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JANUARY 2025
(Supersedes April 2023)

AIR-SHIELD™ LSR

Liquid Membrane Air/Vapor and Liquid Moisture Barrier

DESCRIPTION

AIR-SHIELD LSR (liquid synthetic rubber) is an asphalt-free, single-component, synthetic rubber based liquid air/vapor and liquid moisture barrier. AIR-SHIELD LSR cures to form a tough, seamless, elastomeric membrane, which exhibits excellent resistance to air and moisture transmission.

A low VOC version of AIR-SHIELD LSR is available for those in low VOC areas.

USES

AIR-SHIELD LSR 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 LSR is suitable for both new construction and restoration. Primary applications include cavity wall and masonry wall construction. AIR-SHIELD LSR is designed as an air barrier for 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.
- Low permeability - prevents the transmission of air and inhibits moisture and vapor from passing through porous building materials.
- Highly flexible - bridges cracks, which may form in the substrate.
- 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.
- Low VOC content. (Extra-low VOC version also available.)
- Produces no harmful odors.
- Compatible with asphalt-based emulsion products.
- UV resistant – membrane can be left exposed up to four months.

PACKAGING

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

COVERAGE

Application Rate	17 - 22 ft.^{2}/gal. (1.59 - 2.05 m^2/3.8 L)
Wet Film Thickness	75 mils
Cured Film Thickness	40 mils (1 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

- ASTM E 84, Class A
- Exceeds ABAA maximum material air permeance requirements when tested in accordance with ASTM E2178.
- Complies with all current federal, state, and local maximum allowable VOC requirements, including National EPA VOC Emission Standard for Architectural Coatings, Arizona Maricopa County, CARB, Colorado AIM, LADCO, OTC Phase I and II, Utah Department of Environmental Quality, and SCAQMD.

CONTINUED ON REVERSE SIDE …

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TECHNICAL DATA

Solids Content, %:	56
VOC Content, g/L	Standard: 115 Low VOC Version: 72
Color:	Sprays Pink Dries to Desert Tan
Flexibility @ -26° C (-15° F), (ASTM C836):	PASS
Tensile Strength (ASTM D412), PSI (MPa)	250 (1.72)
Elongation (ASTM D412), %:	700
Adhesion to Exterior Gypsum Sheathing, CMU, Concrete or Exterior Grade Plywood (ASTM D4541 modified per ABAA requirements)	>16 psi (0.11 MPa)
Water Vapor Permeance (ASTM E96, Procedure A) Perms:	0.1
Service Temperature:	Not to exceed 175° F (80° C)
Nail Sealability (ASTM D1970):	Pass
Air/Substrate Temperature (At Time of Application):	>20° F (-6.7° C) and rising Low VOC Version: >60° F (15.6° C) and rising

Air Leakage

Test Method	ASTM E2178-01	ASTM E2357
Pressure:	75 Pa (1.57 lb/ft.^{2})	75 Pa (1.57 lb/ft.^{2})
ABAA Requirements, maximum:	0.004 cfm/ft.^{2} (0.02 L/S/M^2)	0.04 cfm/ft.^{2} (0.2 L/S/M^2)
AIR-SHIELD LSR Results:	<0.004 cfm/ft.^{2} (<0.02 L/S/M^2)	<0.04 cfm/ft.^{2} (<0.2 L/S/M^2)

*Independent test available upon request. AIR-SHIELD LSR 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), structurally sound, frost-free, and relatively smooth. Prepare substrate per manufacturer's instruction prior to application of membrane.

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 available at www.wrmeadows.com.

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

Concrete Masonry Units ... Before applying AIR-SHIELD LSR 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.

Temperature/Conditions ... Drying (curing) times are dependent on air temperature, airflow, relative humidity, substrate temperature, wind chill, dew point, etc. For example, as the temperature decreases or the humidity increases, the dry time will increase. If the temperature drops below 40° F (4.5° C), dry time (cure rate) and resistance to precipitation and dew will be delayed. If the dew point is within five degrees of the air temperature, drying will be dramatically slowed. Protect membrane from precipitation and washout prior to drying. Exposure to air temperatures/wind chills below 20° F (-6.6° C) during drying may lead to cracking and decrease of performance of AIR-SHIELD LSR.

Typical Dry Times:

Tack-Free Time: 4 hours at 75° F (23.5° C) & 50% RH
Dry Time: 48 hours at 75° F (23.5° C)

Application Method ... AIR-SHIELD LSR may be applied by spraying or a 3/4" (19.1 mm) minimum nap roller. (For recommendations on spray equipment, consult W. R. MEADOWS technical staff.)

AIR-SHIELD LSR may be sprayed on at the minimum coverage rate of approximately 17 - 22 ft.^{2}/gal. (0.42 - 0.54 m^2/L) (75 mils wet) (40 mils dry). Note: For roller applications or during periods of extremely hot weather, two coats may be necessary if the material begins to slump. Apply second coat after first coat has completely dried, approximately one to two hours after first coat. Frequently inspect surface area with a wet mil gauge to ensure consistent thickness. Work material well into any fluted rib forming indentations. Porous masonry block walls may require additional coats to obtain desired thickness.

Curing and Drying ... Allow material to dry at air and surface temperatures of 20° F (-6.7° C) or higher. Curing times will be affected by relative humidity, temperature and airflow. The following times are given for average conditions and standard thicknesses. Actual times may differ, depending on specific conditions present on job at time of application. It is recommended that AIR-SHIELD LSR be allowed to air dry to a tack-free film before application of specified insulation. Maximum exposure time for AIR-SHIELD LSR is four months.

Tack-free film: 2 hours
Full cure: 48 hours

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

LIMITATIONS/PRECAUTIONS

DO NOT FREEZE. Keep containers tightly sealed. Maximum UV exposure period is four months. It is recommended that the roof is installed prior to the application of the AIR-SHIELD LSR. This will help avoid water from getting behind the backup wall or filling the CMU block, which can potentially lead to jobsite concerns. Do not apply AIR-SHIELD LSR if precipitation is forecast or imminent within 24 hours at 75° F (23.5° C) and 50% RH of application. Adhesion of membrane 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. Prior to placement on OSB, 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.

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.

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.

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