SECTION 07 2413
OUTSULATION EXTERIOR INSULATION AND FINISH SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. This document is to be used in preparing specifications for projects utilizing the Tremco ExoAir 230 / 230 LT Fluid Applied Air Barrier Membrane and Dryvit Light Commercial Moisture Drainage (LCMD) System 4.

1. Dryvit Outsulation LCMD Systems 1-5 Data Sheet, DS838
2. Dryvit Outsulation LCMD Systems 1-5 Application Instructions, DS172
3. Dryvit Outsulation LCMD Systems 1-5 Installation Details, DS170
4. Tremco ExoAir 230 / 230LT Data Sheet, DS0523
5. Tremco Exoair 230 / 230LT Application Instructions, AI1024

B. Related Sections:

1. 04 0120 – Maintenance of Masonry
2. 07 6200 – Sheet Metal Flashing and Trim
3. 07 9200 – Joint Sealants

1.2 REFERENCES

A. References, General: Versions of the following, cited, standards current as of the date of issue of the project apply to the work of this section.

B. ASTM International (ASTM):

1. ASTM A 240/A 240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
2. ASTM B 117 (Federal Test Standard 141A Method 6061) Standard Practice for Operating Salt Spray (Fog) Apparatus
3. ASTM C 150 Standard Specification for Portland Cement
4. ASTM C 297 Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
5. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants
6. ASTM C 1063 Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
7. ASTM C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
8. ASTM C 1193 - Guide for Use of Joint Sealants
9. ASTM C 1396 (formerly C 79) Standard Specification for Gypsum Board

10. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
11. ASTM D 968 (Federal Test Standard 141A Method 6191) Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
12. ASTM D 1784 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
13. ASTM D 2247 (Federal Test Standard 141A Method 6201) Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
14. ASTM D 2898 Standard Test Method for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing
15. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
16. ASTM D 4060 Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
17. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials
18. ASTM E 96/E 96M - Standard Test Methods for Water Vapor Transmission of Materials
19. ASTM E 162 - Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source
20. ASTM E 330 Test Method for Structural Performance of Exterior Windows, Doors and Curtain Walls by Uniform Static Air Pressure Difference
21. ASTM E 331 Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference
22. ASTM E 783 - Standard Test Method for Field Measurement of Air Leakage through Installed Exterior Windows and Doors
23. ASTM E 1186 - Practices for Air Leakage Site Detection in Building Envelopes and Air Barrier Systems
24. ASTM E 2098 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
25. ASTM E 2134 Test Method for Evaluating the Tensile-Adhesion Performance of Exterior Insulation and Finish Systems (EIFS)
26. ASTM E 2178 - Standard Test Method for Air Permeance of Building Materials
27. ASTM E 2273 Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies
28. ASTM E 2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
29. ASTM E 2430 Standard Specification for Expanded Polystyrene (EPS) Thermal Insulation Boards for use in Exterior Insulation and Finish Systems (EIFS)
30. ASTM E 2485 (formerly EIMA Std. 101.01) Standard Test Method for Freeze-Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water-Resistive Barrier Coatings

31. ASTM E 2486 (formerly EIMA Std. 101.86) Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)
32. ASTM E 2568 Standard Specification for PB Exterior Insulation and Finish Systems
33. ASTM G 155 (Federal Test Standard 141A Method 6151) Standard Practice for Operating-Xenon Arc Light Apparatus, for Exposure of Nonmetallic Materials

C. Mil Std E5272 Environmental Testing
D. Mil Std 810B Environmental Test Methods
E. UL Environment Greenguard Certification:

1. Greenguard Certification Product Guide

F. National Fire Protection Association (NFPA):

1. NFPA 268 Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source
2. NFPA 285 Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior Non Load- Bearing Wall Assemblies Containing Combustible Components Using the Intermediate-Scale, Multistory Test Apparatus

G. U.S. Environmental Protection Agency (EPA):

1. 40 CFR 59, Subpart D – National Volatile Organic Compound Emission Standards for Architectural Coatings.

H. US Green Building Council (USGBC):

1. Leadership in Energy and Environmental Design (LEED) Green Building Rating System

1.3 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. Contractor: The contractor that installs the Outsulation LCMD System 4 to the substrate.
D. Dryvit: Dryvit, the manufacturer of the Outsulation LCMD System 4, a Rhode Island corporation.
E. Expansion Joint: A structural discontinuity in the Outsulation LCMD System 4.
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, which is affixed to the substrate and creates a layer of continuous insulation.

H. Mechanical Fasteners: A combination of polypropylene washers and corrosion resistant fasteners used to secure the insulation board to the substrate.
I. Reinforcing Mesh: Glass fiber mesh(es) used to reinforce the base coat and to provide impact resistance.
J. Sheathing: A substrate in sheet form.
K. Substrate: The material to which the Outsulation LCMD System 4 is affixed.
L. Substrate System: The total wall assembly including the attached substrate to which the water-resistive barrier is affixed.

1.4 SYSTEM DESCRIPTION

A. General: The Dryvit Outsulation LCMD System 4 is an Exterior Insulation and Finish System (EIFS) Class PB, designed for use on noncombustible or combustible type construction. Outsulation LCMD System 4 is installed over a code approved water-resistive barrier and consists of a drainage medium and drainage accessory, expanded polystyrene insulation board, adhesive or mechanical attachment method, base coat, reinforcing mesh(es) and finish.
B. Acceptable system configuration is as follows:

System Configuration	Water-Resistive Barrier	Drainage Medium	EPS Minimum Thickness	Attachment	Base Coat
4	ExoAir 230/230LT	Expanded Metal Lath	1 in (25 mm)	Adhesive	All

C. Design Requirements

1. Acceptable substrates for the Dryvit Outsulation LCMD System 4 shall be:

   a. Exterior grade gypsum sheathing meeting ASTM C 1396 (formerly C 79) requirements for water resistant core or Type X core at the time of application of the Outsulation LCMD System.
   b. Exterior sheathing having a water-resistant core with fiberglass mat facers meeting ASTM C 1177.
   c. Exterior fiber reinforced cement or calcium silicate boards.
   d. APA Exterior or Exposure 1 Rated Plywood, Grade C-D or better, nominal 1/2 in (12.7 mm), minimum, installed with the C face out.
   e. APA Exterior or Exposure 1 Fire Retardant Treated (FRT) Plywood, Grade C-D or better, nominal 1/2 in (12.7 mm), minimum, installed with the C face out.
   f. APA Exposure 1 Rated Oriented Strand Board (OSB) nominal 1/2 in (12.7 mm), minimum.
   g. Unglazed brick, cement plaster, concrete or masonry.

2. Deflection of substrate systems shall not exceed 1/240 times the span.
3. The substrate shall be flat within 1/4 in (6.4 mm) in a 4 ft (1.2 m) radius.

4. The slope of inclined surfaces shall not be less than 6:12. The length of inclined surfaces shall not exceed 12 in (305 mm).
5. All areas requiring an impact resistance classification higher than "standard", as defined by ASTM E 2486 (formerly EIMA Standard 101.86), shall be as detailed in the drawings and described in the contract documents. Refer to Section 1.04.D.1.c of this specification.
6. Expansion Joints:

    a. Design and location of expansion joints in the Outsulation LCMD Systems 1-5 is the responsibility of the project designer and shall be noted on the project drawings. As a minimum, expansion joints shall be placed at the following locations:
        1) Where expansion joints occur in the substrate system
        2) Where building expansion joints occur
        3) At floor lines in wood frame construction
        4) At floor lines of non-wood framed buildings where significant movement is expected
        5) Where the Outsulation LCMD System 4 abuts dissimilar materials
        6) Where the substrate type changes
        7) Where prefabricated panels abut one another
        8) In continuous elevations at intervals not exceeding 75 ft (23 m)
        9) Where significant structural movement occurs such as changes in roofline, building shape or structural system

7. Terminations

    a. Prior to applying the Dryvit Outsulation LCMD Systems 1-5, wall openings shall be treated with Flashing Tape. Refer to Dryvit Outsulation LCMD Systems 1-5 Installation Details, DS170.
    b. The Outsulation LCMD Systems 1-5 shall be held back from adjoining materials around openings and penetrations such as windows, doors and mechanical equipment a minimum of 3/4 in (19 mm) for sealant application. See Dryvit's Outsulation LCMD Systems 1-5 Installation Details, DS170.
    c. The systems shall be terminated a minimum of 8 in (203 mm) above finished grade.
    d. Sealants
        1) Shall be manufactured and supplied by others
        2) Shall be compatible with the Outsulation LCMD Systems 1-5 materials. Refer to current Dryvit publication DS153, for a listing of sealants tested by sealant manufacturer for compatibility.
        3) The sealant backer rod shall be closed cell.

8. 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.

9. 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.
10. 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 Outsulation LCMD Systems 1-5.
11. Site Coated EPS Shapes and Starter Boards: Shall be coated on site utilizing the same materials (EPS, base material mixture, reinforcing mesh, and finish) as specified for the project.
12. Machine Coated EPS Shapes and Starter Boards: Shall be produced by Tremco CPG. The term of the warranty may be extended for an additional 2 years with the use of Tremco-produced Machine Coated Starter Boards.

D. Performance Requirements

1. The Outsulation LCMD System 4 shall have been tested as follows:

a. Durability

TEST	TEST METHOD	CRITERIA	RESULTS
Accelerated Weathering	ASTM G 155 Cycle 1*	No deleterious effects after 2000 hours	No deleterious effects after 5000 hours
	ASTM G 154 Cycle 1* (QUV)		No deleterious effects after 5000 hours
Freeze-Thaw	ASTM E 2485 Method A*	No deleterious effects after 60 cycles	Passed - No deleterious effects after 90 cycles
	ASTM C 67 modified	No deleterious effects after 60 cycles	Passed - No deleterious effects after 60 cycles
	ASTM E 2485 Method B*	No deleterious effects after 10 cycles	Passed - No deleterious effects after 10 cycles
Mildew Resistance	ASTM D 3273	No growth during 28 day exposure period	No growth during 60 day exposure period
Water Resistance	ASTM D 2247*	No deleterious effects after 14 days exposure	No deleterious effects after 42 days exposure
Taber Abrasion	ASTM D 4060	N/A	Passed 1000 cycles
Salt Spray Resistance	ASTM B 117*	No deleterious effects after 300 hours exposure	No deleterious effects after 1000 hours exposure
Water Penetration	ASTM E 331*	No water penetration beyond the inner-most plane of the wall after15 minutes at 2.86 psf (137 Pa)	Passed
Water Vapor Transmission	ASTM E 96 Procedure B*	Vapor permeable	EPS 5 perm-inch Base Coat[1] 40 Perms Finish[2] 40 Perms
Drainage Efficiency	ASTM E 2273	Minimum Drainage Efficiency of 90%	Passed

* ASTM E 2568 Standard Specification for PB Exterior Insulation and Finish Systems.
1. Base Coat perm value based on Dryvit Genesis
2. Finish perm value based on Dryvit Quarzputz

b. Structural

TEST	TEST METHOD	CRITERIA	RESULTS
Tensile Bond	ASTM C 297/E 2134*	Minimum 15 psi (104 kPa) – insulation failure	Minimum 19.1 psi (132 kPa)
Transverse Wind Load	ASTM E 330*	Withstand positive and negative wind loads as specified by the building code	Systems 4 & 5: Minimum 90 psf (4.3 kPa)[1] 16 inch o.c. framing, 1/2 in sheathing screw attached at 8 inch (203 mm) o.c.

* ASTM E 2568 Standard Specification for PB Exterior Insulation and Finish Systems.
1. Adhesive attachment; mechanical fastener attachment results are based on fastener patterns, refer to Dryvit Application Bulletin 00-04.

c. Impact Resistance: In accordance with ASTM E 2486* (formerly EIMA Standard 101.86

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

* ASTM E 2568 Standard Specification for PB Exterior Insulation and Finish Systems.
1. It shall be colored blue for product identification bearing the Dryvit logo.
2. Shall be used in conjunction with Standard Mesh (recommended for areas exposed to high traffic).

d. Fire performance

TEST	TEST METHOD	CRITERIA	RESULTS
Fire Resistance	ASTM E 119	No effect on the fire resistance of a rated wall assembly	Passed 1 hour
Ignitability	NFPA 268*	No ignition at 12.5 kw/m² at 20 minutes	Passed
Intermediate Multi-Story Fire Test	NFPA 285* (UBC 26-9)	1. Resist flame propagation over the exterior surface 2. Resist vertical spread of flame within combustible core/component of panel from one story to the next 3. Resist vertical spread of flame over the interior surface from one story to the next 4. Resist lateral spread of flame from the compartment of fire origin to adjacent spaces	Passed

* ASTM E 2568 Standard Specification for PB Exterior Insulation and Finish Systems.

2. The Outsulation LCMD System 4 components shall be tested for:

a. Fire

TEST	TEST METHOD	CRITERIA	RESULTS
Surface Burning Characteristics	ASTM E 84*	All components shall have a: Flame Spread ≤ 25 Smoke Developed ≤ 450	Passed
* ASTM E 2568 Standard Specification for PB Exterior Insulation and Finish Systems.			

b. Durability

TEST	TEST METHOD	CRITERIA	RESULTS
Reinforcing Mesh **Alkali Resistance of Reinforcing Mesh**	ASTM E 2098*	120 pli (> 21dN/cm) retained tensile strength after exposure	Passed
EPS (Physical Properties) **Density**	ASTM C 303, D 1622	0.95-1.25 lb/ft^3 (15.2-20.0 kg/m^3)	Passed
Thermal Resistance	ASTM C 177, C 518	4.0 @ 40 °F (4.4 °C) 3.6 @ 75 °F (23.9 °C)	Passed Passed
Water Absorption	ASTM C 272	2.5 % max. by volume	Passed
Oxygen Index	ASTM D 2863	24% min. by volume	Passed
Compressive Strength	ASTM D 1621 Proc. A	10 psi (69 kPa) min	Passed
Flexural Strength	ASTM C 203	25 psi (172 kPa) min.	Passed
Flame Spread **Smoke Developed**	ASTM E 84* ASTM E 84*	25 max. 450 max.	Passed Passed
* ASTM E 2568 Standard Specification for PB Exterior Insulation and Finish Systems.			

1.5 ACTION SUBMITTALS

A. Technical data indicating compliance with requirements.
B. Substrate preparation instructions and recommendations.
C. Product Data: The contractor shall submit to the owner/architect the manufacturer's product data sheets describing the products, which will be used on this project.
D. Shop Drawings:

1. Air Barrier: Show locations for air barrier. Show details for each type of substrate, joints, and edge conditions, including flashings, counterflashings, penetrations, transitions, and terminations.

   a. Show locations of transition and accessory materials providing connectivity throughout the assemblies.

2. Panelized Construction: The panel fabricator shall prepare and submit to the owner/architect complete drawings showing: wall layout, connections, details, expansion joints, and installation sequence.

E. Samples: The contractor shall submit to the owner/architect two (2) samples of the Outsulation LCMD System 4 for each finish, texture and color to be used on the project. The same tools and techniques proposed for the actual installation shall be used. Samples shall be of sufficient size to accurately represent each color and texture being utilized on the project.
F. Test Reports: When requested, the contractor shall submit to the owner/architect copies of selected test reports verifying the performance of the Outsulation LCMD System 4.
G. Environmental Product Declaration: When requested, the contractor shall submit to the owner/architect copies of the Environmental Product Declaration (EPD) describing the estimated environmental impacts of the Outsulation LCMD System 4.

1.6 INFORMATION SUBMITTALS

A. Qualification Data: For Installer, manufacturer, and Air Barrier Inspector.

1. Certification of manufacturer's approval of Installer.

B. Manufacturer's Product Compatibility Certificate: Certify compatibility of air barrier products with adjacent materials.
C. Low-Emitting Product Certificate: For air barrier products specified to meet volatile organic emissions standards, submit Greenguard Children and Schools Certification or comparable certification acceptable to Architect.
D. Fire Propagation Characteristics Certificate: From a qualified testing agency, documentation that air barrier system as a component of a wall assembly has been tested and passed NFPA 285. Include system classification number of testing agency on shop drawings.
E. Product Test Reports: Test data for air barrier products and air barrier assembly, by qualified testing agency, indicating proposed membrane air barrier meets performance requirements, when requested by Architect.
F. Warranty: Sample of unexecuted manufacturer and installer special warranties.
G. Field quality control reports.

1.7 QUALITY ASSURANCE

A. Qualifications

1. AMB Manufacturer: A qualified manufacturer with minimum three years experience in manufacture of air barrier membrane as one if its principal products.
2. System Manufacturer: Shall be Dryvit All materials shall be manufactured or sold by Dryvitand shall be purchased from Dryvit or its authorized distributors.

a. Materials shall be manufactured at a facility covered by a current ISO 9001:2015 and ISO 14001:2015 certification. Certification of the facility shall be done by a

registrar accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB).

3. Contractor: Shall be knowledgeable in the proper installation of the Dryvit Outsulation LCMD Systems 1-5 and shall be experienced and competent in the installation of Exterior Insulation and Finish Systems. Additionally, the contractor shall possess a current Trained Contractor Certificate* issued by Dryvit for Moisture Drainage Systems.
4. Installer Qualifications: A firm with minimum three years' experience in installation of specified products in successful use on similar projects, employing workers trained by manufacturer, including a full-time on-site supervisor with a minimum of three years' experience installing similar work, able to communicate verbally with the Contractor, Architect, and employees.
5. Insulation Board Manufacturer: Shall be listed by Dryvit, 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.
6. Panel Fabricator: Shall be a contractor experienced and competent in the fabrication of architectural wall panels and shall possess a current Trained Contractor Certificate* issued by Dryvit for Moisture Drainage Systems.
7. Panel Erector: Shall be experienced and competent in the installation of architectural wall panel systems and shall be:

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

8. Machine Coated EPS Shapes and Starter Boards: Shall be produced by Tremco CPG. The term of the warranty may be extended for an additional 2 years with the use of Tremco-produced Machine Coated Starter Boards.

B. Air Barrier Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified air barrier system, qualified to perform observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Inspector shall be one of the following:

    1. An authorized full-time technical employee of the manufacturer.
    2. An independent party certified as an air barrier inspector by the ABAA or other certifying organization acceptable to Architect, retained by the Contractor.

C. Regulatory Requirements:

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

D. Certification

1. The Outsulation LCMD System 4 shall be recognized for the intended use by the applicable building code(s).

E. AMB Mock-Up

1. Provide air barrier mockup application within mockups required in other sections, or if not specified, in an area of not less than 150 sq. ft. (14 sq. m) of wall surface where directed by Architect for each type of backup wall construction. Include examples of surface preparation, crack and joint treatment, air barrier application, and flashing, transition, and termination conditions, to set quality standards for execution.

    a. Include intersection of wall air barrier with roof air barrier and with foundation wall intersection.

F. Outsulation System 4 Mock-Up

1. The contractor 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.
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.
5. For panelized construction, the mock-up shall be available and maintained at the panel fabrication location.

1.8 DELIVERY, STORAGE, AND HANDLING

A. All Tremco and Dryvit materials shall be delivered to the job site in the original, unopened packages with labels intact.
B. Store products in weather protected environment, clear of ground and moisture, within temperature ranges recommended by air barrier manufacturer.
C. Upon arrival, materials shall be inspected for physical damage, freezing or overheating. Questionable materials shall not be used.

1. 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:

    a. DPR, PMR™, HDP™, Weatherlastic® and E™ Finishes, Color Prime™, Primus®, Genesis® and NCB™: 40 °F (4 °C).
    b. For other products, refer to specific product data sheets.

2. Maximum storage temperature shall not exceed 100 °F (38 °C).

    a. 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.

D. Protect all products from inclement weather and direct sunlight.

1.9 PROJECT CONDITIONS

A. Environmental Requirements

1. 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.
2. 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.
    b. For other products, refer to specific product data sheets.

3. These temperatures shall be maintained with adequate air ventilation and circulation for a minimum of 24 hours (48 hours for Weatherlastic Finishes, Ameristone, and TerraNeo) thereafter, or until the products are completely dry. Refer to published product data sheets for more specific information.

B. Existing Conditions: The contractor shall have access to electric power, clean water and a clean work area at the location where the Dryvit materials are to be applied.

1.10 SEQUENCING AND SCHEDULING

A. Coordinate installation of membrane air barrier with completion of roofing and other work requiring interface with air barrier.
B. Schedule work so air barrier applications may be inspected prior to concealment.

C. Ensure air barrier materials are cured before covering with other materials.
D. Installation of the Outsulation LCMD Systems 1-5 shall be coordinated with other construction trades.
E. Sufficient manpower and equipment shall be employed to ensure a continuous operation, free of cold joints, scaffold lines, texture variations, etc.

1.11 WARRANTY

A. Fluid Applied Air Barrier Membrane Warranty:

1. Special Manufacturer's Warranty: Manufacturer's standard form in which air barrier manufacturer agrees to furnish and install air barrier material to repair or replace those materials installed according to manufacturer's written instructions that exhibit material defects or otherwise fail to perform as specified under normal use within warranty period specified.

   a. Access for Repair: Owner shall provide unimpeded access to the Project and the air barrier system for purposes of testing, leak investigation, and repair, and shall reinstall removed cladding materials upon completion of repair.
   b. Cost Limitation: Manufacturer's obligation for repair or replacement shall be limited to the original installed cost of the work.
   c. Warranty Period: Five years after date of Substantial Completion.

2. Special Warranties: specified in this article exclude deterioration or failure of air barrier materials from the following:

   a. Movement of the structure caused by structural settlement or stresses on the air barrier exceeding manufacturer's written specifications for elongation.
   b. Mechanical damage caused by outside agents.

B. EIFS Warranty:

   a. Manufacturer shall provide a 10-year limited warranty on the labor and materials associated with the EIFS and 10 year materials and labor moisture drainage warranty. This warranty is exclusive of flashings.
      1) This warranty shall be assignable.
      2) This installer shall provide a 2-year warranty for all workmanship related to EIFS application.

   b. Work is warranted against:
      1) Material defects, including but not limited to, peeling, cracking, delamination, flaking, or similar failures.

2) Seepage and leakage of water or excessive moisture into the building or wall cavities through the system. EIFS to EIFS and EIFS to dissimilar sealer joints.

c. Inspection:
1) The manufacturer shall provide a final inspection at the completion of application of the system including all contiguous sealant joints.

1.12 DESIGN RESPONSILBILITY

A. It is the responsibility of both the specifier and the purchaser to determine if a product is suitable for their intended use. The designer selected by the purchaser shall be responsible for 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.

1.13 MAINTENANCE

A. Maintenance and repair shall follow the procedures noted in the Dryvit Outsulation LCMD System 4 Application Instructions, DS172.
B. 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.
C. Sealants and Flashings shall be inspected on a regular basis and repairs made as necessary.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. AMB Manufacturer:

1. Basis-of-Design Products: Provide air barrier products manufactured by Tremco, Inc., Commercial Sealants and Waterproofing Division, An RPM Company, Beachwood OH; (866) 321-6357; email: techresources@tremcoinc.com; www.tremcosealants.com.

B. EIFS Manufacturer:

1. All components of the Outsulation LCMD System 4 shall be supplied or obtained from Dryvit or its authorized distributors. Substitutions or additions of materials other than specified will void the warranty.

2.2 MATERIALS

A. Source Limitations: Obtain air-barrier materials from single source from single manufacturer.
B. Compatibility: Provide membrane air barrier materials that are compatible with one another and with adjacent materials under conditions of service and application required, as demonstrated by membrane air barrier manufacturer based on testing and field experience.
C. Portland Cement: Shall Type I, II or 1L, meeting ASTM C 150, white or gray in color, fresh and free of lumps.
D. Water: Shall be clean and free of foreign matter.

2.3 PERFORMANCE REQUIREMENTS

1. General: Membrane air barrier shall be capable of performing as a continuous vapor-permeable air barrier and as a moisture drainage plane transitioned to adjacent flashings and discharging water to the building exterior. Membrane air barriers shall accommodate substrate movement and seal expansion and control joints, construction material transitions, opening transitions, penetrations, and perimeter conditions without moisture deterioration and air leakage exceeding performance requirements.
2. Air-Barrier Assembly Air Leakage: Maximum 0.04 cfm/sq. ft. of surface area at 1.57 lbf/sq. ft. (0.2 L/s x sq. m of surface area at 75 Pa), when tested according to ASTM E 2357.
3. Fire Propagation Characteristics: Provide air barrier system qualified as a component of a comparable wall assembly that has been tested and passed NFPA 285.

2.4 MEMBRANE AIR BARRIER COMPONENTS

A. Fluid-Applied, Vapor-Permeable Membrane Air Barrier: Elastomeric, UV-resistant, synthetic membrane, formulated for application in a range of 48 - 70 mils (wet), 25 - 35 mils (dry)

1. Basis of Design Product: Tremco, Inc., ExoAir 230 / 230LT
2. Air Permeance, ASTM E 2178: 0.004 cfm/sq. ft of surface area at 1.57-lbf/sq. ft. (0.02 L/s x sq. m of surface area at 75-Pa) pressure difference, maximum.
3. Vapor Permeance, ASTM E 96/E96M: Minimum 12 perms (690 ng/Pa x s x sq. m).
4. Elongation, Ultimate, ASTM D 412, Die C: 600 percent, minimum.
5. Combustion Characteristics: Class A, flame spread, not greater than 25; smoke developed, not greater than 450, per ASTM E 84.

6. UV Resistance, QUV-B: Over 160 cycles of UV and water spray with no observable deterioration.
7. VOC Content: Less than 50 g/L.

B. Accessory Materials:

1. General: Accessory materials as described in manufacturer's written installation instructions, recommended to produce complete air barrier assembly meeting performance requirements, and compatible with air barrier membrane material and adjacent materials.
2. Primer: Liquid primer meeting VOC limitations, recommended for substrate by membrane air barrier manufacturer, when installing modified bituminous self-adhered membranes.

    a. Basis of Design Product: Tremco, Inc., ExoAir Primer

3. Transitions:

    a. Counterflashing Strip: Modified bituminous, 40 mils (1.0 mm) thick self-adhering composite sheet consisting of 32 mils (0.8 mm) of SBS rubberized asphalt laminated to an 8 mils (0.2 mm) high-density, cross-laminated polyethylene film, for counterflashing of metal flashings and for substrate transitions and for termination of air barrier to bituminous roof membranes and to air barrier terminations at openings.
        1) Basis of Design Product: Tremco, Inc., ExoAir TWF Thru-Wall Flashing

    b. High Temperature Flashing Strip and Underlayment: Butyl, 24 mil thick self-adhering composite sheet consisting of 20 mils of butyl laminated to 4 mil polyethylene film; thermally stable under intermittent, non-continuous exposure up to 240 deg F (115 deg C). Fixed EA 110AT to show once at the proper mils. The mils are 18 mils.
        1) Basis of Design Product: Tremco, Inc., ExoAir 110AT

    c. Flashing Strip: Butyl, 22 mil thick self-adhering composite sheet consisting of 16 mils of butyl laminated to 6 mil polypropylene film; thermally stable under intermittent, non-continuous exposure up to 240 deg F (115 deg C)
    d. Opening Transition Assembly: Cured low-modulus silicone extrusion, with reinforcing ribs, sized to fit opening widths, [with aluminum race for insertion into aluminum framing extrusions,] with the following characteristics:
        1) Basis of Design Product: Tremco, Inc., Proglaze ETA Engineered Transition Assembly. Tear Strength: 110 lb/in (19.3 kN/m)

    e. Preformed Silicone-Sealant Extrusion: Manufacturer's standard system consisting of cured low-modulus silicone extrusion, sized to fit opening widths, with

manufacturer's recommended silicone sealant for bonding extrusions to substrates.

1) Basis of Design Product: Tremco, Inc.; Spectrem SimpleSeal.

4. Reinforcing Fabric: High strength mesh fabric consisting of open-weave glass fiber saturated with synthetic resins formulated for high moisture resistance, for reinforcing of liquid applications; not less than 2.5 oz/sq. yd (85 g/sq. m).

   a. Basis of Design Product: Tremco, Inc., Tremco 2011

5. Liquid Joint Sealants:

   a. ASTM C 920, single-component polyurethane, approved by air barrier manufacturer for adhesion and compatibility with membrane air barrier and accessories.
      1) Basis of Design Product: Tremco, Inc., Dymonic 100.

   b. ASTM C 920, single-component, neutral-curing silicone, approved by air barrier manufacturer for adhesion and compatibility with membrane air barrier and accessories post installation of the membrane.
      1) Basis of Design Product: Tremco, Inc., Spectrem 1.

   c. Single-component STPU, approved by air barrier manufacturer for adhesion and compatibility with membrane air barrier and accessories.
      1) Basis of Design Product: Tremco, Inc., ExoAir DualFlash®.

6. Sprayed Polyurethane Foam Sealant: Sprayed Polyurethane Foam Sealant: Foamed-in-place, 1.5- to 2.0-lb/cu. ft. (24- to 32-kg/cu. m) density, with flame-spread index of 25 or less per ASTM E 162, for filling of gaps at openings and penetrations.

   a. Basis of Design; Tremco Inc., Flexible Low Expanding Foam (LEF)

2.5 EIFS COMPONENTS

A. Flashing Materials: Used to protect substrate edges at terminations.
B. TREMPRO CHEM X PRO™: A moisture cure, urethane-based adhesive used to adhere the Dryvit Drainage Strip™and Drainage Track
C. Accessories

1. Drainage Track (Optional - not required when Drainage Strip is specified): UV treated PVC perforated “J” channel with weep holes, complying with ASTM D 1784 and ASTM C 1063. Drainage Track usage is limited to the base of the system at finished grade level when installing system in noncombustible construction. All other horizontal

terminations shall utilize the Dryvit Drainage Strip as shown in the Outsulation LCMD System 4 Installation Details, DS170, Shall be one of the following:

a. Starter Trac STWP - without drip edge by Plastic Components, Inc.
b. Starter Trac STDE - with drip edge by Plastic Components, Inc.
c. Universal Starter Track by Wind-lock Corporation
d. Sloped Starter Strip with Drip by Vinyl Corp.

2. Dryvit Drainage Strip (Optional - not required when Drainage Track is specified): A corrugated plastic material, which provides drainage. Required when using Tyvek StuccoWrap without the Drainage Track.

D. Drainage Medium

1. Expanded Metal Lath: Shall be minimum 2.5 lb/yd^2 (1.4 kg/m^2) Galvanized Furred Diamond Mesh Metal Lath; not recommended for coastal areas and other corrosive environments.

E. Insulation Board: Expanded Polystyrene meeting the Dryvit Specification for Insulation Board, DS131, and the following requirements:

1. The thickness of the insulation board shall be minimum 1”, or to match existing thickness.
2. The insulation board shall be manufactured by a board supplier listed by Dryvit

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

G. Mechanical fasteners consist of a 2 in (51 mm) diameter polypropylene washer with key openings for base coat penetration and recessed chamber, used in conjunction with a corrosion resistant fastener.

1. Washer

a. Shall be Wind-lock Wind-Devil or Wind-Devil 2™, or ITW Buildex Grid-Mate™ PB and Grid-Master washer.

2. Brick, Block, and Concrete

a. Anchors shall be a minimum 3/16” diameter and corrosion resistant.
b. Anchors shall be of sufficient length to penetrate the substrate a minimum of 1”.
c. Pullout values shall be substantiated for the particular substrate and fastener used.

H. Adhesives: Used to adhere the EPS to Expanded Metal Lath.

1. Cementitious: A liquid polymer-based material, which is field mixed with Portland cement.

    a. Shall be Primus or Genesis

I. 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. Non-Cementitious: A factory-mixed, fully formulated, water-based product.

    a. Shall be NCB

3. 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 50-75

J. Reinforcing Mesh: A balanced, open weave, glass fiber fabric treated for compatibility with other system materials.

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

K. 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 finish with integral color and texture and formulated with DPR chemistry:

    a. Quarzputz® DPR: Open texture pattern.
    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

3. Water-based, lightweight acrylic finish with integral color and texture and formulated with DPR chemistry:

a. Quarzputz®
b. Sandpebble®
c. Sandpebble® Fine

4. Specialty Finished 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. NewBrick®: A lightweight insulated brick veneer for use on exterior vertical walls.

5. Elastomeric DPR (Dirt Pickup Resistance): Water-based elastomeric acrylic finish 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 finish 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. Weatherlastic® HB
g. Tuscan Glaze™
h. Color Prime
i. Prymit®
j. SealClear™

PART 3 - EXECUTION

3.1 EXAMINATION

A. Surface Condition: Before applying air barrier materials, examine substrate and conditions to ensure substrates are fully cured, smooth, clean, dry, and free from high spots, depressions, loose and foreign particles and other deterrents to adhesion, and conditions comply with manufacturer's written recommendations.

1. Verify concrete and masonry surfaces are visibly dry, have cured for time period recommended by membrane air barrier manufacturer, and are free from release agents, curing agents, and other contaminates.
2. Test for capillary moisture by method recommended in writing by air barrier manufacturer.
3. Verify masonry joints are filled with mortar and struck flush.

B. Proceed with installation only after unsatisfactory conditions have been corrected.
C. Prior to installation of the Outsulation LCMD System 4, the contractor shall verify that the substrate:

1. Is of a type listed in Section 1.4.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 Outsulation LCMD System 4 installation or performance.

D. Prior to the installation of the Outsulation LCMD System 4, 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 Outsulation LCMD System 4 application. Additionally, the contractor 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 Outsulation LCMD System 4 Installation Details, DS170, or as otherwise necessary to maintain a watertight envelope.

2. Openings are flashed in accordance with the Outsulation LCMD System 4 Installation Details, DS170, 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 manufacturer's requirements and the Outsulation LCMD System 4 Installation Details, DS170.
5. Sheet type membrane water-resistive barriers have been installed in a weatherboard fashion in accordance with building code and manufacturer's requirements.

E. Prior to the installation of the Outsulation LCMD Systems 1-5, the contractor shall notify the general contractor and/or architect and/or owner of all discrepancies.

3.2 INTERFACE WITH OTHER WORK

A. Commencement of Work: Commence work once air barrier substrates are adequately protected from weather and will remain protected during remainder of construction.

B. Sequencing of Work: Coordinate sequencing of air barrier work with work of other sections that form portions of building envelope air barrier to ensure that flashings and transition materials can be properly installed and inspected. Roofing systems shall be capped and sealed, or top of walls protected, in such a way as to eliminate the ability of water to saturate the wall or interior space, both before and after, air barrier system installation. Coordinate installation of EXOAIR® 230 / 230LT with the roofing trade to ensure compatibility and continuity with the roofing system.

C. Subsequent Work: Coordinate air barrier work with work of other sections installed subsequent to air barrier to ensure complete inspection of installed air barrier and sealing of air barrier penetrations necessitated by subsequent work.

3.3 PREPARATION

A. Membrane Air Barrier: Clean, prepare, and treat substrate in accordance with air barrier manufacturer's written instructions.

1. Mask adjacent finished surfaces.
2. Remove contaminants and film-forming coatings from substrates.
3. Remove projections and excess materials and fill voids with substrate patching material.
4. Prepare and treat joints and cracks in substrate per ASTM C 1193 and membrane air barrier manufacturer's written instructions.

B. EIFS: The Outsulation LCMD System 4 materials shall be protected by permanent or temporary means from inclement weather and other sources of damage prior to, during, and following application until completely dry.

C. Protect adjoining work and property during Outsulation LCMD System 4 installation.

3.4 APPLICATION OF FLUID APPLIED AIR BARRIER MEMBRANE ACCESSORY MATERIALS

A. General: Install strips, transition strips, and accessory materials according to air-barrier manufacturer's written instructions. Install transition materials and other accessories to form connect and seal membrane air barrier material to adjacent components of building air barrier system, including, but not limited to, roofing system air barrier, exterior fenestration systems, door framing, and other openings.

B. Primer: Apply primer to substrates when recommended by air barrier manufacturer at required rate for those substrates that will be receiving a modified bituminous self-adhered membrane. Reprime areas not covered within 24 hours.

C. Assembly Transitions: Connect and seal exterior wall air barrier material continuously to roofing-membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.

1. Opening Transitions: Fill gaps at perimeter of openings with foam sealant and apply approved transition or accessory material.
2. Penetrations: Fill gaps at perimeter of penetrations with foam sealant and level with approved sealant. or seal transition strips around penetrating objects and terminate with approved sealant.
3. Joints: Bridge and cover isolation joints, expansion joints, and discontinuous joints between separate assemblies utilizing approved transition or accessory materials.
4. Changes in Plane: Apply approved sealant beads at corners and edges to form smooth transition.
5. Substrate Gaps: Cover gaps with stainless steel sheet mechanically attached to substrate and providing continuous support for air barrier.

D. Flashings: Seal top of through-wall flashings to membrane air barrier with a continuous bead of approved sealant recommended by air barrier manufacturer.

E. Seal punctures, voids, and seams. Patch with approved transition and accessory materials following air barrier manufacturer’s recommendations and extend repair beyond repaired areas to maintain continuity.

3.5 FLUID APPLIED AIR BARRIER MEMBRANE INSTALLATION

A. General: Apply fluid air-barrier material to form a seal with transition materials and accessories to achieve a continuous air barrier according to air-barrier manufacturer's written instructions. Apply fluid air-barrier material within manufacturer's recommended application temperature ranges.

B. Membrane Air Barrier: Apply fluid air barrier material in full contact with substrate to produce a continuous seal according to membrane air barrier manufacturers written instructions.

1. Vapor-Permeable Membrane Air Barrier: Total dry film thickness as recommended in writing by manufacturer to meet performance requirements, -in a range of 25 – 35 mils (1.0-mm) dry film thickness depending on substrate, applied in one or more equal coats, roller- or spray- applied.

C. Connect and seal exterior wall air-barrier membrane continuously to subsequently-installed roofing-membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, wall openings, and other construction used in exterior wall openings, using approved transitions and accessory materials.
D. Wall Openings: Apply approved sealant to adhere silicone extrusion to perimeter of windows, curtain walls, storefronts, doors, and louvers. Apply opening transition assembly or preformed silicone sealant extrusion according to air barrier transition manufacturer's written instructions.
E. Seal punctures, voids, and seams. Patch with approved transition and accessory materials following air barrier manufacturer's recommendations and extend repair beyond repaired areas to maintain continuity.
F. Do not cover air barrier until it has been tested and inspected by Owner's testing agency.
G. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air-barrier components.

3.6 EIFS INSTALLATION

A. The systems shall be installed in accordance with the Dryvit Outsulation LCMD System 4 Application Instructions, DS172.
B. The overall minimum base coat thickness shall be sufficient to fully embed the mesh. The recommended method is to apply the base coat in two (2) passes.
C. Sealant shall not be applied directly to textured finishes or base coat surfaces. Dryvit Outsulation LCMD System 4 surfaces in contact with sealant shall be coated with Demandit Smooth or Color Prime.
D. High impact meshes shall be installed as specified at ground level, high traffic areas, and other areas exposed to or susceptible to impact damage.
E. The installation of Pre-Coated EPS Shapes and Starter Boards shall be in accordance with Dryvit Publication DS854.

3.7 FIELD QUALITY CONTROL – FLUID APPLIED AIR BARRIER MEMBRANE

A. Testing Agency: Owner may engage a qualified testing agency to perform tests and inspections.
B. Testing Agency: Contractor shall engage a qualified Inspector to perform tests and inspections, including documenting of membrane air barrier prior to concealment.

1. Inspections and testing shall be carried out at the following rate:

    a. Up to 10,000 sq. ft. (930 sq. m): One inspection.
    b. 10,001 to 35,000 sq. ft. (931 to 3,250 sq. m): Two inspections.
    c. 35,001 to 75,000 sq. ft. (3,251 to 6,970 sq. m): Three inspections.
    d. 75,001 to 125,000 sq. ft. (6,971 to 11,610 sq. m): Four inspections.
    e. 125,001 to 200,000 sq. ft. (11,611 to 18,580 sq. m): Five inspections.
    f. Over 200,000 sq. ft. (18,580 sq. m): Six inspections.

2. Scope of Testing: Testing shall include the following:

    a. Qualitative air-leakage testing per ASTM E 1186.
    b. Quantitative air-leakage testing per ASTM E 783.
    c. Photo documentation of work to be subsequently concealed.

C. Coordination of Testing: Cooperate with testing agency. Allow access to work areas and staging. Notify testing agency in writing of schedule for Work of this Section to allow sufficient time for testing and inspection.

1. Do not cover Work until testing and inspection is completed and accepted.

D. Reporting: Forward written inspection reports to the Architect within 10 working days of the inspection and test being performed.
E. Correction: Correct deficient applications not passing tests and inspections, make necessary repairs, and retest as required to demonstrate compliance with requirements.
F. The contractor shall be responsible for the proper application of the Outsulation LCMD System 4 materials.
G. Dryvit assumes no responsibility for on-site inspections or application of its products.
H. If required, the contractor shall certify in writing the quality of work performed relative to the substrate system, details, installation procedures, workmanship and the specific products used.
I. If required, the EPS supplier shall certify in writing that the EPS meets Dryvit's specifications.
J. 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.

3.8 CLEANING

A. Clean spills, stains, and overspray resulting application utilizing cleaning agents recommended by manufacturers of affected construction. Remove masking materials.
B. Protect membrane air barrier from damage from subsequent work. Protect membrane materials from exposure to UV light for period in excess of that acceptable to membrane air barrier manufacturer; replace overexposed materials and retest.

C. All excess Outsulation LCMD System 4 materials shall be removed from the job site by the contractor in accordance with contract provisions and as required by applicable law.

D. All surrounding areas, where the Dryvit Outsulation LCMD System 4 has been applied, shall be left free of debris and foreign substances resulting from the contractor's work.

3.9 PROTECTION

A. Outsulation LCMD System 4 shall be protected from inclement weather and other sources of damage until dry and permanent protection in the form of flashings, sealants, etc. are installed.

3.10 REPAIRS FOR EXISTING EIFS SYSTEMS

A. Existing systems with cracks or impact damage shall be repaired as follows:

1. Using a sharp utility knife, hand saw or circular saw with a carborundum blade, cut the damaged EIFS approximately 3 three inches away from the affected areas, and remove the insulation board and other components down to the substrate.
2. Verify the substrate is undamaged and structurally sound.
3. If the substrate is structurally sound, and the air and weather resistive barrier (A/WRB) is undamaged, move onto step four (4), if the A/WRB is damaged, remove EPS adhesive and apply AquaFlash to reseal damaged barrier.
4. Grind off finish a minimum of three inches on each side of the area where the insulation has been removed. **Do not cut into the reinforcing mesh with the grinder.** The edges of the finish should be sharp, clean and non-tapered from the finish down to the base coat layer.
5. Install new insulation board to the substrate tight against EPS with the appropriate adhesive. Sliver all gaps to ensure there is no space between the EPS boards. **Do not use base coat to fill gaps between EPS board Joints**.
6. Mask off the existing finish, apply basecoat and mesh on new insulation board and overlap onto existing exposed base coat layer approximately 2 1/2". Ensure that the base coat between the old and the new is flat and seated approximately 1/16" below the surface of the existing finish coat. Allowing a 1/16" recess is necessary so the finish coat, when applied, will become overall flush with the existing finish coat. Allow to fully dry.
7. Precisely mask off the existing finish. Apply new finish and blend new texture into existing texture. Allow to fully dry.
8. Clean entire wall of areas where repairs have been made using appropriate cleaning method based on type of contaminants noted on subject surfaces.
9. Apply Dryvit Weathercoat to the entire wall where damage was repaired.

B. Existing systems with damaged edge shall be repaired as follows:

1. Using a sharp utility knife, hand saw or circular saw with a carborundum blade, cut the damaged EIFS approximately 3 three inches away from the affected areas, and remove the insulation board and other components down to the substrate.
2. Verify the substrate is undamaged and structurally sound.
3. If the substrate is structurally sound, and the air and weather resistive barrier (A/WRB) is undamaged, move onto step four (4), if the A/WRB is damaged, remove EPS adhesive and apply AquaFlash to reseal damaged barrier.
4. Grind off finish a minimum of three inches on each side of the area where the insulation has been removed. **Do not cut into the reinforcing mesh with the grinder.** The edges of the finish should be sharp, clean and non-tapered from the finish down to the base coat layer.
5. Apply reinforcing mesh to the exposed face leaving an extra 2 1/2" overhanging on the edges abutting the previously cut edges and the exposed return edge being covered and back-wrapped an additional 3-inches. Set insulation tightly into place where the damaged piece was removed with the appropriate adhesive. Sliver all gaps to ensure there is no space between the EPS boards. **Do not use base coat to fill gaps between EPS board Joints**.
6. Mask off the existing finish, apply basecoat to the mesh on new insulation board and overlap mesh onto existing exposed base coat layer approximately 2 1/2". Ensure that the base coat between the old and the new is flat and seated approximately 1/16" below the surface of the existing finish coat. Allowing a 1/16" recess is necessary so the finish coat, when applied, will become overall flush with the existing finish coat. Allow to fully dry.
7. Precisely mask off the existing finish. Apply new finish and blend new texture into existing texture. Allow to fully dry.
8. Clean entire wall of areas where repairs have been made using appropriate cleaning method based on type of contaminants noted on subject surfaces.
9. Apply Dryvit Weathercoat to the entire wall where damage was repaired.

END OF SECTION 07 24 13