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**AIR-SHIELD™**

(Supersedes September 2019)

## ALUMINUM SHEET MEMBRANE

### Self-Adhering Air/Vapor and Liquid Moisture Barrier

#### DESCRIPTION

AIR-SHIELD ALUMINUM SHEET MEMBRANE self-adhering air/vapor and liquid moisture barrier is part of a total W. R. MEADOWS system to complete the building envelope. It is a roll-type product that is nominally 40 mils thick. The membrane's-controlled thickness is fabricated from aluminum bonded to specially modified asphalt.

This unique, self-adhesive membrane, protected by a special release paper, is strong and durable. It remains flexible when surface mounted and will adhere to most primed surfaces at minimum temperatures of 40° F (4.4° C). The membrane provides excellent protection as a tough barrier that won't shrink, sag, dry out, crack, or rot. It offers excellent resistance to punctures during installation.

#### USES

AIR-SHIELD ALUMINUM SHEET MEMBRANE self-adhering air/vapor and liquid moisture barrier is designed for a variety of uses.

Primary applications include cavity wall and masonry wall construction. AIR-SHIELD ALUMINUM SHEET MEMBRANE works equally well as an air and/or vapor 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

- Low permeability - prevents the transmission of air and inhibits moisture vapor through porous building materials.
- Provides a complete above-grade air, vapor, and water barrier on a variety of construction materials.
- Controlled thickness membrane is ideal for air barrier applications.
- Modified membrane is flexible at low temperatures.
- 12 month exposure time.
- Excellent adhesion to prepared substrates of 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.

- Self-healing when penetrated with self-tapping screws or nails.
- No flame required.
- Low temperature version also available.

#### PACKAGING

AIR-SHIELD ALUMINUM SHEET MEMBRANE is packaged in rolls of 36.5" (.93 m) x 75' (22.86 m). AIR-SHIELD ALUMINUM SHEET MEMBRANE can also be cut to desired width.

Optional sizes include:

4" x 75', 6" x 75', 9" x 75', 12" x 75', 16" x 75'  
18" x 75', 20" x 75' and 24" x 75'.

#### COVERAGE

Coverage is approximately 228 ft.<sup>2</sup> (21.1 m<sup>2</sup>). Net coverage when lapped 2.5" (63.5 mm) is 215.5 ft.<sup>2</sup> (20.0 m<sup>2</sup>).

#### STORAGE

AIR-SHIELD ALUMINUM SHEET MEMBRANE should be stored palletized and protected from rain and/or physical damage. Do not store at temperatures above 90° F (32.2° C) for extended periods of time. Do not leave membrane exposed to direct sunlight. Do not double-deck pallets. Store away from sparks or flames. Outdoors, store AIR-SHIELD ALUMINUM SHEET MEMBRANE on pallets and completely cover.

#### SPECIFICATIONS

- Exceeds all current and existing building code regulations.
- Exceeds the requirements of CAN/ULC S741 and S742.
- ABAA Section 07261 Self-Adhering Air and Vapor Barrier Specification

**CONTINUED ON THE REVERSE SIDE...****W. R. MEADOWS, INC.**

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**TECHNICAL DATA**

PROPERTY	TEST RESULTS	TEST METHODS
Thickness, film	0.006 (0.152 mm)	ASTM D3767 method A
Puncture Resistance, film	81 lbf (36.75 Kgf)	ASTM E154
Tensile Strength, MD, film	4,255 psi (29.5 MPa)	ASTM D412 die C modified
Tensile Strength, CMD, film	5,420 psi (37.5 MPa)	ASTM D412 die C modified
Elongation, MD, film, %:	287	ASTM D412 die C modified
Elongation, CMD, film, %:	226	ASTM D412 die C modified
Thickness, membrane + film	0.043" (1.09 mm)	ASTM D3767 method A
Puncture Resistance, membrane + film	88 lbf (40 Kgf)	ASTM E154
Tensile Strength, MD, membrane + film	750 psi (5.2 MPa)	ASTM D412 die C modified
Tensile Strength, CMD, membrane + film	950 psi (6.5 MPa)	ASTM D412 die C modified
Elongation, MD, membrane + film, %:	327	ASTM D412 die C modified
Elongation, CMD, membrane + film, %:	254	ASTM D412 die C modified
Water Absorption, %:	<0.1	ASTM D570
*Water Vapor Transmission, perms:	<0.01	ASTM E96, B
Rubberized asphalt softening point:	205° F (96.1° C)	ASHTO T53
Hydrostatic Resistance:	Equiv. to 230.9' (70.38 m) of water	ASTM D5385
Exposure to Fungi:	Pass, 16 weeks	Soil Test
Flexibility @ -20 °F (-29 °C):	Pass	ASTM D1970
*Air Permeance @ 1.57 lb./ft. <sup>2</sup> (75 Pa)	<0.001 cfm/ft. <sup>2</sup> (<0.004 L/S/M <sup>2</sup> )	ASTM E2178
*Air Leakage @ 1.57 lb./ft. <sup>2</sup> (75 Pa)	<0.001 cfm/ft. <sup>2</sup> (<0.004 L/S/M <sup>2</sup> )	ASTM E2357

**MAINTAIN ENERGY EFFICIENCY**

AIR-SHIELD ALUMINUM SHEET MEMBRANE provides an effective barrier to air exfiltration and infiltration, reducing condensation within the wall assembly, and increasing efficiency of a building's mechanical system. Wet insulating materials lose much of their R-factor performance characteristics, reducing the energy efficiency of the structure. W. R. MEADOWS thermal and moisture protection products play a key role in *maintaining* the structure's energy efficiency and aiding in the integrity of other structural systems, such as insulation.

**APPLICATION**

**Surface Preparation** ... All surfaces to be protected must be clean, dry, frost-free, and smooth. Remove any sharp protrusions and repair all defects.

All surfaces to receive AIR-SHIELD ALUMINUM SHEET MEMBRANE must be clean of oil, dust, and excess mortar. Strike masonry joints flush. All walls to receive AIR-SHIELD ALUMINUM SHEET MEMBRANE must be capped to prevent moisture infiltration from entering the wall during construction. Concrete and masonry joints should be cured at least 72 hours, be clean, dry, smooth, and free of voids. Repair spalled areas; fill all voids and remove all sharp protrusions. Concrete must be cured a minimum of 14 days and must be dry before AIR-SHIELD ALUMINUM SHEET MEMBRANE is applied. Where curing compounds are used, they must be clear resin-based, without oil, wax or pigments. Prepare substrate per manufacturer's instruction prior to application of membrane. All surfaces to which AIR-SHIELD ALUMINUM SHEET MEMBRANE is to be applied must be addressed with MEL-PRIME™ or MEL-PRIME W/B adhesive from W. R. MEADOWS. MEL-PRIME may be applied to an area that is to be covered the same day. Uncovered areas must be re-addressed the next day. See container for complete application directions, drying information, and precautions.

### **Application Method ... AIR-SHIELD**

ALUMINUM SHEET MEMBRANE self-adhesive air/vapor and liquid moisture barrier can be applied at minimum temperatures of 40° F (4° C). Apply membrane to surface addressed with MEL-PRIME by removing release paper and rolling membrane firmly into place. Remove release paper only as membrane is being applied. Ensure membrane is fully adhered and remove all wrinkles and/or fish mouths. Cut AIR-SHIELD ALUMINUM SHEET MEMBRANE with a utility knife to detail around protrusions and masonry reinforcing. Seal all end laps and protrusions with POINTING MASTIC from W. R. MEADOWS. Overlap subsequent courses of membrane a minimum of 2.5" (63.5 mm). Vertical terminations of AIR-SHIELD ALUMINUM SHEET MEMBRANE should either be tied into the wall system or mechanically fastened with TERMINATION BAR from W. R. MEADOWS. AIR-SHIELD ALUMINUM SHEET MEMBRANE is not designed for permanent exposure. Good construction practices call for application of insulation as soon as possible to protect the air barrier.

When used as a flexible wall flashing, AIR-SHIELD ALUMINUM SHEET MEMBRANE should be recessed ½" (13 mm) from the face of the masonry. Flashing should not be permanently exposed to sunlight. Do not allow the rubberized asphalt surface of the flashing membrane to come in contact with sealants containing solvents, creosote, uncured coal tar products, EPDM, or PVC components.

If being used with a masonry cladding, replace AIR-SHIELD ALUMINUM SHEET MEMBRANE with AIR-SHIELD THRU-WALL FLASHING from W. R. MEADOWS due to the potential long term corrosion of the aluminum facer when in contact with the alkalis in the mortar.

**Cleanup ...** Tools, etc. can be cleaned with mineral spirits, paint thinner or aromatic solvent.

### **SAFETY & TOXICITY**

No adverse effects expected with normal product use. Cotton work gloves and safety glasses are recommended. Refer to Safety Data Sheet for complete health and safety information.

### **ACCESSORIES**

**MEL-PRIME W/B ...** This water-based adhesive prepares surfaces for AIR-SHIELD membrane application. Product is ready to use and requires no additional mixing. MEL-PRIME W/B emits no unpleasant odors and works with all waterproofing membranes from W. R. MEADOWS. Can be applied easily by manual spraying or with a roller. Product is VOC-compliant. MEL-PRIME W/B is ideal for use at temperatures of 40° F (4° C) and above.

Coverage: 150 - 200 ft.<sup>2</sup>/gal. (6.14 - 8.6 m<sup>2</sup>/L)

Packaging: 1 Gallon (3.79 L) Units, 4/Carton and 5 Gallon (18.93 L) Pails

**MEL-PRIME Adhesive...** This solvent-based adhesive can be used at temperatures below 40° F (4° C) and above. Can be applied with a roller or brush.

Coverage: 250 - 300 ft.<sup>2</sup>/gal. (6.14 - 7.4 m<sup>2</sup>/L)

Packaging: 1 Gallon (3.79 L) Cans and 5 Gallon (18.93 L) Pails

**TERMINATION BAR...** As an option, TERMINATION BAR may be used to mechanically fasten the membrane.

Packaging: (25) 10' pieces per 20 lb. carton (250 lineal ft.)

**POINTING MASTIC...** Used for sealing exterior vertical and horizontal terminations, laps, around protrusions, and top edges of TERMINATION BAR. Coverage: Approximately 200 lineal ft. (61 m) per gallon (3.79 L) when used as directed.

Packaging: 5 Gallon (18.93 Liter) Pails or 29 oz. (857.65 ml) cartridges, 12/Carton

## PRECAUTIONS

The rubberized asphaltic membrane component (soft black side) may not be compatible with most polyurethanes or silicones. W. R. MEADOWS offers a line of approved products as part of our complete system. Please reference the appropriate detail for your specific application. When used with other products than recommended, ensure compatibility through either testing or written approval from the manufacturer. Membrane adhesion of self-adhesive and fluid-applied membranes 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. In situations where the membrane adhesion may be compromised, in-situ adhesion tests should be performed to determine suitability of substrate prior to full installation of AIR-SHIELD ALUMINUM SHEET MEMBRANE. If there are variations in the OSB surface, multiple tests may be required

## LEED INFORMATION

May help contribute to LEED credits:

- EAp2: Minimum Energy Performance
- EAc2: Optimize Energy Performance
- MRc9: Construction and Demolition Waste Management

**For BIM models, CAD details, most recent data sheet, further LEED information, and SDS, 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**

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.