



Timothy Hayden, Director
Roberta L. Baker, Procurement Officer

**CALVERT COUNTY
DEPARTMENT OF FINANCE & BUDGET
PROCUREMENT OFFICE**

150 Main Street, Suite 107
Prince Frederick, Maryland 20678
410-535-1600 • 301-855-1243
www.calvertcountymd.gov

Board of Commissioners
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April 25, 2019

**ITB 2019-095
DEMOLITION AND CONSTRUCTION
PRINCE FREDERICK VOLUNTEER FIRE DEPARTMENT (COMPANY 2)
PRINCE FREDERICK, CALVERT COUNTY, MARYLAND**

QUESTIONS AND ANSWERS/CLARIFICATION NO. 1

Following are questions and answers/clarification for the above-referenced Request for Proposal. Acknowledge receipt of this document by executing the signature block provided on each page. **This completed and signed document should be included with your proposal**. Failure to do so may subject bidder to disqualification.

1. Currently, below specification calls for Perm A barrier VP with regard to above project.

2.3 ACCESSORIES

A. Accessories for **Perm-A-Barrier VP**

1. Bituthene® Liquid Membrane—for details and terminations
2. Perm-A-Barrier Wall Flashing—heavy duty fully-adhered membrane for throughwall flashing detailing
3. Perm-A-Barrier Detail Membrane—flexible, fully-adhered membrane for detail flashing areas
4. Sealants—Refer to Technical Letter 1 for details on compatible waterproofing sealants

We would like to request that our AIR-SHIELD LMP please be reviewed as a permeable air barrier here. Please see attached data sheet to assist with review.

See Addendum No. 1.

CONTRACTOR'S LEGAL BUSINESS NAME: _____

AUTHORIZED SIGNATURE: _____ DATE: _____

Mailing Address: 175 Main Street, Prince Frederick, Maryland 20678
Maryland Relay for Impaired Hearing or Speech: 1-800-735-2258

PRODUCT DATA

MasterFormat: 07 27 26

W. R. MEADOWS,
SEALTIGHT

NO. 724-B

NOVEMBER 2017
(Supersedes September 2016)

AIR-SHIELD™ LMP

Liquid Membrane Vapor Permeable Air Barrier

DESCRIPTION

AIR-SHIELD LMP is a water-based air/liquid moisture barrier that cures to form a tough, seamless, elastomeric membrane. AIR-SHIELD LMP exhibits excellent resistance to air leakage. When properly applied as a drainage plane, AIR-SHIELD LMP prohibits liquid water intrusion into the substrate.

USES

AIR-SHIELD LMP has been specifically formulated to act as an air and liquid moisture barrier, allowing vapor to pass through it. It may be applied to most common surfaces and integrated into various wall systems. AIR-SHIELD LMP is suitable for both new construction and retrofit applications. Primary applications include cavity wall and masonry wall construction. AIR-SHIELD LMP works equally well as an air barrier on precast concrete, cast-in-place concrete, masonry (concrete block), interior and exterior gypsum board, Styrofoam, primed steel, aluminum mill finish, anodized aluminum, primed galvanized metal, drywall, and plywood.

FEATURES/BENEFITS

- Non-asphaltic – designed to meet stringent fire code requirements.
- High permeability - allows the transmission of moisture vapor through porous building materials.
- Highly flexible - bridges cracks, which may form in the substrate.
- UV resistant – gray membrane can be left exposed up to six months. Black membrane can be exposed for an indefinite period and is ideal for exposed applications, such as beneath rain screen panels.
- User friendly – single-component, water-based technology allows for simple, safe application and easy cleanup.

- Liquid applied - simplifies detailing and assures a monolithic, seamless membrane when applied to a rough or smooth surface.
- Sprayable - with appropriately configured airless spray equipment - low application costs.
- Excellent adhesion - remains firmly bonded to the substrate, even when applied over damp surfaces.
- Self-sealing – Nails and fasteners can be used without compromising performance.
- Low VOC content.

PACKAGING

5 Gallon (18.93 Liter) Pails
55 Gallon (208.20 Liter) Drums

COVERAGE

Application Rate: 25 ft.²/gal. (0.6 m²/L)
Wet Film Thickness: 60 mil (1.5 mm)
Cured Film Thickness: 30 mil (0.8 mm)

SHELF LIFE

When stored indoors in original, unopened containers at temperatures between 40° - 90° F (4° - 32° C), optimum performance and best use is obtained within one year of date of manufacture.

SPECIFICATIONS

- Exceeds Air Barrier Association of America (ABAA) requirements for fluid-applied air barriers.
- Exceeds ABAA maximum assembly air leakage requirements when tested in accordance with ASTM E 2357.
- Exceeds ABAA maximum material air leakage requirements when tested in accordance with ASTM E 2178.
- Exceeds the requirements of the Massachusetts Commercial Energy Code for Building Envelope Systems.
- Complies with all current federal, state, and local maximum allowable VOC requirements, including National EPA VOC Emission Standard for Architectural Coatings, CARB, LADCO, and OTC Phase I and II.

CONTINUED ON REVERSE SIDE...

W. R. MEADOWS, INC.
P.O. Box 338 • HAMPSHIRE, IL 60140-0338
Phone: 847/214-2100 • Fax: 847/683-4544
1-800-342-5976
www.wrmeadows.com

HAMPSHIRE, IL / CARTERSVILLE, GA / YORK, PA
FORT WORTH, TX / BENICIA, CA / POMONA, CA
GOODYEAR, AZ / MILTON, ON / ST. ALBERT, AB

TECHNICAL DATA

Solids Content, %:	58
Color:	Gray (Black – special order only)
Flexibility @ -26° C (-15° F), (ASTM C 836):	PASS
Elongation (ASTM D 412), %:	1300
Water Vapor Permeance (ASTM E 96, Procedure B) Perms:	12
Service Temperature:	Not to exceed 175° F (80° C)
Nail Sealability (ASTM D 1970):	Pass
Storage Temperature	40 - 90° F (4 - 32° C)
Air/Substrate Temperature (At Time of Application):	>20° F (-6.7° C)

AIR LEAKAGE

Test Method	ASTM E 2178	ASTM E 2357
Pressure	75 Pa (1.57 lb./ft. ²)	75 Pa (1.57 lb./ft. ²)
ABAA Requirements	0.004 cfm/ft. ² (0.02 L/S/M ²)	0.04 cfm/ft. ² (0.2 L/S/M ²)
AIR-SHIELD LMP Results	<0.004 cfm/ft. ² (0.02 L/S/M ²)	<0.04 cfm/ft. ² (0.2 L/S/M ²)

AIR-SHIELD LMP conforms with ASTM E 84, Class A.

AIR-SHIELD LMP may be used in NFPA 285 complying wall assemblies. Contact W. R. MEADOWS for further information.

APPLICATION

Surface Preparation ... All surfaces must be clean (free of all coatings and curing compounds), free of frost, structurally sound, and relatively smooth. AIR-SHIELD LMP can be applied to "green" or damp concrete if there is no liquid water on the surface. Prepare substrate per manufacturer's instruction prior to membrane application.

Exterior Sheathing Panels ... Exterior sheathing panels are to be installed and fastened per manufacturer's recommendation. For detailed application information, see INSTALLATION INSTRUCTIONS: JOINT TREATMENT OF EXTERIOR SHEATHING PANELS WHEN USING AIR-SHIELD FLUID APPLIED MEMBRANES available at www.wrmeadows.com. For joint treatment in plywood and OSB sheathing, please see PLYWOOD SHEATHING JOINT DETAIL INSTALLATION GUIDELINES also available at www.wrmeadows.com.

Rough Openings ... Refer to INSTALLATION GUIDELINES: AIR-SHIELD ROUGH OPENINGS available at www.wrmeadows.com.

Concrete Masonry Units ... Before applying AIR-SHIELD LMP to CMU surfaces, patch all cracks, protrusions, small voids, offsets, details, irregularities, and small deformities with MEADOW-PATCH[®] 5 or MEADOW-PATCH 20 from W. R. MEADOWS at least two hours before application.

Appearance ... AIR-SHIELD LMP (gray) will dry gray in color. AIR-SHIELD LMP (black) appears dark gray in the container, but the dried film will be black.

Temperature/Conditions ... Apply AIR-SHIELD LMP at air and surface temperatures of 20° F (-6.7° C) and higher. Curing/drying times are dependent on air temperature, airflow, relative humidity, substrate temperature, etc., specific to each individual application. Typical results are:

Tack-Free Time: 2 hours
Full Cure: 48 hours

Roller ... AIR-SHIELD LMP can be applied directly from the container; a ½" (19.1 mm) nap roller is recommended. Apply AIR-SHIELD LMP on a vertical surface, in multiple coats if necessary, to achieve a final film thickness of 60 mils wet (30 mils dry). NOTE: While the proper film thickness may be achieved with a single coat, multiple coats may be necessary if the material slumps due to temperature and/or substrate conditions. Allow each previous coat to dry (approximately one hour) prior to applying the next coat.

Sprayer ... AIR-SHIELD LMP should be stored and maintained at a temperature of 60° F (15.6° C) or higher throughout the entire spray application. Note: Use of Graco HydraMax 350 or Graco GH833 is recommended for optimum performance. A Graco heavy duty texture gun with either a 0.051" (Graco GHD 551), 0.035" (Graco GHD 535), or 0.037" (Graco GHD 537) spray tip is recommended. If cratering occurs, the GHD 535 or 537 is recommended for a smoother finish.

Spray AIR-SHIELD LMP on a vertical surface, in multiple coats if necessary, to achieve a final film thickness of 60 mils wet (30 mils dry). NOTE: While the proper film thickness may be achieved with a single coat, multiple coats may be necessary if the material slumps due to temperature and/or substrate conditions. Allow each previous coat to dry (approximately one hour) prior to applying the next coat.

Film Thickness ... Frequently inspect the surface with a wet film gauge to verify that proper film thickness is achieved and that the film thickness is uniform over the entire surface. Porous substrates, masonry blocks, etc., may require multiple coats to achieve recommended film thickness.

Cleanup ... Material should not be left in the pump, lines, or gun when finished spraying. After spraying, flush water through the system until pump and hose are clear (approximately five gallons). Aromatic solvents, such as xylene or toluene (approximately two gallons) can be used for final flushing after water is flushed through the pump and lines. Water should be flushed through the machine to remove any solvent prior to spraying of AIR-SHIELD LMP.

PRECAUTIONS

DO NOT FREEZE. Keep containers tightly sealed. Maximum UV exposure period for gray membrane is six months; unlimited for black. Do not apply AIR-SHIELD LMP if rainfall or snow is forecast or imminent within 12 hours of application.

HEALTH AND SAFETY

Direct contact may result in mild irritation to the skin and eyes. Should adverse effects occur, remove subject from area immediately. If irritation occurs and persists, move victim from exposure source and treat symptomatically. Flush affected areas with mild soap and water. Refer to safety data sheet for complete health and safety information.

TECHNICAL ASSISTANCE

Please contact W. R. MEADOWS for specific details and/or data not outlined in this literature. Technical assistance, from design to product application, is available upon request.

LEED INFORMATION

May help contribute to LEED credits:

- EAp2: Minimum Energy Performance
- EAc2: Optimize Energy Performance
- MRc9: Construction and Demolition Waste Management
- EQc2: Low-Emitting Materials [For Healthcare and Schools (exterior-applied products) ONLY]

For CAD details, most current data sheet, further LEED information, and SDS, visit www.wrmeadows.com.



LIMITED WARRANTY

W. R. MEADOWS, INC. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

Disclaimer

The information contained herein is included for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. W. R. MEADOWS, INC. cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information. As W. R. MEADOWS, INC. has no control over the use to which others may put its product, it is recommended that the products be tested to determine if suitable for specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine the suitability of products for specific application and assume all responsibilities in connection therewith.