

**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.

**FEATURES/BENEFITS**

- 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 – <100 g/L.

**PACKAGING**

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

**SPECIFICATIONS**

- Exceeds Air Barrier Association of America (ABAA) Section 07263 Liquid-Applied Vapor Permeable Air Barrier System.
- Exceeds ABAA maximum assembly air leakage requirements when tested in accordance with ASTM E 2357.
- Exceeds the requirements of the Massachusetts Commercial Energy Code for Building Envelope Systems.
- 2005 National Building Code of Canada
- Complies with all current federal, state, and local maximum allowable VOC requirements, including U.S. EPA, LADCO, SCAQMD, and OTC.
- Complies with Canada VOC Concentration Limits for Architectural Coatings Regulations.

**Air Leakage**

Test Method	ASTM E 283 & ASTM E 2178-01	ASTM E 2357
Pressure	75 Pa (1.57 lb./ft. <sup>2</sup> )	75 Pa (1.57 lb./ft. <sup>2</sup> )
ABAA Requirements	0.004 cfm/ft. <sup>2</sup> (0.02 L/S/M <sup>2</sup> )	0.04 cfm/ft. <sup>2</sup> (0.2 L/S/M <sup>2</sup> )
AIR-SHIELD LMP Results	<0.004 cfm/ft. <sup>2</sup> (0.02 L/S/M <sup>2</sup> )	<0.04 cfm/ft. <sup>2</sup> (0.2 L/S/M <sup>2</sup> )

**\*Independant tests available upon request.**

*CONTINUED ON REVERSE SIDE...*

## PHYSICAL PROPERTIES (TYPICAL)

Solids Content, %:	58
Color:	Gray (Black – special order only)
Flexibility @ -26° C (-15° F), (ASTM C 836):	PASS
Elongation (ASTM D 412), %:	1200
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 and Application Temperature of AIR-SHIELD LMP For Roller Application: For Spray Application:	40 - 90° F (4 - 32° C) 60 - 90° F (16 - 32° C)
Air/Substrate Temperature (At Time of Application):	> 40° F (4° C)

## LEED INFORMATION

May help contribute to LEED credits:

- EA Credit 1: Optimize Energy Performance
- IEQ Credit 3.1: Construction IAQ Management Plan:  
During Construction
- IEQ Credit 4.2: Low-Emitting Materials: Paints &  
Coatings
- IEQ Credit 7.1: Thermal Comfort - Design
- MR Credit 2: Construction Waste Management
- MR Credit 5: Regional Materials

## 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. Joints <1/4” should be pretreated with AIR-SHIELD LMP or filled with AIR-SHIELD JOINT FILLER in order for the material to create a continuous film when applied. Joints >1/4” in exterior sheathing panels (drywall and glass-faced) should be filled with AIR-SHIELD JOINT FILLER and then taped with 2” wide AIR-SHIELD MESH TAPE. For plywood and oriented strand board (OSB), use AIR-SHIELD self-adhesive membrane over all joints.

**Details and Protrusions ...** Before application of AIR-SHIELD LMP, apply a 6” (152 mm) minimum wide strip (lapped 3” on each side) of AIR-SHIELD where joints between dissimilar building materials occur, i.e. details around doors and windows, as well as protrusions. Architectural details are available online at [www.wrmeadows.com](http://www.wrmeadows.com) or by calling 1-800-342-5976.

**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 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 40° F 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 ¾” 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 or higher throughout the entire spray application. The product will become thick and difficult to spray at temperatures below 60° F. 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.

#### **COVERAGE**

<b>Application Rate</b>	25 ft. <sup>2</sup> /gal.
<b>Wet Film Thickness</b>	60 mil (2.3 mm)
<b>Cured Film Thickness</b>	30 mil (1.15 mm)

#### **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.

#### **SHELF LIFE (TYPICAL)**

Twelve (12) months in original, unopened container. Store at 40° - 90° F.

#### **PRECAUTIONS**

DO NOT FREEZE. Keep containers tightly sealed. Maximum UV exposure period for grey membrane is six (6) months, unlimited for black. Do not apply AIR-SHIELD LMP if rainfall is forecast or imminent within 12 hours of application. Do not apply AIR-SHIELD LMP when temperatures are expected to fall below 32° F (0° C) within 24 hours of the completed 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 Material 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.

**For CAD details, most current data sheet, further LEED information, and MSDS, visit [www.wrmeadows.com](http://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**

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