved with continuous and interconnecting bedding beads of Dymonic 100 (green) polyurethane sealant. Apply Dymonic 100 (green) to the edges of the Securock ExoAir 430 Panel. Provide 1/2" wide continuous bedding along edges of the Dymonic Simple Seal adhered to the Securock ExoAir 430 Panel membrane surface and within overlaps of lineals of the Dymonic Simple Seal. Assure that Dymonic Simple Seal is centered over gap and sufficient sealant is applied to achieve the 1/2" bedding bead. Using a hand-held seam roller, lightly roll press the Dymonic Simple Seal to firmly bed, rolling toward its edge to force some sealant out, creating a slight bleed, and then tool the excess sealant back over the top of the Dymonic Simple Seal.
 - c. Preplan installation to minimize splicing of Dymonic Simple Seal. When splicing is required, provide a minimum 1" overlap of the Dymonic Simple Seal. Installation should begin at bottom of joint following typical construction practices of proper shingle effect of the overlap for vertical joints. For horizontal joints connected to vertical control joints, horizontal joint shall be detailed first then lapping vertical joint over top.

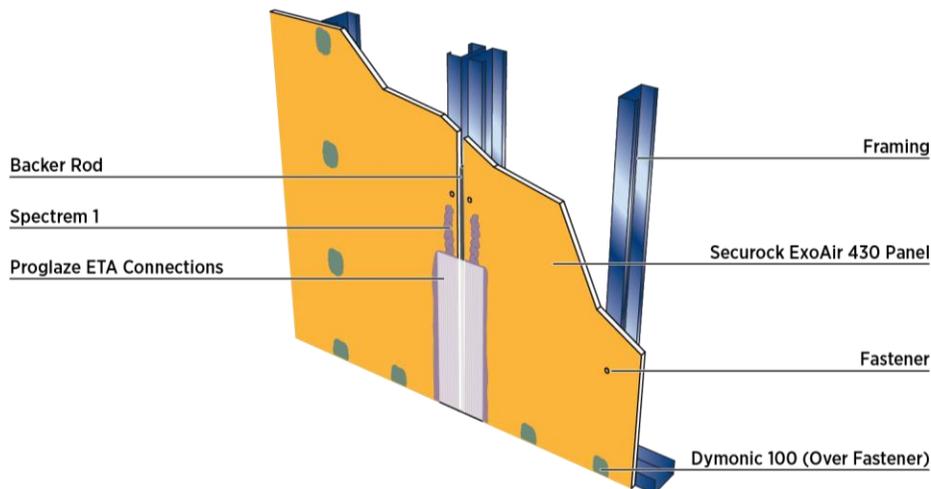


Figure 4: Expansion / Joint Control

4. Brake Metal and Sealant

- a. Joint to be studded out with panel terminating at outside edge of stud.
- b. Brake metal shall be minimum 26-gauge aluminum or stainless steel with minimum 1" x 1" legs.
- c. On one side of the joint, apply 1/4" bead of Dymonic 100 (green) sealant 1/8" from edge of panel.
- d. Angle brake metal over sealant pressing tight to corner and mechanically attached with minimum 1" fasteners every 12" o.c. through face.
- e. Angle brake metal over sealant pressing tight to corner and mechanically attached with minimum 1" fasteners every 12" o.c. through face.
- f. Friction fit closed cell backer rod into joint, recess 1/4" to 1/2" from face of panel. Install Dymonic 100 (green) sealant over backer rod. Fill the joint completely with sealant at a proper width-to-depth ratio, and tool flush to ensure intimate contact of sealant with joint walls. For complete installation instructions, download data sheet from tremcosealants.com/products/dymonic

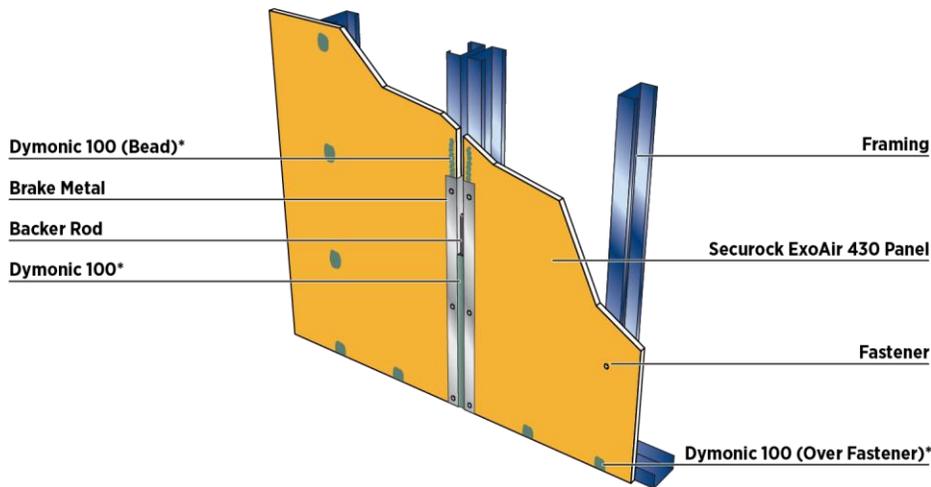


Figure 5: Brake Metal and Sealant

G. Penetrations

1. Non-Rated Wall Penetrations

- a. This section is intended to provide guidance for preparing the rough opening for penetrations.
- b. The minimum annular space can be 0", (point contact to maximum 5/8", apply Dymonic 100 (green) sealant).
- c. If annular space exceeds 5/8", fill any gaps with ExoAir LEF or closed cell backer rod flush with the membrane surface of the panel. If necessary, allow LEF to cure and trim flush to the face of the panel.
- d. A cove bead of Dymonic 100 (green) sealant shall be installed that will maintain a minimum 1/4" bond to both the membrane surface and the penetration.

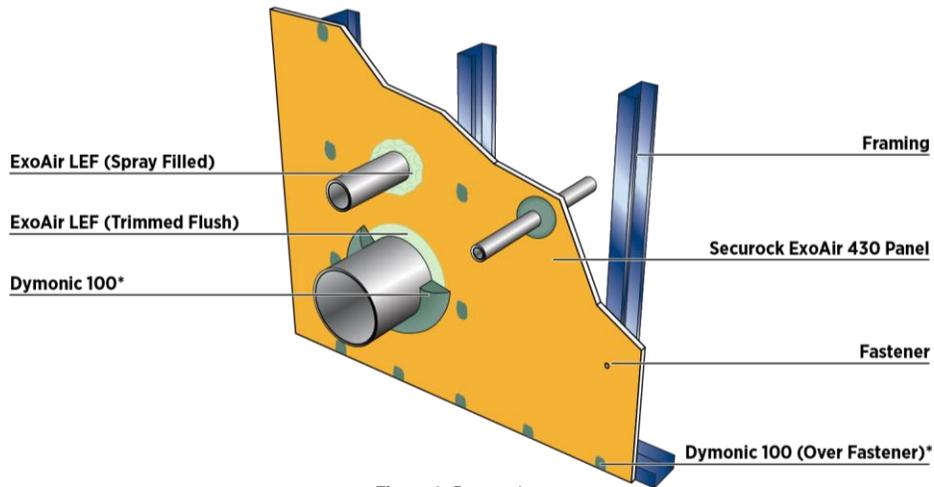


Figure 6: Penetrations

H. Rough Openings

1. This section is intended to provide guidance for preparing the rough opening for fenestrations. Consult fenestration manufacturer’s installation instructions for specific installation practices.

2. Rough Openings – Dymonic 100 Sealant

- a. Apply a continuous bead of Dymonic 100 (green) sealant in all four corners of the rough opening where the sill, jamb and head meet. Apply a continuous bead of Dymonic 100 (green) sealant in a zigzag pattern or a straight bead around the face of the panel, the sill, jambs and head. Tool Dymonic 100 sealant over the four corners do that sealant grips the Securock ExoAir 430 membrane a minimum of 1” on all sides. Ensure there are no holes or gaps in the sealant and feather it out. Using a mil gauge, ensure that a minimum of 40 wet mils have been applied; if not, reapply sealant to achieve 40 wet mils.
- b. In rough opening:
 - 1) Securock 430 panel – 1” minimum
 - 2) Wood buck – determined by window placement/design professional
 - 3) Steel framing – determined by window placement/design professional.
- c. Tool Dymonic 100 (green) sealant on the face of the panel toward the rough opening ensuring the exposed core is covered with no holes or gaps. Feather sealant out onto the panel. Tool Dymonic 100 (green) sealant in the rough opening toward the face of the panel ensuring the exposed core is covered with no holes or gaps. Measure sealant to ensure that at least 40 wet mils have been applied; if not reapply Dymonic 100 (green) sealant.
- d. For specific window connections, contact the local Sales Representative or Technical Services.

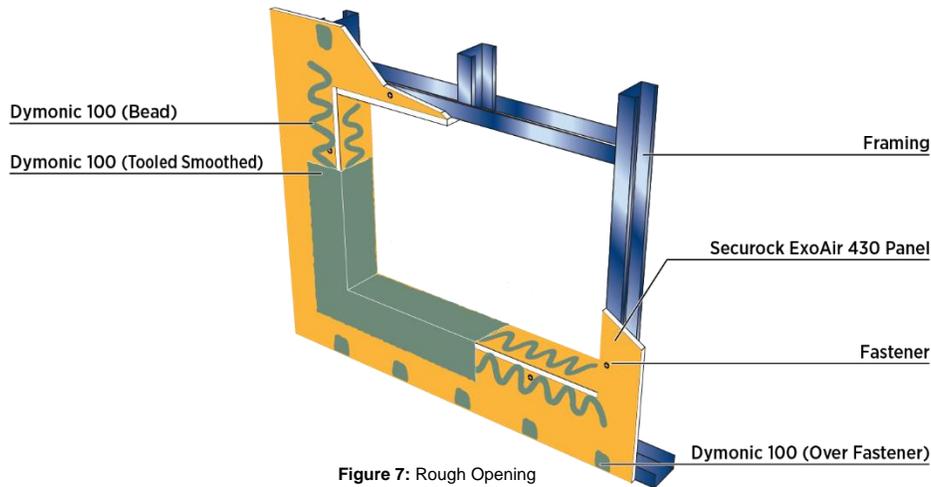


Figure 7: Rough Opening

3. Nail Flange

- a. Refer to Sections III.F.b., III.F.c., III.F.d.
- b. Press window into wet sealant and mechanically fasten to structure.
- c. Immediately prior to installing the flanged window, apply generous bead of Dymonic 100 (green) around the rough opening placed in such a way so that the fasteners penetrate through the wet sealant and fasten to the structure.
- d. Apply a generous bed of Dymonic 100 (green) sealant completely covering (minimum 1/2" overlap) all fasteners, feathering out beyond the flange onto the panel a minimum of 1/4".
- e. Apply a continuous bead of Dymonic 100 (green) sealant in all four corners of the rough opening where the sill, jamb and head meet. Apply a continuous bead of Dymonic 100 (green) sealant in a zigzag pattern or a straight bead around the face of the panel, the sill, jambs and head. Tool Dymonic 100 sealant over the four corners so that sealant grips the Securock ExoAir 430 membrane a minimum of 1" on all sides. Ensure there are no holes or gaps in the sealant and feather it out. Using a mil gauge, ensure that a minimum of 40 wet mils have been applied; if not, reapply sealant to achieve 40 wet mils.

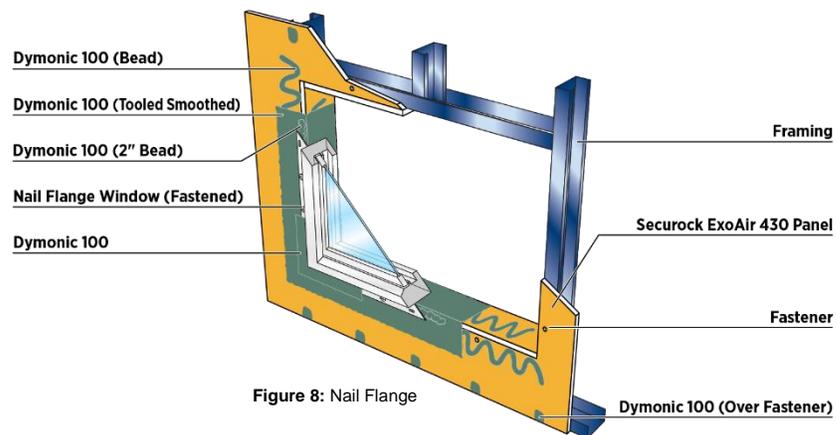


Figure 8: Nail Flange

I. Transitions

1. Adjacent Substrates

- a. Dissimilar material connections need to be properly detailed. These steps below are intended to maintain the continuity between the Securock ExoAir 430 panel and dissimilar materials with gaps 1" or less. For instruction on gaps with anticipated movement refer to section 13. For joints wider than 1" contact Tremco Technical Services.

- b. Fill joint completely with Dymonic 100 (green) sealant and tool flush. Dymonic 100 (green) does not have to cure before applying ExoAir 230.
- c. Apply 70 wet mils of ExoAir 230 (light orange) and overlapping a minimum 3” onto the Securock ExoAir panel. Allow ExoAir 230 (light orange) to cure. Continue with Tremco field-applied air barrier system.

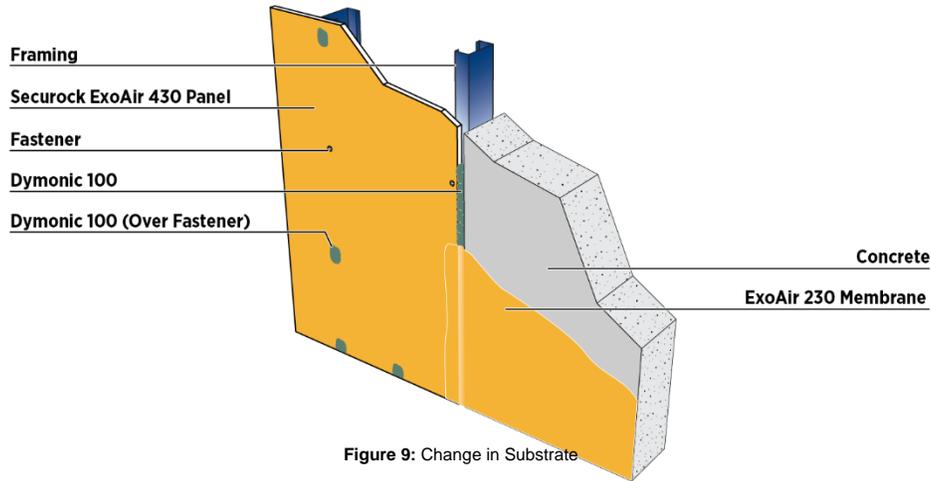


Figure 9: Change in Substrate

IV. Mixing Instructions for Dryvit Materials

A. General

- 1. No additives such as sand, aggregates, rapid binders, anti-freeze, accelerators, etc. shall be added to any Dryvit materials under any circumstances. **Such additives will adversely affect the performance of the material and void all warranties.**

B. Adhesive and Base Coat

1. Primus, or Genesis

- a. Open the bucket with a utility knife or lid-off.
- b. Due to shipping and storage, there may be some separation of materials. Prior to splitting the material and adding Portland cement, mix the material thoroughly. Use a “Twister” paddle or equivalent mixing blade powered by a 1/2 in (12.7 mm) drill, at 500 - 1200 rpm only. **NOTE: A minimum 7-amp drill works best for Portland cement-based materials. CAUTION: Do not over-mix or use other types of mixing blades as air entrapment and product damage may occur and result in workability and performance problems.**
- c. Pour 1/2 of the freshly mixed material [approximately 30 lbs (13.5 kg)] into a clean plastic container.
- d. Add 1/3 of a bag [approximately 30 lbs (13.5 kg)] of fresh, lump free Type I or II Portland cement. Either gray or white cement is acceptable. Add cement slowly and mix thoroughly. **Do not add large quantities of cement at one time.**
- e. Clean potable water may be added to the mixture to adjust the workability.
 - 1) Primus
 - a) Add as little water as possible, in small increments, and only after the Portland cement is thoroughly mixed. **Do not over water as this will degrade the performance and promote efflorescence.**
 - b) Mix the Primus material with Portland cement thoroughly; then wait five (5) minutes and mix again to break the initial set. Retempering with a small amount of water is permissible provided the mixture has not set. The mixture has a pot life similar to other Portland cement plaster material. Mix only as much material as can be conveniently used during a work period.
 - 2) Genesis
 - a) Add 1 qt (950 ml) of water prior to adding Portland cement. Additional water may be added to adjust workability.
 - b) Mix the Genesis material with Portland cement thoroughly; then wait ten to fifteen (10-15) minutes and mix again to break the initial set. Retempering with a small amount of water is permissible provided the mixture has not set. The mixture has a pot life similar to other Portland cement plaster material. Mix only as much material as can be conveniently used during a work period.

2. Primus DM

a. Pail Mixing

- 1) One 50 lb (22.7 kg) bag of material will produce approximately 5 gal (19 L) of Primus DM mixture. Add 1.5 gal (5.7 L) of clean potable water into a clean plastic container.
- 2) Add Primus DM slowly while mixing using a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 500 - 1200 rpm. **NOTE: A minimum 7-amp drill works best for Portland cement-based materials.**
- 3) Thoroughly mix until uniformly wetted, adjusting consistency with a small amount of water or Primus DM material.
- 4) Allow the mixture to set a minimum of five (5) minutes then retemper, adding a small amount of water if necessary. Material must be free of lumps before using.

b. Mortar Mixer

- 1) Add 1.5 gal (5.7 L) of clean potable water for each 50 lb (22.7 kg) bag of Primus DM into a clean mortar mixer.
- 2) Add the Primus DM while the mixer is running. Mix three to five (3 – 5) minutes, shut mixer off for five (5) minutes, then run mixer for another two to three (2 – 3) minutes to break the set and add a small amount of water if necessary, to adjust the workability. The pot life is one to three (1 - 3) hours depending on weather.

3. Genesis DM

a. Pail Mixing

- 1) One bag of Genesis DM will produce approximately 5 gal (19 L) of Genesis DM mixture. To a clean 5 gal (19 L) pail, add 6 - 7 qt (5.7 - 6.6 L) of clean potable water.
- 2) Add the Genesis DM slowly while constantly mixing with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 500 - 1200 rpm. **NOTE: A minimum 7 amp drill works best for Portland cement based materials.**
- 3) Thoroughly mix until uniformly wetted, adjusting consistency with a small amount of water or Genesis DM.
- 4) Let set for ten (10) minutes. Retemper, adding a small amount of water if necessary. Material must be free of lumps before using.

b. Mortar Mixer

- 1) Add 6 - 7 qt (5.7 - 6.6 L) of clean potable water for each 50 lb (22.7 kg) bag of Genesis DM into a clean mortar mixer.
- 2) Add the Genesis DM while the mixer is running. Mix three to five (3 – 5) minutes, shut the mixer off for ten (10) minutes, then run mixer for another two to three (2 – 3) minutes to break the set adding a small amount of water if necessary, to adjust workability. The pot life is one to one and one half (1 – 1 1/2) hours depending on weather.

4. Genesis DMS

a. Sprayer

- 1) Connect a source of clean, cool potable water to a spray machine suitable for EIFS applications.
- 2) Regulate the water flow rate to provide the desirable mixing consistency of material. Material may thicken up upon leaving the mixing cylinder at a given water flow and loosen up after pumping. **NOTE: The consistency for application must be determined after pumping.**

b. Pail Mixing

- 1) One bag of Genesis DMS will produce approximately 5 gal (19 L) of Genesis DMS mixture. To a clean 5 gal (19 L) pail, add 7 - 9 qt (6.6 - 8.5 L) of clean, cool potable water.
- 2) Add the Genesis DMS slowly while continuously mixing with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 500 - 1200 rpm. **NOTE: A minimum 7 amp drill works best for Portland cement based materials.**
- 3) Thoroughly mix until uniformly wetted, adjusting consistency with a small amount of water or Genesis DMS.
- 4) Let set for five (5) minutes. Retemper, adding a small amount of water if necessary. Material must be free of lumps before using.

c. Mortar Mixer

- 1) Add 7 - 9 qt (6.6 - 8.5 L) of clean, cool potable water for each 50 lb (22.7 kg) bag of Genesis
- 2) DMS into a clean mortar mixer.
- 3) Add the Genesis DMS while the mixer is running. Mix three to five (3 – 5) minutes, shut the mixer off for five (5) minutes, then run mixer for another two to three (2 – 3) minutes. Retemper, adding a small amount of water if necessary. Material must be free of lumps before using. The pot life is one to three (1 - 3) hours depending on weather.

5. Rapidry DM 35-50

- a. Pail Mixing
 - 1) One 50 lb (22.7 kg) bag of Rapidry DM 35-50 will produce approximately 5 gal (19 L) of Rapidry DM 35-50 mixture. To a clean Dryvit 5 gal (19 L) pail, add 6.5 qt (6.1 L) of clean potable water. As an alternative, on the inside of the Dryvit 5 gal (19 L) pail, draw a horizontal line which measures 4 7/16 in (113 mm) from the base of the pail and fill with water.
 - 2) Add the Rapidry DM 35-50 slowly while mixing with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 500 - 1200 rpm. **NOTE: A minimum 7 amp drill works best for Portland cement based materials.**
 - 3) Thoroughly mix until uniformly wetted, adjusting consistency with a small amount of water or Rapidry DM 35-50 material. Material must be free of lumps before using.

- b. Mortar Mixer
 - 1) Add 6.5 qt (6.1 L) of clean potable water for each 50 lb (22.7 kg) bag of Rapidry DM 35-50 into a clean mortar mixer.
 - 2) Add the Rapidry DM 35-50 while the mixer is running. Mix for three to five (3 - 5) minutes adjusting consistency with a small amount of water or Rapidry DM 35-50. Material must be free of lumps before using. The pot life is approximately 30 minutes depending on temperature.

6. Rapidry DM 50-75

- a. Pail Mixing
 - 1) One 45 lb (20.4 kg) bag of Rapidry DM 50-75 will produce approximately 5 gal (19 L) of Rapidry DM 50-75 mixture. To a clean Dryvit 5 gal (19 L) pail, add 5.5 qt (5.2 L) of clean potable water. As an alternative, on the inside of the Dryvit 5 gal (19 L) pail, draw a horizontal line which measures 3 13/16 in (97 mm) from the base of the pail and fill with water.
 - 2) Add the Rapidry DM 50-75 slowly while mixing with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 500 - 1200 rpm. **NOTE: A minimum 7 amp drill works best for Portland cement based materials.**
 - 3) Thoroughly mix until uniformly wetted, adjusting consistency with a small amount of water or Rapidry DM 50-75 material.
 - 4) Let set for five (5) minutes. Retemper, adding a small amount of water if necessary. Material must be free of lumps before using.

- b. Mortar Mixer
 - 1) Add 5.5 qt (5.2 L) of clean potable water for each 45 lb (20.4 kg) bag of Rapidry DM 50-75 into a clean mortar mixer.
 - 2) Add the Rapidry DM 50-75 while the mixer is running. Mix for three to five (3 – 5) minutes, shut the mixer off for 5 minutes, then run mixer for another two to three (2 – 3) minutes to break the set adjusting consistency with a small amount of water or Rapidry DM 50-75. The pot life is approximately 30 minutes depending on temperature.

C. Base Coat only

1. NCB
 - a. Open the bucket with a utility knife or lid-off.
 - b. Mix NCB to a smooth, homogeneous consistency with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm. A small amount of clean potable water may be added to adjust workability.
2. Dryflex
 - a. Open the bucket with a utility knife or lid-off.
 - b. Due to shipping and storage, there may be some separation of materials. Prior to splitting the material and adding Portland cement, mix the material thoroughly. Use a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 500 - 1200 rpm. **NOTE: A minimum 7 amp drill works best for Portland cement based materials. CAUTION: Do not over-mix or use other types of mixing blades as air entrapment and product damage may occur and result in workability and performance problems.**
 - c. Pour 1/2 of the freshly mixed material [approximately 22.5 lbs (10.21 kg)] into a clean plastic container.
 - d. Add 1/4 of a bag [approximately 22.5 lbs (10.21 kg)] of fresh, lump free Type I or II Portland cement. Either gray or white cement is acceptable. Add cement slowly and mix thoroughly. **Do not add large quantities of cement at one time.**
 - e. Clean potable water may be added to the mixture to adjust the workability. Add as little water as possible, in small increments, and only after the Portland cement is thoroughly mixed. **Do not over-water as this will degrade the performance and promote efflorescence. NOTE: It is advisable to mix the Dryflex material with Portland cement thoroughly; then wait five (5) minutes and mix again to break the initial set. Retempering with a small amount of water is permissible provided the mixture has not set. The mixture has a pot life similar to any Portland cement material. Mix only as much material as can be conveniently used during a work period.**

D. Primers

1. Color Prime™, Color Prime - W™, Primer with Sand™, and Weatherprime®
 - a. Mix material with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm to a homogeneous consistency.

E. Finish

1. Quarzputz®, Quarzputz® E, Sandblast®, Freestyle®, Sandpebble®, Sandpebble® E, Sandpebble® Fine, Sandpebble® Fine E, HDP Finishes, and Weatherlastic® Finishes.
 - a. Thoroughly mix the factory-prepared Dryvit finish with a “Twister” paddle or equivalent mixing blade powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm, until a uniform, homogeneous consistency is attained. A small amount of clean potable water may be added to adjust workability. Always add the same amount of water to each pail within a given lot to avoid color variation.

NOTE: If using a tint pack to color finish please refer to Tint Pack Mixing Instructions, [DS750](#).

F. Specialty Finishes

1. Ameristone
 - a. Mix Ameristone for approximately one (1) minute to ensure uniformity using a “Twister” paddle or equivalent mixing blade powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm, just prior to application. **DO NOT OVERMIX.**
 - b. Mix all pails for the same amount of time.
 - c. If clean potable water is added as described in [DS142](#) for various application techniques, the same amount must be added to each pail.
2. Stone Mist®
 - a. Mix Stone Mist for one (1) minute to ensure uniformity using a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, 450 - 500 rpm, just prior to application. **DO NOT OVERMIX.**
3. TerraNeo
 - a. Mix TerraNeo for one (1) minute just prior to application, to ensure uniformity using a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm. **DO NOT OVERMIX.**
4. Limestone
 - a. Mix Limestone with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm until a uniform workable consistency is attained.

NOTE: If using a tint pack to color finish please refer to Tint Pack Mixing Instructions, [DS750](#).

5. Custom Brick Finishes
 - a. For Custom Brick finishes, refer to Dryvit Custom Brick Application Instructions, [DS154](#), for complete mixing instructions.

NOTE: If using a tint pack to color finish please refer to Tint Pack Mixing Instructions, [DS750](#).

6. Reflectit™
 - a. Refer to Reflectit Data Sheet [DS705](#) and Application Instructions [DS124](#) for complete instructions.
7. Finesse™
 - b. Mix Finesse with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm until a uniform workable consistency is attained.

G. Coatings and Sealers

1. Demandit Smooth and Demandit Sanded, HDP Water-Repellent Coating, Weathercoat™, and Weatherlastic® Smooth
 - a. Mix material with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm to a homogeneous consistency.
2. Tuscan Glaze™
 - a. Mix Tuscan Glaze with a “Twister” paddle or equivalent mixing blade, powered by a 1/2 in (12.7 mm) drill, at 450 - 500 rpm to a homogeneous consistency, immediately prior to application. As an alternate, boxing of buckets is acceptable. **Continuously** agitate throughout application to ensure color consistency.
3. SealClear™
 - a. Stir material thoroughly before using and stir often during the application process. As an alternate, boxing of buckets are acceptable.

V. Accessories**A. Installation of the Dryvit Drainage Strip or Drainage Track**

1. Dryvit Drainage Strip (Optional - not required when Drainage Track is specified)
 - a. Dryvit Drainage Strip shall be used at the base of the walls and shall be installed at the heads of all penetrations and at expansion/control joints as shown in Outsulation Plus MD Securock ExoAir 430 Installation Details, DS110.
 - b. Using a chalk line, strike a level line at the base of the wall, head of opening or expansion/control joint to use as

- reference in applying the Dryvit Drainage Strip.
- c. Install the Dryvit Drainage Strip by applying dabs of Dryvit's AP Adhesive at 12 in (305 mm) on center on the dry Backstop NT air/water-resistive barrier.
 - d. Position the Dryvit Drainage Strip on the chalk line and press firmly against the substrate to ensure firm contact between the adhesive and the wall surface. Staples or other fasteners may be used if necessary, to maintain position until the insulation board is installed.
2. Dryvit Drainage Track (Optional - not required when Drainage Strip is specified)
- a. Dryvit Drainage track usage is limited to the base of the system at finished grade level.
 - b. Using a chalk line, strike a level line at the base of the wall that coincides with either the top or bottom of the nailing flange.
 - c. Install the Dryvit Drainage Track by applying a continuous horizontal bead of Dryvit's AP Adhesive on the wall side of the track's nailing flange.
 - d. Position the track on the chalk line and press firmly against the substrate to ensure firm and continuous contact between the adhesive and the wall surface. **NOTE: Do not overlap tracks, they shall be butted tightly.**
 - e. Secure the track to the wall using corrosion resistant fasteners attached into the underlying framing members. **NOTE: It is recommended that the surface of the Drainage Track be lightly sanded to improve adhesion of Dymonic 100.**
 - f. Install Dymonic 100 at 40 mils and minimum of 1" width on the flange of the Drainage Track, as well as the adjacent wall a minimum of 1" in order to ensure water-tightness at the flange/wall interface.

VI. Insulation Board Installation

A. System Terminations

1. Attach Detail Mesh around the perimeter of all openings, penetrations, and other system terminations by stapling or applying a ribbon of adhesive mixture on the substrate and embedding the Detail Mesh into the wet mixture. **NOTE: Back wrapping is not required at the base of the wall when using the Dryvit Drainage Track.**
2. Position the Detail Mesh so that a minimum of 2 1/2 in (64 mm) will extend onto the face of the insulation board. Keep the mesh, which is not embedded, clean.

B. Inspection of the Insulation Board

1. Prior to installing the insulation board, it shall be checked to ensure that:
 - a. It is shipped in a clear polyethylene bag bearing the Dryvit name. In addition, the lot number of the insulation board shall be visible on the outside of the bag. Insulation board shall be obtained from Dryvit Systems, Inc. or its authorized distributors, and made exclusively by manufacturers listed by Dryvit Systems, Inc.
 - b. One edge of each board shall bear the word Dryvit, the plant identification number of the block molder, the appropriate model code report number, and the name of the third-party quality control agency with corresponding number. In addition, one board in each bag shall bear the same markings on the face.
 - c. The insulation board measures a maximum of 2 ft (0.6 m) by 4 ft (1.2 m) with a minimum thickness of 1 in (25 mm). 3/4 in (19 mm) thick EPS may be used in small localized areas.
 - d. The insulation board meets the following tolerances:
 - 1) Length: Plus or minus 1/16 in (1.6 mm).
 - 2) Width: Plus or minus 1/16 in (1.6 mm).
 - 3) Thickness: Plus or minus 1/16 in (1.6 mm). For boards greater than 1 in (25 mm), plus 1/16 in (1.6 mm) minus 0 for boards less than or equal to 1 in (25 mm).
 - 4) Squareness: Shall not deviate from square by more than 1/32 in (0.8 mm) in 12 in (305 mm) of total length or width.
 - 5) Edge Trueness: Shall not deviate more than 1/32 in (0.8 mm) in 12 in (305 mm).
 - 6) Face Flatness: Shall not exhibit any bowing of more than 1/32 in (0.8 mm) in the length.

WARNING: Any insulation board not meeting the above requirements should be rejected and not installed.

C. Methods of Applying the Dryvit Adhesive

1. Mix the Dryvit adhesive in accordance with Section IV.B.
 - a) Cementitious Adhesive
 - 1) Notched Trowel Method
 - a) With a notched trowel, 3/8 in (9.5 mm) wide, 1/2 in (12.7 mm) deep notches spaced 1 1/2 in (38 mm) apart, apply the adhesive mixture to the backside of the insulation board. Holding the trowel at a 45° angle, apply firm pressure to the insulation board in order to scrape the excess adhesive from between the adhesive beads. **NOTE: Apply the adhesive so that the ribbons run vertically when the insulation board is placed on the wall.**
 - b) Non-cementitious Adhesive

- 1) AP Adhesive - recommended for use in limited areas only, such as metal surfaces, including steel lintels, metal flashing, etc.
 - a) Cut the smallest opening possible in spout (just large enough so adhesive can flow easily when gunned). It is intended to be applied in thin beads [approximately 3/8 in (9.5 mm)].

D. Insulation Board Installation

1. Prior to installing the insulation board, ensure that the surface of the Backstop NT is uniform in thickness, continuous, clean, dry and free of any foreign materials that will affect adhesion of the insulation board.
2. Begin installation of the insulation board from a permanent or temporary support.
3. Use a 12 in (305 mm) high by 4 ft (1.2 m) long piece of insulation board as a starter row at the base of the wall. This will help minimize the insulation board joints from coinciding with the sheathing joints. Offset the insulation board joints from the sheathing joints a minimum of 8 in (203 mm) in both vertical and horizontal directions. Install the insulation boards with their long edges oriented horizontally.
4. Apply the adhesive to the insulation board as described in Section VI.C.
 - a. When using Primus, Genesis, Primus DM, Genesis DM, or Genesis DMS as the adhesive, butter the edge of the insulation board at all terminations in order to properly embed the previously installed Detail Mesh used for back wrapping. Back wrapping is necessary to provide appropriate fire performance and to create the proper surface for application of sealant. **NOTE: The application of the adhesive mixture to the edge of the insulation board is only done when wrapping with the Detail Mesh.**
 - b. Genesis DMS may be applied to the substrate surface in a vertical notched trowel pattern as described in Section VIII.D.1.a.1). Refer to Genesis DMS Data Sheet, [DS471](#).
5. Position the insulation board horizontally on the substrate. Press the board gently to the substrate and slide it into position. Apply firm pressure over the entire surface of the insulation board to ensure uniform contact and high initial grab.
6. Using a margin trowel, clean the insulation board edges of any adhesive mixture. Ensure that the insulation board joints are butted tightly, and faces are level and flush. **CAUTION: Do not allow adhesive to remain in board joints.**
7. Install subsequent rows of insulation board in a running bond pattern (vertical joints staggered).
8. With factory edges exposed, stagger vertical joints at inside and outside corners. Make sure the corners are straight and plumb.
9. To ensure an overall flat surface, tamp the insulation board surface with a board that overlaps two to four rows of insulation.
10. If for any reason the insulation board joints are not butted tightly, slivers of insulation board must be installed to fill any gaps. ALL GAPS GREATER THAN 1/16 in (1.6 mm) MUST BE SLIVERED. **Tip: In order to create a tight fit, it is recommended that a wider joint be cut with a hot groover or similar tool to allow for a more precise fitting sliver. Do not install adhesive on sliver edges.**
11. Windows, Doors, Mechanical Equipment and all Wall Penetrations
 - a. Option 1
 - 1) At openings, align the insulation boards so that the edges (vertical and horizontal joints) do not coincide with the corners of the opening (refer to Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS110).
 - 2) Attach Detail Mesh around the perimeter of the opening as described in Section VIII.B.
 - 3) Hold the insulation board back from the window/door frame or mechanical equipment to allow for differential movement, proper system edge preparation, and sealant installation as shown in the Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS110
 - b. Option 2 - Installation of J Track at heads of all openings [length not to exceed 10 ft (0.3 m)]. **Tip: It is recommended to use a 3/4 in (19 mm) casing bead as manufactured by Plastic Components – item numbers 1075 or CB 75-25.**
 - 1) Because insulation board joints cannot align with corners of openings, first cut L-shaped pieces of insulation board for the corners of the opening. Then measure and cut the insulation board to the proper length to fit between the corner pieces over the opening. Insulation board shall be notched to receive J track as shown in the Dryvit Outsulation Plus MD Securock ExoAir 430 System Installation Details, DS110
 - 2) Mix the adhesive material as described in Section III.C
 - 3) Cut the Detail Mesh to a working length.
 - 4) Apply a ribbon of adhesive mixture on the air/water-resistive barrier/substrate and position the Detail Mesh in the wet mixture allowing for a 2 1/2 in (64 mm) minimum overlap onto the face of the insulation boards. Keep the mesh, which is not embedded, clean.
 - 5) Apply the adhesive mixture to the backside of the insulation board in accordance with Section VIII.D and position on the wall. Press gently and slide into position applying uniform pressure to ensure full contact and high initial grab.
 - 6) Using a margin trowel, remove any adhesive from the edges of the insulation boards that will abut other insulation boards. **CAUTION: Do not allow adhesive to remain in board joints. Ensure that the**

insulation board joints are abutted tightly, and are level and flush.

- 7) Measure and cut J Track so that it extends 6 in (152 mm) beyond the edges of the opening as shown in Outsulation Plus MD Securock ExoAir 430 Installation Details, DS110.
- 8) Install the J Track by applying a continuous bead of Dryvit AP Adhesive on the wall side of the vertical nailing flange of the track and position over the notched insulation board. Press firmly against the substrate to ensure firm and continuous contact between the adhesive and the wall surface.
- 9) Secure the track to the wall using corrosion resistant fasteners attached into the underlying framing members. **NOTE: It is recommended that the surface of the track be lightly sanded to improve adhesion.**
- 10) Install the AquaFlash System, Backstop NT and Grid Tape or Flashing Tape on the flange of the J Track and the adjacent wall in order to ensure water-tightness at the flange/wall interface. See Section IV for proper application.
- 11) Expansion Joints
 - a) Attach Detail Mesh around the perimeter of the opening as described in Section VIII.B.
 - b) When abutting dissimilar materials, leave a minimum 3/4 in (19 mm) separation between the insulation board and abutting material to allow for differential movement, proper system edge preparation and sealant installation.
 - c) When the Outsulation Plus MD Securock ExoAir 430 System is installed at a substrate transition, leave a minimum 3/4 in (19 mm) separation between the insulation boards to allow for differential movement, proper system edge preparation and sealant installation.
- 12) **IMPORTANT:** Once the insulation board and Detail Mesh are in place, wait a minimum of 24 hours prior to working on the surface of the insulation board to prevent any movement which may weaken the bond of the adhesive mixture to the substrate. **NOTE: Be sure to protect the installed insulation board from rain, freezing or inclement weather for a period of 24 hours.**
- 13) Any irregularities in the insulation board surface must be sanded flat. Sanding is accomplished with a light circular motion. **The entire wall area must be sanded.** Use grade 20 grit sandpaper or coarser, in conjunction with hand, electric or air rasps. **NOTE: Do not sand parallel to the insulation board joints. CAUTION: The contractor shall take precautions to contain EPS dust from rasping operation in accordance with contract documents. Use of vacuum rasps are recommended to minimize introduction of EPS dust into the environment.**
- 14) Remove all loose pieces of insulation board and dust from the sanding operation using a brush, broom, or compressed air. Use OSHA required masks to protect against inhaling EPS dust.
- 15) All Detail Mesh that was previously installed for back wrapping the insulation board shall be embedded in the base material mixture at this time.
 - a. With a stainless-steel trowel, apply any of Dryvit's cementitious base material mixture to the face (and edge if not previously coated) of the insulation board and embed the Detail Mesh in the wet mixture. **NOTE: It is not recommended to use NCB to embed reinforcing mesh at EPS edges that will receive sealant.**
- 16) Aesthetic Reveals
 - a. To install an aesthetic reveal, snap a straight line using a chalk line to mark the position.
 - b. Position a straight edge such as a steel stud or track against the insulation board in the proper location to guide the appropriate cutting tool (router, hot knife, or hot groover).
CAUTION: The thickness of the insulation board in the bottom of the reveal must not be less than 3/4 in (19 mm).
 - c. Use Detail Mesh to ensure continuity of reinforcing mesh through aesthetic reveals continuing a minimum of 2 1/2 in (64mm) on each side of the reveal.
 - d. Apply the base material mixture in the reveal and on the adjacent insulation board surfaces.
 - e. Embed the Detail Mesh into base coat mixture on one side of the reveal only.
 - f. Use a sled or special tool configured to the profile of the reveal. Embed the Detail Mesh into the base coat mixture through the reveal being careful not to cut the mesh.
 - g. Embed the Detail Mesh into the base coat mixture on the other side of the reveal. Ensure that the mesh is fully embedded and that all excess material is removed from the reveal.
 - h. Using a damp brush, smooth out any irregularities in the base coat.
CAUTION: If the mesh is cut in the reveal, a new piece of mesh must be installed over the cut.
- 17) Where Corner Mesh is specified for additional impact resistance at outside corners, the Corner Mesh shall be embedded in the base coat mixture and allowed to set prior to installing the overall reinforced base coat over the face of the wall.
- 18) Corners of all openings such as windows, doors, mechanical equipment and all penetrations shall be reinforced with Detail Mesh placed diagonally to the opening as illustrated in Figure 10.

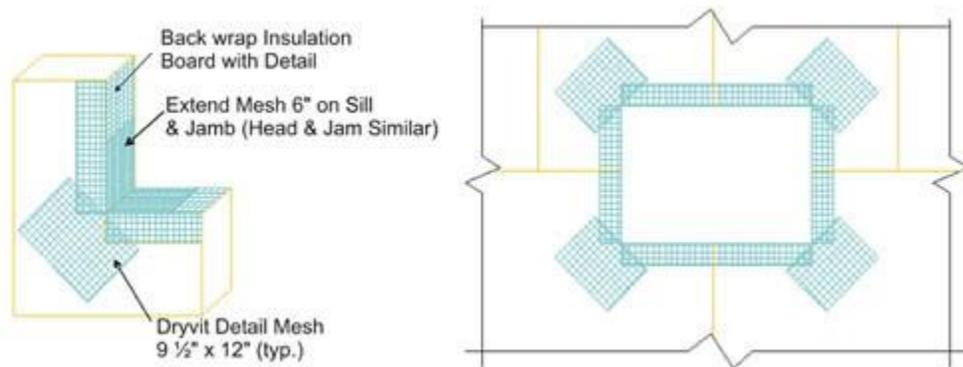


Figure 10: Rough Openings

VII. Installation of Reinforcing Mesh and Base Coat

A. General

1. **Do not apply the Dryvit materials in the rain. The insulation board must be dry prior to applying the base coat material.**
2. Prior to installing the reinforced base coat, inspect the surface of the insulation board for:
 - a. Flatness: Use a minimum 8 ft (2.4 m) straight edge. Sand any high areas and out-of-plane board joints flat, as described in Section VI.D.13 and 14. **CAUTION: Do not build up low areas with base coat mixture to form a flat surface.**
 - b. Damage and foreign materials: correct deficiencies as necessary.
 - c. Surface degradation due to weathering or UV, visible as discoloration. Sand affected areas to remove deterioration while maintaining the flatness of the surface.

B. Mix the base coat material as described in Section IV.B and C.

C. Prior to installing the reinforcing mesh, it should be inspected to ensure that it has been furnished by Dryvit Systems, Inc.

1. Dryvit reinforcing mesh is available in the following widths and lengths:
 - a. Standard - 48 in x 150 ft (1.2 m x 45.7 m); 72 in x 150 ft (1.8 m x 45.7 m)
 - b. Standard Plus, and Intermediate - 48 in x 150 ft (1.2 m x 45.7 m)
 - c. Panzer 15 - 48 in x 75 ft (1.2 m x 22.9 m)
 - d. Panzer 20 - 48 in x 75 ft (1.2 m x 22.9 m)
 - e. Corner - 9 1/4 in x 150 ft (235 mm x 45.7 m)
 - f. Detail - 9 1/2 in x 150 ft (241 mm x 45.7 m)
2. It shall be colored blue for product identification bearing the Dryvit logo.

D. Installation of Dryflex base coat in high exposure areas such as sloped surfaces, windowsills, etc.

1. Using a stainless-steel trowel, apply the Dryflex mixture on the surface of the insulation board in a uniform thickness of approximately 3/32 in (2.4 mm). Apply the Dryflex continuously over the sloped surface and continue minimum 6 in (152 mm) onto the vertical areas.
2. Immediately place the reinforcing mesh against the wet Dryflex mixture. With the curve of the mesh against the wall, trowel from the center to the edges, avoiding wrinkles, until the mesh is fully covered and not visible. The overall minimum base coat thickness shall be sufficient to **fully embed** the reinforcing mesh. The recommended method is to apply the base coat in two (2) passes.

NOTE: The reinforcing mesh can be continued across the transition from Dryflex base coat to standard base coat.

3. Allow the Dryflex to cure a minimum of 24 hours or until dry.

E. Base Coat Application

1. Standard Base Coat (single layer of Standard, Standard Plus or Intermediate Reinforcing Mesh)
 - a. The base coat shall be applied such that the resulting overall minimum base coat thickness is sufficient to **fully embed** the reinforcing mesh. The recommended method is to apply the base coat in two (2) passes.
 - b. Double pass method (recommended)
 - 1) Using a stainless-steel trowel, apply the base coat mixture on the entire surface of the insulation board to an area slightly larger than the width and length of a piece of reinforcing mesh, in a uniform thickness of 1/16 in

- (1.6 mm). **NOTE: The reinforcing mesh may be installed either vertically or horizontally.**
- 2) Immediately place the reinforcing mesh against the wet base coat mixture. With the curve of the mesh against the wall, trowel from the center to the edges avoiding wrinkles, until the mesh is fully embedded and not visible. Trowel smooth to a uniform thickness slightly more than the thickness of the reinforcing mesh. **NOTE: The reinforcing mesh shall be continuous at corners and mesh edges lapped not less than 2 1/2 in (64 mm). Do not lap the reinforcing mesh within 8 in (203 mm) of a corner. Tip: Corners and edges normally require light strokes with a small damp brush to smooth out irregularities.**
 - 3) Allow the base coat mixture to take up until firm to the touch. Trowel a second tight coat of the base coat mixture over the first coat to **fully cover** the reinforcing mesh - Figure 11. The result should be such that the reinforcing mesh is approximately centered within the base coat thickness. Do not allow the first pass to completely dry prior to the second pass application or an excessive amount of base coat mixture will be necessary to fully coat the wall surface.

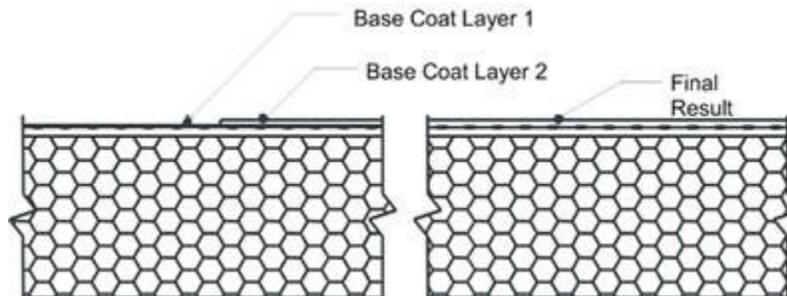


Figure 11: Reinforcing Mesh

- c. Single pass method (optional)
 - 1) Using a stainless-steel trowel, apply the base coat mixture on the entire surface of the insulation board to an area slightly larger than the width and length of a piece of reinforcing mesh, in a uniform thickness of 1/16 in (1.6 mm). **NOTE: The reinforcing mesh may be installed either vertically or horizontally.**
 - 2) Immediately place the reinforcing mesh against the wet base coat mixture. With the curve of the mesh against the wall, trowel from the center to the edges avoiding wrinkles, until the mesh is fully embedded and not visible. Trowel smooth to a uniform thickness slightly more than the thickness of the reinforcing mesh. **NOTE: The reinforcing mesh shall be continuous at corners and mesh edges lapped not less than 2 1/2 in (64 mm). Do not lap the reinforcing mesh within 8 in (203 mm) of a corner. Tip: Corners and edges normally require light strokes with a small damp brush to smooth out irregularities.**
- d. Protect completed work from water penetration and runoff.
- e. Allow the base coat to cure a minimum of 24 hours before proceeding with application of finish coat. Cool, damp conditions may require longer drying times. Do not apply finish to a wet or damp base coat.
2. Panzer Mesh Base Coat (Panzer 15 or Panzer 20 used in conjunction with Standard or Standard Plus Reinforcing Mesh). **Panzer Mesh is recommended for use at all ground floor locations and at high traffic areas. Refer to contract documents.**
 - a. Using a stainless-steel trowel, apply the base coat mixture on the entire surface of the insulation board to an area slightly larger than the width and length of a piece of reinforcing mesh, in a uniform thickness of approximately 1/8 in (3.2 mm).
 - b. Immediately place the reinforcing mesh against the wet base coat mixture. With the curve of the mesh against the wall, trowel from the center to the edges avoiding wrinkles until the mesh is fully covered and not visible.
 - c. Continue in the same manner until the entire area requiring Panzer Mesh is covered. **CAUTION: Do not lap the Panzer Mesh. Adjacent pieces are to be tightly butted.**
 - d. Protect completed work from water penetration and runoff.

- e. Allow the Panzer base coat to cure a minimum of 24 hours prior to applying Dryvit's Standard or Standard Plus Reinforcing Mesh.
- f. Apply the second layer of reinforcing mesh in accordance with Section VII.E.1.c. Offset the edges of the Standard or Standard Plus Reinforcing Mesh from the edges of the Panzer Mesh a minimum of 8 in (203 mm). **Tip: If Panzer Mesh is installed horizontally, we recommend the Standard or Standard Plus Mesh be installed vertically and vice versa.**

VIII. Sealant Joint Preparation

- A. All Outsulation Plus MD Securock ExoAir 430 base coat surfaces which will be in contact with sealant must be coated with either Color Prime or Demandit.
 1. Mix Color Prime or Demandit in accordance with Section IV.D and G respectively.
 2. Using a small brush, apply Color Prime or Demandit to the base coat surface that is to be in contact with the sealant and extending to the joint edge.
 3. Allow the Color Prime or Demandit to dry a minimum of 48 hours prior to applying the sealant primer and sealant. Cool damp weather may require longer drying times.
 4. Refer to sealant manufacturer's installation instructions for the proper application of the sealant.

IX. Dryvit Primers

- A. Prior to applying the Dryvit primers, the base coat shall have cured a minimum of 24 hours and shall be dry and hard. Cure time may be longer depending on environmental conditions. **NOTE: Refer to Product Data Sheets when applying over other materials.**
- B. Inspect the base coat for any irregularities such as trowel marks, board lines, rough corners and edges, improper reinforcing mesh embedment as well as efflorescence. **NOTE: Correct all irregularities and remove all efflorescence prior to applying the Dryvit primer.**
- C. Mix Dryvit Primers to a smooth homogeneous consistency in accordance with Section IV.D.
- D. Color Prime and Weatherprime
 1. Apply with a brush, roller, or airless spray equipment. Refer to Color Prime or Weatherprime data sheets, [DS410](#) or [DS436](#), respectively for complete instructions.
- E. Color Prime W
 1. Application with airless spray equipment is recommended. Refer to Color Prime W data sheet, [DS474](#) for complete instructions.
- F. Primer with Sand
 1. Application with a roller is recommended. Refer to Primer with Sand data sheet, [DS477](#) for complete instructions.

X. Dryvit Finish

- A. Prior to applying the Dryvit finish, the base coat shall have cured a minimum of 24 hours and shall be dry and hard. Cure time may be longer depending on environmental conditions.
- B. Inspect the base coat for any irregularities such as trowel marks, board lines, rough corners and edges, improper reinforcing mesh embedment as well as efflorescence. **NOTE: Correct all irregularities and remove all efflorescence prior to applying the Dryvit finish.**
- C. General
 1. Important: All Dryvit finishes must be installed continuously to a natural break such as corners, expansion joints, or tapeline. Mechanics must maintain a wet edge. Whenever possible, order enough material in a single batch to complete the project to avoid potential color variations from batch to batch. Sufficient personnel and scaffolding must be provided to continuously finish a distinct wall area or otherwise cold joints will result. Scaffolding must be spaced a minimum of 18 in (458 mm) from the wall to prevent staging lines. On hot windy days, the wall may be fogged with clean potable water to cool the wall and facilitate finish installation. As with other plaster materials, installation work should precede the sun. For example, work the shady or cool side of the building. If this is not possible, scaffold should be shaded with a tarp or nursery shade cloth. Do not introduce water to the finish material once it is installed on the wall. This will cause color variations. Each mechanic must use the same tool and hand motion and match the texture of the mechanics above, below and on each side. Use finish from a single batch number whenever possible.
 2. Do not apply Dryvit materials in the rain. The base coat must be dry prior to applying the Dryvit finish or coatings.
 3. Do not apply textured Dryvit finish material in sealant joints. Refer to Section X for proper sealant joint preparation.
- D. Application

1. Mix the Dryvit finishes as described in Section IV.
2. Quarzputz, Quarzputz E, Quarzputz HDP, Sandblast, Sandblast HDP, Weatherlastic Quarzputz
 - a. Using a clean stainless-steel trowel, apply a coat of the Dryvit finish in a uniform thickness on the dry base coat. **NOTE: The Dryvit Quarzputz finish shall be applied and leveled to a uniform thickness no greater than the largest aggregate. The Sandblast finish is applied and leveled to a thickness of approximately 1 1/2 times the largest aggregate.**
 - b. The texture is achieved by uniform hand motion and/or tool that produces the texture to match the approved sample. Each mechanic must use the same tool and hand motion to ensure that the texture achieved is uniform over the entire wall area.
3. Sandpebble, Sandpebble E, Sandpebble Fine, Sandpebble Fine E, Weatherlastic Sandpebble, Weatherlastic Sandpebble, Sandpebble HDP, and Weatherlastic Sandpebble Fine.
 - a. Using a clean, stainless steel trowel, apply an even coat of the finish to a thickness slightly thicker than the largest aggregate size.
 - b. Pull across using a horizontal trowel motion to develop a uniform thickness no greater than the largest aggregate of the material.
 - c. The texture is achieved by a uniform hand floating motion with a clean stainless-steel trowel; wipe the trowel and wet it lightly. Apply light pressure in a circular motion.
4. Freestyle
 - a. Using a clean, stainless steel trowel, apply the Freestyle finish on the base coat in a thickness not greater than 1/16 in (1.6 mm). The texture is either pulled out of this base to a thickness of no greater than 1/4 in (6.4 mm) or the texture may be achieved by adding more Freestyle finish to the base coat using the same texturing motions that are used with other plaster materials, such as, a skip trowel finish. Numerous other aesthetically pleasing textures can be created to match approved samples. **NOTE: The maximum thickness of Freestyle finish texture shall not exceed 1/4 in (6.4 mm).**
5. Weatherlastic Adobe
 - a. Using a brush, roller or airless spray equipment, apply a coat of color coordinated Color Prime (see Section III.E for mixing instructions) at the recommended coverage to the cured base coat and allow to dry.
 - b. Using a stainless-steel trowel, apply a coat of Weatherlastic Adobe approximately 1/16 in (1.6 mm) to the wall surface. Allow the Weatherlastic Adobe finish to take-up.
 - c. Using a stainless-steel trowel, apply a second coat of Weatherlastic Adobe to obtain the desired texture. **Tip: An atomizing spray bottle may be used to apply a mist of water to the surface in the finishing step.**
6. Specialty Finishes: Ameristone, [DS142](#); Stone Mist, [DS420](#); TerraNeo, [DS481](#); Limestone, [DS472](#); Limestone HDP, [DS811](#); Custom Brick, [DS154](#); Reflectit, [DS124](#); Finesse, [DS859](#); Finesse HDP, [DS811](#); NewBrick, [DS871](#).
 - a. Mix the Specialty finishes as described in Section III.G
 - b. Apply the specialty finishes in accordance with the products' Application Instructions or Data Sheets listed above.

XI. Coatings and Sealers

- A. Mix coatings and sealers to a smooth homogeneous consistency in accordance with Section IV.G.
- B. Demandit Smooth and Weathercoat
 1. Apply with a brush, roller, or airless spray equipment.
 2. When applying with a roller, a maximum 3/4 in (19 mm) nap, polyester or polyester blend with nylon or lambswool, with beveled ends and a phenolic core is recommended. An 18 in (458 mm) wide roller frame with a 2 1/4 in (57 mm) inside diameter is also recommended.
 3. Apply in one continuous coat, maintaining a wet edge as the application proceeds to a natural break. The roller cover must be kept fully loaded as the application proceeds. **CAUTION: Do not stretch out the application by rolling with a dry roller. The last leveling roller strokes should always be in the same direction. Do not cut in around openings prior to overall application, but rather, do the cut-in work as the application proceeds.**
 4. Do not allow Demandit Smooth or Weathercoat to dry on roller covers. Roller covers with dried coating do not apply the coating evenly.
 5. Changing color requires the application of two coats.
- C. Demandit Sanded
 1. Apply the Demandit Sanded with a brush or 1/2 in - 5/8 in (12.7 mm – 15.9 mm) nap roller.
 2. Roll or brush in multiple directions and then lightly finish in one direction to ensure that no lap marks remain.
 3. A second coat may be required for heavy textured surfaces or when there is a contrast of colors. Apply the second coat as described in paragraph XI.B.2 and 3 above. **CAUTION: Do not attempt to apply Demandit Sanded in one heavy coat. Two coats are recommended. Apply the second coat only after the first coat is completely dry.**

Important: Texture changes will exist after Demandit Sanded is applied over existing Dryvit finishes. The degree of change is a function of the thickness and the number of coats of Demandit Sanded.

D. Weatherlastic Smooth

1. Apply a minimum 11 mils dry film thickness (22 mils wet film thickness). This is achieved by applying the Weatherlastic Smooth in two (2) 11 mil wet coats. Under average drying conditions, 70 °F (21 °C), 50% RH, two (2) hours drying time between coats should be adequate.
2. For cutting-in and trim, a nylon bristle brush is recommended.
3. Roller Application
 - a. A minimum 10 in (254 mm) roller cover with a 1 1/4 in - 1 1/2 in (32 mm - 38 mm) nap is recommended.
 - b. Completely saturate the roller cover and keep the roller loaded with coating to avoid foaming. Do not dry-roll or over-roll as this will cause excessive entrapment of air within the coating.
 - c. A second coat is applied in a similar manner after the first coat has adequately dried.
4. Spray Application
 - a. Application by airless spray equipment or mastic pump and gun allows application of coating at total required application rate with a minimum of stipple or thickness variations.
 - b. Equipment should have the capacity to pump 2 gal (7.6 L) of coating per minute.
 - c. Material hose should be minimum 1/2 in (12.7 mm) inside diameter for spraying coating through more than a 50 ft (15 m) length. Minimum bursting of 800 lbs (3600 N) is recommended.
Tip: Orifice sizes of 0.021 in - 0.032 in (0.53 mm - 0.81 mm) will be required depending on equipment used.
 - d. Cross apply coating holding spray gun perpendicular to, and approximately 3 ft (1 m) from the wall surface. Avoid excessive material build-up by holding spray gun away from the wall when pulling the trigger, then bringing gun across area to be coated. Maintain a wet edge and avoid starting and stopping in the middle of the wall. Do not attempt to overreach spray pattern as this may result in appearance of irregular spray pattern. Place scaffolding and equipment to facilitate quick application without numerous interruptions.
 - e. A 10 % loss from overspray should be anticipated.
 - f. Backrolling sprayed areas is recommended to control pinholing on spray applications over porous surfaces.

E. Tuscan Glaze

1. Mix Tuscan Glaze to a smooth homogenous consistency in accordance with Section IV.G.2. Continuously agitate throughout application to ensure color consistency.
2. Tuscan Glaze is best applied on large areas using a Hudson-type sprayer or airless spray equipment. For smaller areas, Tuscan Glaze is best applied with a paint pad or, depending on the desired results, a roller, paint brush or sponge. Job site mock-ups are required and should represent the actual job site application techniques.
3. Apply Tuscan Glaze evenly in light strokes. If sagging or running occurs, use a sponge or paint pad to correct immediately. Watch for brush or roller lines. If brush or roller lines appear, use a damp sponge, a paint pad or rag to make them disappear before the Tuscan Glaze starts to dry. The wall may be blotted with a camelback sponge to achieve the desired mottled appearance. Check walls throughout the application to ensure that uniformity and the desired appearance is achieved.

F. SealClear

1. Mix SealClear to a smooth, homogeneous consistency in accordance with Section IV.G.3.
2. For application instructions, refer to the SealClear Data Sheet, [DS426](#).

XII. Maintenance and Repair

A. Outsulation Plus MD

1. Refer to DryvitCARE EIFS Repair Procedures, DS498.

B. Securock ExoAir 430

1. It is imperative to air barrier performance that the air barrier membrane applied to the board face not be compromised in any way. Compromises to the air barrier membrane can result from scratches, knife cuts, holes made in the panel or fastener penetration and withdrawal. If the air barrier membrane is compromised, the following procedures shall be followed to re-establish the air barrier membrane. If damage to either side of the panel compromises its structural integrity, the entire panel will need to be replaced.
2. Surface Damage
 - a. Scratched or knife cuts to the membrane on the face side of the panel shall be repaired with a 40 mill application of Dymonic 100 (green) sealant.
 - b. Apply a 40 wet mill of Dymonic 100 (green) sealant over the damaged area extending 2" on all sides.
3. Openings and Gaps
 - a. Openings or Gaps Smaller than 8"
 - 1) For openings or gaps smaller than 8" in any direction, the panel shall be repaired as follows. From

another piece of Securock ExoAir 430 Panel, cut a section larger than the damaged area to be used as the repair piece. Place the cut piece over the damaged area ensuring that it covers all damage. Trace around the repair piece and cut, using a knife or hand saw, along the marking creating a hole in the damaged panel. When cutting the panel ensure that the gaps between repair piece and the damaged board shall not exceed 1/8".

- 2) Use sections of drywall steel track to support the repair piece and fasten using screws. Ensure all surfaces are clean, dry and free of dust or debris.
 - 3) Caulk all gaps with Dymonic 100 (green) sealant, completely filling the gaps and tool smooth.
 - 4) Apply Dymonic 100 (green) sealant at 40 mil thickness over the entire surface of the repair patch extending 2" beyond the gaps on all sides.
- b. Openings or Gaps Larger than 8"
- 1) For openings or gaps larger than 8" in any direction, the panel shall be repaired as follows.
 - 2) Cut the panel back to the framing on parallel sides. Cut a piece of Securock ExoAir 430 Panel to tightly fit into the opening and secure to framing with screws. Gaps between boards shall not exceed 1/8". Ensure all surfaces are clean, dry and free of dust or debris.
 - 3) Caulk all gaps with Dymonic 100 (green) sealant, completely filling the gaps and tool smooth.
 - 4) Apply Dymonic 100 (green) sealant at 40 mil thickness over the entire surface of the repair patch and extending 2" beyond the gaps on all sides.

DISCLAIMER

Information contained in this document conforms to standard detail and product recommendations for the installation of the Dryvit Outsulation Plus MD Securock ExoAir 430 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 workmanship of any project. To ensure that you are using the latest, most complete information, contact Dryvit Systems, Inc., at:

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