FEDDERLITE® M PANEL SYSTEM

Prefabricated, Lightweight, Mechanically Attached Outsulation®
Exterior Wall Panels with Integrated Reinforcing Channels

Dryvit

DS957

Fedderlite M Panel System Specifications

MODULITE™
Prefabricated Solutions

INTRODUCTION

This document contains the Manufacturer's Standard Specification for the Fedderlite M Panel System. These specifications follow the Construction Specification Institute's MasterFormat.

TAILORING THE DRYVIT MANUFACTURER'S SPECIFICATIONS TO YOUR PROJECT

These specifications cover all the common ways of using the Fedderlite M Panel System. Most projects use only a few of the possible combinations of these materials and methods. To tailor the specifications to your project, simply use those sections which apply. Also, it may be prudent to place certain parts of the Dryvit Fedderlite M Panel Specification in other parts of the project's total specification, such as sealants and framing. The project design professionals are responsible for ensuring that the project specifications are suitable for the project. For assistance in preparing your specification, contact your Dryvit Distributor or Dryvit Systems, Inc.

UNITS

Standard International Units (SI) are included in parentheses after the English equivalents thus:

1/2 in (12.7 mm) 1.0 pcf (16 Kg/m^3)

Please note that the conversions may not be exact but rather represent commonly used equivalents.

WARNING

The Fedderlite M Panel System is designed and detailed to prevent water from entering the system. If specifications are not followed and proper details not adhered to, water may intrude the system, resulting in possible damage to the system and other building elements in the wall.

DISCLAIMER

Information contained in this specification conforms to standard detail and product recommendations for the installation of the Dryvit Fedderlite M Panel 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, visit our website at www.dryvit.com or contact Dryvit Systems, Inc., at

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DRYVIT SYSTEMS, INC.
MANUFACTURER'S SPECIFICATION
CSI MASTERFORMAT SECTION 07 24 00
FEDDERLITE M PANEL SYSTEM

PART I GENERAL

1.01 SUMMARY

A. This document is to be used in preparing specifications for projects utilizing the Dryvit Fedderlite M Panel System. For complete product description and usage refer to:
1. Dryvit Fedderlite M Panel System Installation Details, DS949
2. Dryvit Fedderlite M Installation and Fabrication Instructions, DS217
3. Dryvit Modulite Brochure, DS210
4. Dryvit Backstop NT, Vapor Permeable Air/Water Resistive Barrier, DS455
5. Dryvit Backstop NT-VB, Vapor Barrier Air/Water Resistive Barrier, DS829

B. Related Sections
1. Unit Masonry – Section 04 20 00
2. Concrete – Sections 03 00 00
3. Cold-Formed Metal Framing – Section 05 40 00
4. Wood Framing – Section 06 11 00
5. Water-Resistive Barriers – Section 07 25 00
6. Vapor Retarders – Section 07 26 13
7. Air Barriers – Section 07 27 26
8. Flashing – Section 07 60 00
9. Joint Protection – Section 07 90 00

1.02 REFERENCES

A. Section Includes
1. AATCC 127 Water resistance Test: Hydrostatic pressure test
2. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
3. ASTM B117 (Federal Test Standard 141A Method 6061) Standard Practice for Operating Salt Spray (Fog) Apparatus
4. ASTM C67 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
5. ASTM C150 Standard Specification for Portland Cement
6. ASTM C177 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus
7. ASTM C272 Standard Test Method for Water Absorption of Core Materials for Sandwich Constructions
8. ASTM C297 Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
9. ASTM C203 Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
10. ASTM C303 Standard Test Method for Dimensions and Density of Preformed Block and Board–Type Thermal Insulation
11. ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
12. ASTM C1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
13. ASTM C1325 Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units
14. ASTM D968 (Federal Test Standard 141A Method 6191) Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
15. ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics
16. ASTM D1622 Standard Test Method for Apparent Density of Rigid Cellular Plastics
17. ASTM D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
18. ASTM D2247 (Federal Test Standard 141A Method 6201) Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
19. ASTM D2863 Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)
20. ASTM D2898 Standard Test Method for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing

21. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
22. ASTM D4060 Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
23. ASTM E72 Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
24. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
25. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
26. ASTM E119 Standard Method for Fire Tests of Building Construction and Materials
27. ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
28. ASTM E330 Test Method for Structural Performance of Exterior Windows, Doors and Curtain Walls by Uniform Static Air Pressure Difference
29. ASTM E331 Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference
30. ASTM E2098 Test Method for Determining the Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to Sodium Hydroxide Solution
31. ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
32. ASTM E2430 Standard Specification for Expanded Polystyrene (EPS) Thermal Insulation Boards for use in Exterior Insulation and Finish Systems (EIFS)
33. ASTM E2485 (formerly EIMA Std. 101.01) Standard Test Method for Freeze-Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water-Resistive Barrier Coatings
34. ASTM E2486 (formerly EIMA Std. 101.86) Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)
35. ASTM E2568 Standard Specification for PB Exterior Insulation and Finish Systems
36. ASTM E2570 Standard Test Method for Evaluating Water-Resistive Barrier (WRB) Coatings Used Under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage
37. ASTM G154 Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
38. ASTM G155 (Federal Test Standard 141A Method 6151) Standard Practice for Operating-Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials
39. Mil Std E5272 Environmental Testing
40. Mil Std 810B Environmental Test Methods
41. ISO 9001:2015 Quality Management System
42. ISO 14001:2015 Environmental Management System

1.03 DEFINITIONS

A. Base Coat: Material used to encapsulate one or more layers of reinforcing mesh fully embedded that is applied to the outside surface of the EPS.
B. Building Expansion Joint: A joint through the entire building structure designed to accommodate structural movement.
C. Panel Erector: The contractor that installs the Fedderlite M Panel System to the substrate.
D. Dryvit: Dryvit Systems, Inc., the manufacturer of the components of the Fedderlite M Panel System, a Rhode Island corporation.
E. Expansion Joint: A structural discontinuity in the Fedderlite M Panel System.
F. Finish: An acrylic-based coating, available in a variety of textures and colors that is applied over the base coat.
G. Insulation Board: Expanded polystyrene (EPS) insulation board.
H. Panel Fabricator: The contractor who fabricates the panelized Fedderlite M Panel System.
I. Reinforcing Mesh: Glass fiber mesh(es) used to reinforce the base coat and to provide impact resistance.
J. Substrate: The surface to which the Fedderlite M Panel System is affixed.

1.04 SYSTEM DESCRIPTION

A. General: The Dryvit Fedderlite M Panel System is a prefabricated lightweight exterior continuous insulated (CI) wall panel which is installed over acceptable substrates.

B. Methods of Installation:

1. Mechanically attached: The Fedderlite M Panel System is attached to an acceptable substrate using an engineered fastening systems as listed in the project shop drawings. See Dryvit's Fedderlite M Panel System Installation Details DS949.

C. Design Requirements:

1. Acceptable Substrates: The Fedderlite M Panels are installed over an acceptable substrate capable of supporting mechanical attachment and fasteners as engineered and listed in the project shop drawings.
   a. CMU, concrete or brick.
   b. Structural framed wall assembly with sheathing.
2. The slope of inclined surfaces shall not be less than 6:12 (27°) and the length shall not exceed 12 in (305 mm).
3. The Fedderlite M Panels shall be held back from adjoining materials around openings and penetrations such as windows, doors, and other penetrations a minimum of 1/2"in (12.7 mm) for sealant application. See Dryvit's Fedderlite M Panel System Installation Details DS949.
4. The Fedderlite M Panels shall be terminated a minimum of 2 in (51 mm) above hardscape and 8 in (203 mm) above softscape.
5. Sealants:

(Note to Specifier: Coordinate additional sealant requirements in Section 1.10.A.2 and 2.03.J.1.)

   a. Shall be compatible with the Fedderlite M Panel System materials. Refer to current Dryvit Publication DS153 for listing of sealants tested by sealant manufacturer for compatibility.
   b. The sealant backer rod shall be closed cell.
6. Vapor Retarders: The use and location of vapor retarders within a wall assembly is the responsibility of the project designer and shall comply with local building code requirements. The type and location shall be noted on the project drawings and specifications. Vapor retarders may be inappropriate in certain climates and can result in condensation within the wall assembly. Refer to Dryvit Publication DS159 for additional information.
7. Dark Colors: 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.
8. The maximum service temperature of the EPS insulation is 165°F (74°C). The system shall be protected from direct exposure to heating appliances, reflective surfaces and other conditions that may cause the product temperature to exceed this value.
9. Flashing: Shall be provided at all roof-wall intersections, windows, doors, chimneys, decks, balconies and other areas as necessary to prevent water from entering behind the Fedderlite M Panel System.
10. Deflection of the substrate system shall not exceed L/240.

D. Performance Requirements:

1. The Fedderlite M Panel System shall have been tested as follows:
   a. Backstop NT Air/Water-Resistive Barrier Coating

TEST	TEST METHOD	CRITERIA	RESULTS
Tensile Bond	ASTM C297/E 2134*	Minimum 15 psi (104 kPa)	Substrate: Minimum 19 psi (131 kPa) (Backstop NT) Minimum 24.1 psi (166 kPa) (Backstop DMS) Flashing: Minimum 431 psi (2970 kPa) (Backstop NT) Minimum 140 psi (967 kPa) (Backstop DMS)
Freeze-thaw	ASTM E2485 Method B*	No deleterious effects after 10 cycles	Passed - No deleterious effects after 10 cycles
Water Resistance	ASTM D2247*	No deleterious effects after 14 days exposure[1]	No deleterious effects after 14 days exposure
Water Vapor Transmission	ASTM E96 Proc. B*	Vapor Permeable	Vapor Permeable
			Backstop NT-VB: .08 Perms[2]
Air Leakage	ASTM E283	No ICC or ANSI/EIMA Criteria	0.002 cfm/ft^2 (0.01 l/sec/m^2) (Backstop NT)
Air Permeance	ASTM E2178	No ICC or ANSI/EIMA Criteria	1.2x10^{-4} cfm/ft^2 @ 1.6 psf (0.0006 l/s/m^2 @ 75 Pa) (Backstop NT)

Air Barrier Assembly	ASTM E2357	No ICC or ANSI/EIMA Criteria	<0.001 cfm/ft^2 @ 6.24 psf (0.05 l/sec m^2 @300 Pa) (Backstop NT)
Nail Sealability	ASTM D1970	No ICC or ANSI/EIMA Criteria	Passed ABAA Criteria
Structural Performance	ASTM E1233 Proc. A*	Minimum 10 positive cycles at 1/240 deflection; No cracking in field, at joints or interface with flashing	Passed
Racking	ASTM E72*	No cracking in field, at joints or interface with flashing at net deflection of 1/8 in (3.2 mm)	Passed
Restrained Environmental	ICC-ES Procedure*	5 cycles; No cracking in field, at joints or interface with flashing	Passed
Water Penetration	ASTM E331*	No water penetration beyond the inner-most plane of the wall after 15 minutes at 2.86 psf (137 Pa)	Passed
Weathering UV Exposure	ASTM D2898 Method B*	210 hours of exposure	Passed
Accelerated Aging	ICC-ES Procedure*	25 cycles of wetting and drying	Passed
Hydrostatic Pressure Test	AATCC 127*	ICC: 21.6 in (549 mm) water column for 5 hours	Passed
Surface Burning Characteristics	ASTM E84	Flame Spread < 25 Smoke Developed < 450	Passed

* ASTM E2570 Standard Test Method for Evaluating Water-Resistive Barrier (WRB) Coatings Used Under Exterior Insulation and Finish Systems (EIFS) or EIFS with Drainage, also referred to as AC212 – Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing

1. No cracking, checking, rusting, crazing, erosion, blistering, peeling, or delamination when viewed under 5x magnification
2. Defined as a Class I vapor retarder per the 2009 IBC and IRC

b. Durability

TEST	TEST METHOD	CRITERIA	RESULTS
Abrasion Resistance	ASTM D968	No deleterious effects after 528 quarts (500 liters)	No deleterious effects after 1056 quarts (1000 liters)
Accelerated Weathering	ASTM G155 Cycle 1	No deleterious effects after 2000 hours	No deleterious effects after 5000 hours
	ASTM G 54 Cycle 1 (QUV)		No deleterious effects after 5000 hours
Freeze-Thaw	ASTM E2485 Method	No deleterious effects after 60 cycles	Passed - No deleterious effects after 90 cycles
	ASTM C67 modified	No deleterious effects after 60 cycles	Passed - No deleterious effects after 60 cycles
	ASTM E2485 Method B	No deleterious effects after 10 cycles	Passed - No deleterious effects after 10 cycles
Mildew Resistance	ASTM D3273	No growth during 28 day exposure period	No growth during 60 day exposure period
Water Resistance	ASTM D2247	No deleterious effects after 14 days exposure	No deleterious effects after 42 days exposure
Taber Abrasion	ASTM D4060	N/A	Passed 1000 cycles
Salt Spray Resistance	ASTM B117	No deleterious effects after 300 hours exposure	No deleterious effects after 1000 hours exposure
Water Penetration	ASTM E331	No water penetration beyond the inner-most plane of the wall 2 hours at 6.24 psf (299 Pa)	Passed
Water Vapor Transmission	ASTM E96 Procedure B	Vapor permeable	EPS 5 perm-inch Base Coat[1] 40 Perms Finish[2] 40 Perms
1. Base Coat perm value based on Dryvit Genesis® 2. Finish perm value based on Dryvit Quarzputz			

c. Impact Resistance: In accordance with ASTM E 2486

Reinforcing Mesh[1]/Weight oz/yd² (g/m²)	Minimum Tensile Strengths	EIMA Impact Classification	EIMA Impact Range		Impact Test Results	
			in-lbs	(Joules)	in-lbs	(Joules)
Standard - 4.3 (146)	150 lbs/in (27 g/cm)	Standard	25-49	(3-6)	36	(4)
Standard Plus - 6 (203)	200 lbs/in (36 g/cm)	Medium	50-89	(6-10)	56	(6)
Intermediate™ - 12 (407)	300 lbs/in (54 g/cm)	High	90-150	(10-17)	108	(12)
Panzer® 15[2] - 15 (509)	400 lbs/in (71 g/cm)	Ultra High	>150	(>17)	162	(18)
Panzer 20[2] - 20.5 (695)	550 lbs/in (98 g/cm)	Ultra High	>150	(>17)	352	(40)
Detail Mesh® Short Rolls - 4.3 (146)	150 lbs/in (27 g/cm)	n/a	n/a	n/a	n/a	n/a
Corner Mesh™ - 7.2 (244)	274 lbs/in (49 g/cm)	n/a	n/a	n/a	n/a	n/a
1. Colored blue and bear the Dryvit logo for product identification 2. Used in conjunction with Standard Mesh (recommended for areas exposed to high traffic)						

2. The Fedderlite M Panel components shall be tested for:
a. Fire

TEST	TEST METHOD	CRITERIA	RESULTS
Surface Burning Characteristics	ASTM E84	All components shall have a: Flame Spread ≤ 25 Smoke Developed ≤ 450	Passed

b. Durability

TEST	TEST METHOD	CRITERIA	RESULTS
Reinforcing Mesh Alkali Resistance of Reinforcing Mesh	ASTM E2098	120 pli (> 21dN/cm) retained tensile strength after exposure	Passed
EPS (Physical Properties) Density	ASTM C303, D 1622	0.95-1.25 lb/ft^3 (15.2-20.0 kg/m^3)	Passed
Thermal Resistance	ASTM C177, C 518	4.0 @ 40 °F (4.4 °C) 3.6 @ 75 °F (23.9 °C)	Passed Passed
Water Absorption	ASTM C272	2.5 % max. by volume	Passed

Oxygen Index	ASTM D2863	24% min. by volume	Passed
Compressive Strength	ASTM D 621 Proc. A	10 psi (69 kPa) min.	Passed
Flexural Strength	ASTM C203	25 psi (172 kPa) min.	Passed

1.05 SUBMITTALS

A. Product Data: The panel fabricator or erector shall submit to the owner/architect the manufacturer's product data sheets describing products, which will be used on this project.

B. Shop Drawings: The panel fabricator or erector shall prepare and submit to the owner/architect complete drawings showing wall layout, connections, fastener calculations, details, expansion joints, and installation sequence.

C. Samples: The panel fabricator or erector shall submit to the owner/architect samples as required in the contract documents for each finish, texture and color to be used on the project. The same tools and techniques proposed for the actual applications shall be used. Samples shall be of sufficient size to accurately represent each color and texture being utilized on the project.

D. Warranty: When requested, a copy of the warranty shall be included in the submittal.

1.06 QUALITY ASSURANCE

A. Qualifications.
1. System Manufacturer: Shall be Dryvit Systems, Inc. All materials shall be manufactured or sold by Dryvit and shall be purchased from Dryvit or its authorized distributors.
   a. EIFS materials shall be manufactured at a facility covered by a current ISO 9001:2008 and ISO 14001:2004 certification. Certification of the facility shall be done by a registrar accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB).
2. Insulation Board Manufacturer: Shall be listed by Dryvit Systems, Inc., shall be capable of producing the Expanded Polystyrene (EPS) in accordance with the current Dryvit Specification for Insulation Board, DS131, and shall subscribe to the Dryvit Third Party Certification and Quality Assurance Program.
3. Panel Fabricator: Shall be a contractor experienced and competent in the fabrication of architectural wall panels.
4. Panel Erector: Shall be experienced and competent in the installation of architectural wall panel systems.
5. Sealant Contractor: Shall be experienced and competent in the installation of commercial sealants.

B. Regulatory Requirements:
1. The EPS shall be separated from the interior of the building by a minimum 15-minute thermal barrier in accordance with local building code requirements.
2. The use and maximum thickness of EPS shall be in accordance with the applicable building code(s).

C. Mock-Up
1. The panel fabricator or erector shall, before the project commences, provide the owner/architect with a mock-up for approval.
2. The mock-up shall be of suitable size as required to accurately represent the products being installed, as well as each color and texture to be utilized on the project as defined by the contract documents.
3. The mock-up shall be prepared with the same products, tools, equipment and techniques required for the actual applications. The finish used shall be from the same batch that is being used on the project.
4. The approved mock-up shall be available and maintained at the jobsite as defined by contract documents.

1.07 DELIVERY, STORAGE AND HANDLING

A. At the Fedderlite M Panel System fabrication location and job site, the panels shall be stored under cover, well ventilated, with entire panel protected from weather, excessive heat, dust, dirt, and ponding water.
B. Panels shall be numbered in accordance with the shop drawings visible on the panel edge and back of panel.
B. Panels shall be stored to prevent damage or distortion.
C. Panels shall be packaged in crates or on skids to protect from damage during shipping to the job site.
C. Positive means shall be employed to protect panel edges from damage during handling and transport.

1.08 PROJECT CONDITIONS

A. Environmental Requirements
B. Existing Conditions: The erector shall have access to electric power, and a clean work area at the location where the Fedderlite M panels are to be installed.

1.09 SEQUENCING AND SCHEDULING

A. Installation of the Fedderlite M Panel System shall be coordinated with other construction trades and as directed by the general contractor or owner.

1.10 WARRANTY

A. Manufacturers' Limited Fedderlite M Panel System Warranty
1. Manufacturer shall offer a limited material defect and labor to repair or replace defective material warranty stating the Products will be free from manufacturing defect and will perform as warranted in the manner specified for the stated term measured from the Date of Project Substantial Completion.
   a. A pre-construction meeting, including representatives of the Manufacturer, the Fabricator or Erector, the Owner, and the Consultant (if applicable), shall be required prior to installation of the Fedderlite M Panel System.
   b. The term of this warranty may be extended for an additional 2 years with involvement on the project of a Manufacturer-approved, third-party consultant ("Consultant") engaged by the Owner or its authorized representative, at the Owner's sole expense. Inspection reports generated by the Consultant shall be made available to the Manufacturer and the Owner.
   c. The warranty is available upon written request.
2. The Fedderlite M Panel System warranty shall additionally include the following for the term of the warranty or as specifically noted hereunder.

   (Note to Specifier: An additional 2-year warranty extension is available where Tremco (Company) Joinery and Sealants referenced in Section 2.03.J.1 are integrated. Amend warranty term below to 12-years.)

   a. The Fedderlite M Panel System warranty term shall be 10 years **[12-years].**
   b. The Fedderlite M Panel System will remain in a watertight condition when the Fedderlite M Panel System is used in conjunction with approved Company Joinery and Sealants.
   c. Finish will be UV fade resistant for 10 years, except for specially produced colors.

1) Specially produced colors will be UV fade resistant for 5 years when high-performance colorants are used to formulate.

B. Fabricator and Erector Warranty
   1. Fedderlite M Panel System fabricator and erector shall provide a separate minimum 1-year warranty for all workmanship related to the proper installation and performance of the Fedderlite M Panel System application. Manufacturer shall not be responsible for workmanship associated with the engineering, fabrication or installation of Fedderlite M Panel System.

1.11 DESIGN RESPONSIBILITY

A. It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for its intended use. The panel fabricator or erector selected by the purchaser shall be responsible for coordinating with the building designer all decisions pertaining to design, detail, structural capability, attachment details, shop drawings and the like. Dryvit has prepared guidelines in the form of specifications, installation details, and product data sheets to facilitate the design process only. Dryvit 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 Dryvit or otherwise, or for any changes which purchasers, specifiers, designers, or their appointed representatives may make to Dryvit's published comments.

1.12 MAINTENANCE

A. All Dryvit products are designed to require minimal maintenance. However, as with all building products, depending on location, some cleaning may be required. See Dryvit publication DS152 on Cleaning and Recoating.

B. Sealants and Flashings shall be inspected on a regular basis and repairs made as necessary.

PART II PRODUCTS

2.01 MANUFACTURER

A. All components of the Fedderlite M Panel System shall be supplied or obtained from Dryvit or its authorized distributors. Substitutions or additions of materials other than specified will void the warranty.

2.02 MATERIALS

A. Portland Cement: Shall be Type I or II, meeting ASTM C 150, white or gray in color, fresh and free of lumps.

B. Water: Shall be clean and free of foreign matter.

2.03 COMPONENTS

A. Air/Water-Resistive Barrier Components (when specified):

1. Dryvit Backstop NT: A vapor permeable, flexible, polymer-based non-cementitious water-resistive and air barrier coating available in Texture, Smooth, and Spray. See DS180 and DS181.
2. Dryvit Backstop NT-VB: A Class 1 vapor retarder, available in trowel and spray versions. When specified, consider having a WVT analysis performed. See DS830 and DS831.
3. Dryvit Grid Tape™: An open weave fiberglass mesh tape with pressure sensitive adhesive available in rolls 4 in (102 mm) wide by 100 yds (91 m) long and used in combination with Dryvit Backstop NT Texture.

B. Flashing/Transition membrane: Used to protect substrate edges at terminations.

1. Shall be AquaFlash and AquaFlash Mesh: A waterproof, flexible, water-based polymer material and reinforcing fabric.

C. Mechanical Attachment: Mechanical fasteners shall be as required to meet engineered pull out values and as listed in project shop drawings.

D. Insulation Board: Expanded Polystyrene meeting Dryvit Specification for Insulation Board, DS131.

1. Thickness of insulation board shall be minimum 2 in (50.8 mm).
2. The insulation board shall be manufactured by a board supplier listed by Dryvit Systems, Inc.

F. Reinforcing Channels, Rails and Accessory Mounting Components: Used to reinforce the Fedderlite M Panels and provide structural attachments to the acceptable substrate and shall be a combination of the following as engineered and listed in project shop drawings:

1. 6063 T6 grade aluminum Standard Fedderlite Aluminum channels
2. 6063 T6 grade Fedderlite M Aluminum Channel
3. 6063 T6 grade Fedderlite M Aluminum Mounting Rail
4. Fedderlite M Clip – 22 gauge galvanized flat stock clip used to mechanically attach the Standard Fedderlite Aluminum channel to the acceptable substrate.
5. Shim / Spacer – 1/16” thick PVC horseshoe ship / spacer used to adjust planer tolerance irregularities in the acceptable substrate.

G. Base Coat: Shall be compatible with the EPS insulation board and reinforcing mesh(es).

1. Cementitious: A liquid polymer-based material, which is field mixed with Portland cement.
   a. Shall be Primus, or Genesis
2. Ready mixed: A dry blend cementitious, copolymer-based product, field mixed with water.
   a. Shall be Primus DM, Genesis DM, Genesis DMS, Rapidry DM 35-50 or Rapidry DM 50-75.

H. Reinforcing Mesh: A balanced, 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 as listed in Section 1.04.D.1.c.)

1. Shall be Standard, Standard Plus, Intermediate, Panzer 15, Panzer 20, Detail and Corner Mesh
2. Shall be colored blue for product identification bearing the Dryvit logo.

I. Finish: Shall be the type, color and texture as selected by the architect/owner and shall be one or more of the following:

1. Standard DPR (Dirt Pickup Resistance): Water-based, acrylic coating with integral color and texture and formulated with DPR chemistry:
   a. Quarzputz® DPR: Open-texture
   b. Sandblast® DPR: Medium texture
   c. Freestyle® DPR: Fine texture
   d. Sandpebble® DPR: Pebble texture
   e. Sandpebble® Fine DPR: Fine pebble texture

2. Hydrophobic (HDP™) Finishes: 100% acrylic coating with integral color and texture and formulated with hydrophobic properties:
   a. Quarzputz® HDP
   b. Sandblast® HDP
   c. Sandpebble® HDP
   d. Sandpebble® Fine HDP
   e. Lymestone™ HDP
   f. Finesse™ HDP
3. **E**: Water-based, lightweight acrylic coating with integral color and texture and formulated with DPR chemistry:
   a. Quarzputz® **E**
   b. Sandpebble® **E**
   c. Sandpebble® Fine **E**
4. Specialty Finishes and Veneers:
   a. Ameristone: Multi-colored quartz aggregate with a flamed granite appearance.
   b. Stone Mist®: Ceramically colored quartz aggregate.
   c. Custom Brick: Acrylic polymer-based finish used in conjunction with a proprietary template system to create the look of stone, brick, slate or tile.
   d. TerraNeo: 100% acrylic-based finish with large mica chips and multi-colored quartz aggregates.
   e. Lymestone: A premixed, 100% acrylic-based finish designed to replicate the appearance of limestone blocks.
   f. Reflectit: 100% acrylic coating providing a pearlescent appearance.
   g. Finesse™: A smooth 100% acrylic-based dirt pickup resistance finish.
   h. Tibur Stone™: A smooth 100% acrylic-based dirt pickup resistance finish with the appearance of travertine stone.
   i. NewBrick®: A lightweight insulated brick veneer for use on exterior walls.
   j. Ferros™ Finish: - a water-based finish properties that replicates the look of rusting metal.
   k. Wood Grain: A 100% acrylic-based finish created with a textured finish, a coating, a graining tool and a sealer providing an authentic woodgrain appearance.
5. Elastomeric DPR (Dirt Pickup Resistance): Water- based, elastomeric acrylic coating with integral color and texture and formulated with DPR chemistry:
   a. Weatherlastic® Quarzputz
   b. Weatherlastic® Sandpebble
   c. Weatherlastic® Sandpebble Fine
   d. Weatherlastic® Adobe
6. Medallion Series PMR™ (Proven Mildew Resistance): Water-based, acrylic coating with integral color and texture and formulated with PMR chemistry:
   a. Quarzputz® PMR
   b. Sandblast® PMR
   c. Freestyle® PMR
   d. Sandpebble® PMR
   e. Sandpebble® Fine PMR
7. Coatings, Primers and Sealers:
   a. Demandit® Smooth
   b. Demandit® Sanded
   c. Demandit® Advantage™
   d. HDP™ Water-Repellent Coating
   e. Weatherlastic® Smooth
   f. Tuscan Glaze™
   g. Color Prime
   h. Prymit®
   i. SealClear™

J. Joint Sealants:

(Note to Specifier: Where the additional 2-year warranty extension for use of Tremco (Company) Joinery and Sealants is desired, retain [Required] below in section 2.03.J.1. and delete section 2.03.J.2)

1. Silicone Sealant: **[Required]**
   a. Tremco Spectrem 1: An ultra low modulus, high-performance, one-part, moisture-curing silicone joint sealant with physical properties making it an ideal sealant for sealing dynamic joints.
   b. Tremco Spectrem 3: A general-purpose, low-modulus, high performance, one-part, neutral-cure, non-staining, low dirt pickup, construction-grade silicone sealant.
   c. Tremco Spectrem 4-TS: A multi-component, neutral-curing, non-staining, low dirt pick up, low-modulus silicone sealant specially formulated for use in dynamically moving building joints. Spectrem 4-TS offers color flexibility with the opportunity to tint the material on site.

d. Coordination for custom sealant colors is required.
e. Where deemed necessary, use TREMprime Silicone Porous Primer.

1. Polyurethane Sealant:
   a. Tremco Dymonic FC: A one component hybrid polyurethane sealant. Where deemed necessary, use TREMprime Silicone Porous Primer for porous surfaces and TREMprime Silicone Metal Primer for metals or plastics. Coordinate for primer use as indicated.

PART III EXECUTION

3.01 EXAMINATION

A. Prior to installation of the Fedderlite M Panel System, the contractor shall verify that the substrate:
   1. Is of a type listed in Section 1.04.C.1.
   2. Is flat within 1/4 in (6.4 mm) in a 4 ft (1.2 m) radius.
   3. Is sound, dry, connections are tight; has no surface voids, projections, or other conditions that may interfere with the Fedderlite M Panel System installation or performance.

B. Prior to installation of the Fedderlite M Panel System, the architect or general contractor shall ensure that all needed flashings and other waterproofing details have been completed, if such completion is required prior to the Fedderlite M Panel application. Additionally, the erector shall ensure that:
   1. Metal roof flashing has been installed in accordance with the manufacturer's requirements, Asphalt Roofing Manufacturers Association (ARMA) Standards and Dryvit Fedderlite M Panel Installation Details, DS113, or as otherwise necessary to maintain a watertight envelope.
   2. Openings are flashed in accordance with the contract documents, Fedderlite M Panel System Installation Details DS949 or as otherwise necessary to prevent water penetration.
   3. Chimneys, balconies and decks have been properly flashed.
   4. Windows, doors, etc. are installed and flashed per contract documents, manufacturer's requirements and the Fedderlite M Panel System Installation Details DS949.

C. Prior to the installation of the Fedderlite M Panel System, the contractor shall notify the general contractor, and/or architect, and/or owner of all discrepancies.

3.02 PREPARATION

A. Protect adjoining work and property during Fedderlite M Panel installation.

3.03 INSTALLATION

A. The Fedderlite M panels shall be installed in accordance with approved shop drawings.
B. Dryvit Fedderlite M Panel base coat surfaces in contact with sealant shall be coated with Dryvit Demandit Smooth or Color Prime. Refer to Dryvit DS153 for approved sealant options.
C. High impact meshes shall be installed to the panel face as specified at ground level, high traffic areas and other areas exposed to or susceptible to impact damage.

3.04 FIELD QUALITY CONTROL

A. The panel fabricator and erector shall be responsible for the proper storage and application of the Fedderlite M Panel materials.
B. Dryvit assumes no responsibility for on-site inspections or application of its products.
C. If required, the panel fabricator or erector shall certify in writing the quality of work performed relative to the substrate system, details, installation procedures, workmanship and as to the specific products used.
D. If required, the EPS supplier shall certify in writing that the EPS meets Dryvit's specifications.
E. If required, the sealant contractor shall certify in writing that the sealant application is in accordance with the sealant manufacturer's and Dryvit's recommendations.

3.05 CLEANING

A. All excess Fedderlite M Panel materials shall be removed from the job site by the contractor in accordance with contract provisions.
B. All surrounding areas, where the Dryvit Fedderlite M Panel System has been applied, shall be left free of debris and foreign substances resulting from the contractor's work.

3.06 PROTECTION

A. The building shall be protected from inclement weather and other sources of damage until permanent protection in the form of flashings, sealants, etc. are installed.

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