



## DATA SHEET NO. 5116-075

### **AIR-SHIELD™ ALUMINUM SHEET MEMBRANE** **Self-Adhering Air/Vapour and Liquid Moisture Barrier**

#### **DESCRIPTION**

AIR-SHIELD ALUMINUM SHEET MEMBRANE self-adhering air/vapour 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 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/vapour 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 vapour 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 vapour through porous building materials.
- Provides a complete above-grade air, vapour, 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 38.5" (.97 m) x 75' (22.86 m). AIR-SHIELD ALUMINUM SHEET MEMBRANE can also be cut to desired width.

Optional sizes include 10.1 cm (4"), 15.2 cm (6"), 22.8 cm (9"), 30.5 cm (12"), 40.6 cm (16"), 45.7 cm (18"), 50.8 cm (20"), and 61 cm (24"), all 22.86 m (75') long.

#### **STORAGE**

AIR-SHIELD ALUMINUM SHEET MEMBRANE should be stored palletized and protected from rain and/or physical damage. Do not store at temperatures above 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.

#### **COVERAGE**

Coverage is approximately 22.3 m<sup>2</sup> (240 ft.<sup>2</sup>). Net coverage when lapped 63.5 mm (2.5") is 21.1 m<sup>2</sup> (228 ft.<sup>2</sup>)

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## SPECIFICATIONS/STANDARDS

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

## TECHNICAL DATA

PROPERTY	TEST RESULTS	TEST METHODS
Thickness, film	(0.152 mm) 0.006"	ASTM D3767 Method A
Puncture Resistance, film	36.75 Kgf (81 lbf)	ASTM E154
Tensile Strength, MD, film	29.5 MPa (4,255 psi)	ASTM D412 die C modified
Tensile Strength, CMD, film	37.5 MPa (5,420 psi)	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	1.09 mm (0.043")	ASTM D3767 Method A
Puncture Resistance, membrane + film	40 Kgf (88 lbf)	ASTM E154
Tensile Strength, MD, membrane + film	5.2 MPa (750 psi)	ASTM D412 die C modified
Tensile Strength, CMD, membrane + film	6.5 MPa (950 psi)	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:	96.1° C	ASHTO T53
Hydrostatic Resistance:	Equiv. to 70.38 m (230.9') of water	ASTM D5385
Exposure to Fungi:	Pass, 16 weeks	Soil Test
Flexibility @ -29° C:	Pass	ASTM D1970
Air Permeance @ 75 Pa (1.57 lb./ft. <sup>2</sup> )	<0.02 L/S/M2 (<0.004 cfm/ft. <sup>2</sup> )	ASTM E2178

## 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.

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**WARRANTY:** W. R. Meadows of Western Canada warrants that, at the time and place we make shipment, our materials will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM OF TRADE OR OTHERWISE. As the exclusive remedy for breach of this Warranty, we will replace defective materials, provided, however, that the buyer examine the materials when received and promptly notify us in writing of any defect before the materials are used or incorporated into a structure. Three (3) months after W. R. Meadows of Western Canada has shipped the materials, all our Warranty and other duties with respect to the quality of the materials delivered shall conclusively be presumed to have been satisfied, all liability therefore terminates and no action for breach of any such duties may thereafter be commenced. W. R. Meadows of Western Canada shall in no event be liable for consequential damages. Unless otherwise agreed to in writing, no warranty is made with respect to materials not manufactured by W. R. Meadows of Western Canada. We cannot warrant or in any way guarantee any particular method of use or application or the performance of materials under any particular condition. Neither this Warranty nor our liability may be extended or amended by our salesmen, distributors or representatives, or by our distributor's representatives, or by any sales information or drawings.

**Application Method ...** AIR-SHIELD ALUMINUM SHEET MEMBRANE self-adhesive air/vapour and liquid moisture barrier can be applied at minimum temperatures of 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 63.5 mm (2.5"). 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 13 mm (½") 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 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 4° C and above.

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

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

**POINTING MASTIC ...** Used for sealing exterior vertical and horizontal terminations, laps, around protrusions, and top edges of TERMINATION BAR.

#### **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.

#### **MASTERFORMAT NUMBER AND TITLE**

07 27 13 - Modified Bituminous Sheet Air Barriers

#### **LEED INFORMATION**

May help contribute to LEED credits:

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

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

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