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AIR-SHIELD™ LM

Liquid Membrane Air/Vapor and Liquid Moisture Barrier

DESCRIPTION

AIR-SHIELD LM is a liquid-applied, water-based, polymer-modified air/vapor and liquid moisture barrier. AIR-SHIELD LM cures to form a tough, seamless, elastomeric membrane, which exhibits excellent resistance to air and moisture transmission. AIR-SHIELD LM is a water-based asphalt emulsion modified with a blend of synthetic polymers and special additives. The product can be applied in two ways – first, as a single-component product for spray and roller application. Secondly, the product can be applied as a co-spray, two-component material in combination with W. R. MEADOWS CURE-IT. Either method will achieve the required nominal 45 mils dry film thickness.

USES

AIR-SHIELD LM has been specifically formulated to act as an air/vapor and liquid moisture barrier within the building envelope. It may be applied to most common surfaces and integrated into various wall systems. AIR-SHIELD LM is suitable for both new construction and restoration. Primary applications include cavity wall and masonry wall construction. AIR-SHIELD LM is specifically designed as an air and/or vapor barrier on precast concrete, cast-in-place concrete, masonry (concrete block), exterior gypsum board, Styrofoam, primed steel, aluminum mill finish, anodized aluminum, primed galvanized metal, and plywood.

FEATURES/BENEFITS

- AIR-SHIELD LM applied through co-spray (utilizing CURE-IT) method develops rapid resistance to rain wash-off and can be applied in cool and damp conditions. Co-spray application method extends seasonal application window.
- Low permeability – prevents the transmission of air and inhibits moisture and vapor from passing through porous building materials.
- Cost effective - Co-spray application allows for single application thickness in a single coat, thereby reducing installation cost.
- Versatile - AIR-SHIELD LM can be applied by two component co-spray or one-component spray or roller.
- Environmentally compatible – AIR-SHIELD LM is non-toxic and non-flammable.
- User friendly – single-component, water-based technology allows for simple, safe application, and easy cleanup.
- Phthalate-free.
- Liquid-applied – simplifies detailing and assures a monolithic, seamless membrane when applied to a rough or smooth surface.
- Excellent adhesion – remains firmly bonded to most substrates.
- VOC content is 0.0 g/L. Produces no harmful odors. VOC compliant in all 50 states.
- Compatible with other asphalt-based products.

PACKAGING

5 Gallon (18.93 L) Pails
55 Gallon (208.20 L) Drums**
**Available upon special order only

COVERAGE

Application Rate	25 ft.^{2}/gal. (0.49 m^2/L)
Wet Film Thickness	65 mil (1.5 mm)
Cured Film Thickness	45 mil (1.15 mm)

Coverage dependent on substrate type, weather, and application conditions.

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/STANDARDS

- Exceeds Air Barrier Association of America (ABAA) requirements for fluid-applied air barriers.
- Exceeds ABAA maximum air permeance requirements when tested in accordance with ASTM E2178.
- Exceeds ABAA maximum assembly air leakage requirements when tested in accordance with ASTM E2357.
- Complies with all current federal, state, and local maximum allowable VOC requirements, including National EPA VOC Emission Standard for Architectural Coatings, CARB, LADCO, OTC Phase I and II, and SCAQMD.

CONTINUED ON REVERSE SIDE …

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TECHNICAL DATA

% Solids by weight	65
VOC Content	0 g/L
Color	Black (Wet) Brown (Dry)
Elongation (ASTM D412)	1500%
Water Vapor Permeance (ASTM E96, Procedure A)	IBC Class I Vapor I 0.1 Perms
Service Temperature	-20° to 140° F (-29° C to 60° C)
Application Temperature	>30° F (-1° C)
Storage Temperature **Ambient Air, Substrate & Material**	
1-Part System	>40° F (-1° C) and 48 hours
Co-Spray	>20° F (-6.7° C) and Rising[1]

All technical data is typical information and will vary due to testing methods, site conditions, temperature, drying conditions, procedures, batching, and expected variations in raw materials and batching . Statistical differences in test results should be anticipated. On-site testing results may not correlate to published laboratory results due to testing variations.

Note 1 – Follow cold temperature guide requirements stated below under the section titled Co-Spray Application.

APPLICATION

Before application, obtain full, safe access to the area and mask adjacent surfaces to protect from overspray or drips. Verify that the product is within shelf life, as indicated on the product label. Inspect the freeze indicator on the pallet to verify if it has been broken from exposure to freezing temperatures. Contact W. R. MEADOWS Technical Service for information on product inspection if the freeze indicator has been broken.

Surface Preparation

Concrete … Shall be cured in place seven days minimum. It shall be smooth, with sharp protrusions such as cold joints ground flush. 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.

Concrete Masonry Unit (CMU) … Mortar joints shall be struck flush and shall be free of voids. Mortar droppings shall be removed from brick ties. 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.

OSB, Plywood, Lumber, Pressure-Treated Wood … Wood sheathing inspection carries the same protocol given for gypsum sheathing. Moisture content, measured with a wood moisture meter in the core of the substrate, shall be below 20%. Do not cover any wooden materials with AIR-SHIELD LM or W. R. MEADOWS system products if moisture content is 20% or above. In most cases, fire-treated and pressure-treated wood must be kiln dried to accommodate the less than 20% moisture content requirement. Membrane adhesion on oriented strand board (OSB) can sometimes be affected by the level of surface texture or the presence of wax that is part of the binder used to bond together the wood strands. To ensure adequate adhesion per project and building code requirements, in-situ adhesion tests should be performed to determine suitability of substrate prior to full installation. If there are variations in the OSB surface, multiple tests may be required.

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 LM 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 AIR-SHIELD ROUGH OPENINGS INSTALLATION GUIDELINES document available at www.wrmeadows.com for recommendations.

Application Method

Thoroughly, mechanically mix AIR-SHIELD LM prior to application using a low speed (<500 rpm) drill and liquid mixing blade, such as Jiffy Mixer.

Co-Spray Application … Co-spray curative to be used with the AIR-SHIELD LM is CURE-IT. CURE-IT is ready to use, no dilution required. Using proper dual component spray set-up and application methods outlined in the Sprayer Equipment Guidelines for W. R. MEADOWS Co-Spray Fluid-Applied Membranes, spray product onto wall surfaces, holding the gun approximately 20" - 24" (508 – 610 mm) from the surface. Spray apply AIR-SHIELD LM onto wall surfaces, holding the gun square to the surface, and using a cross-hatch pattern to apply an even coat. Minimum wet mil thickness achieved in a single coat shall be 65 mils measured with a comb-type wet mil gauge immediately after spray and before the emulsion breaks. Do not apply more than 80 mils wet thickness per coat. In certain applications in direct sun or very hot days, blistering will occur due to outgassing of the water in the membrane. Avoid installation in direct sun, especially on warm days.

Recommended Tip Size for Co-Spray and 1-Part Spray Application: Graco XHD 551.

In cooler temperatures [<40° F (4.4° C)], condition AIR-SHIELD LM CO-SPRAY to a minimum 50° F (10° C) by storing overnight at 75° F (23.9° C) or higher prior to application. Use a heated trailer drum heater and a heat exchanger to keep the product in drums and lines warm [ideally above 70° F (21.1° C)] during spraying in cold conditions. Properly conditioned product sprays, builds, and cures more consistently than cold product, thereby avoiding potential jobsite issues due to rain, snow, frost, or freezing conditions.

Single Component Spray Application ...
Tack-Free film: 2 hours at 75° F (23.9° C) and 50 RH
Dry Film: 48 hours at 75° F (23.9° C) and 50 RH

Do not apply AIR-SHIELD LM when air, material, and surface temperatures are expected to fall below 32º F (0º C) within 48 hours of completed application.

Co-Spray Application with CURE-IT...
Firm Set: <5 minutes at 75° F (23.9° C) and 50 RH
Dry Film: 12 hours at 75° F (23.9° C) and 50 RH

Allow the membrane to dry completely before subjecting it to inspection for air/water leakage and adhesion testing. Drying time varies with substrate, ambient temperature, and humidity. Membrane is dry when it appears black and rubber-like and feels dry when pressed. It is recommended that AIR-SHIELD LM be allowed to air dry to a tack-free film before application of specified insulation. Higher ambient air and surface temperature will affect cohesive and adhesion properties during testing.

Compatibility ... Prior to project start, during the initial walk through, identify all membranes, coatings, sealants, tapes, and joint compounds by others which will contact any AIR-SHIELD LM and any accessories products. W. R. MEADOWS offers a complete air/vapor and waterproofing building envelope enclosure system and should be used when possible since compatibility and functionality have already been verified. If not possible to use W. R. MEADOWS system products, verify compatibility with W. R. MEADOWS and the other materials' manufacturer prior to installation. Laboratory verification of compatibility can take up to six weeks.

AIR-SHIELD LM is not compatible with most polyurethanes, soft PVC, or silicones.

If running occurs during application, decrease application thickness and allow coat to dry firm before proceeding. Build 65 mils total wet film thickness in multiple coats. Allow first/previous coat to dry firm before covering with the next application.

Cleanup ... Uncured AIR-SHIELD LM cleans up easily while wet with water. Cured material is best removed by xylene (xylol) or by mechanical means.

LIMITATIONS

Maximum UV exposure period is 30 days. Protect adjacent areas from overspray. Also, when co-spraying, protect area below from water that will release from the drying co-sprayed AIR-SHIELD LM. This may run down the wall and cause potentially staining. AIR-SHIELD LM is not designed to perform as a permanently exposed membrane. Keep containers tightly sealed. KEEP FROM FREEZING. Do not apply AIR-SHIELD LM if rainfall is forecast or imminent.

GreenLine® By W. R. MEADOWS
Environmentally Responsible Products for the Building Industry

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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