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(Supersedes October 2018)

## AIR-SHIELD™

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

#### DESCRIPTION

AIR-SHIELD 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 cross-laminated polyethylene 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° 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. AIR-SHIELD can also be used as a transition membrane to provide protection against water infiltration in critical detail areas, such as window and door openings, deck-to-wall intersections, corner boards, wall-to-wall tie-ins, foundation sill plates, sheathing panel seams, under stucco finishes, masonry walls, and other non-roof detail areas.

#### USES

AIR-SHIELD 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 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.

#### PACKAGING

AIR-SHIELD is packaged in rolls of 38.5" (.97 m) x 75' (22.86 m). AIR-SHIELD 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'.

#### STORAGE

AIR-SHIELD 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 on pallets and completely cover.

#### COVERAGE

Curing: 200 - 400 sq. ft./gal

Bond Breaking: 200 - 400 sq. ft./gal

Coverage will vary due to various amounts of different fillers, extenders, or additives in the concrete mix that can result in the concrete mass and finished surface having a higher than normal porosity and some very porous hotspots. Coverage ratios must be adjusted to compensate for resulting penetration and additional coverage coats required to provide proper surface treatment. Always apply to a test area first to determine actual coverage rate before full-scale application.

#### SPECIFICATIONS

- Exceeds the requirements of the Massachusetts Commercial Energy Code for Building Envelope Systems.
- ABAA Section 07261 Self-Adhering Air and Vapor Barrier Specification

#### MAINTAIN ENERGY EFFICIENCY

AIR-SHIELD 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.

**CONTINUED ON THE REVERSE SIDE...**

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| Test  | Results                                       |
|---|---|
| Color:  | White   |
| Thickness:  | 40 mils (1 mm)                                |
| Pliability @ -25° F (-32° C)  | No effect                                     |
| Tensile Strength Film<br>ASTM D412 modified (MD):<br>ASTM D882 (MD): lb/in. | 4000 psi (27.6 MPa)<br>23.5 lb/in. (4.1 N/mm) |
| Elongation Film:<br>ASTM D412 modified (MD, %):<br>ASTM D882, (MD, %):      | 400 (Typical)<br>400 Min.                     |
| Puncture Resistance:<br>ASTM E154   | 40 lbf (178 N) Min.                           |
| Water Vapor Permeance (free film)<br>ASTM E96, Procedure B                  | 0.035 Perms                                   |
| Water Absorption (% by weight):<br>ASTM D1970<br>ASTM D570-81               | 0.25 Max<br>0.1 Max.                          |
| Application Temperature:  | 40° F (4° C) Min.                             |
| Low Temperature Flexibility @ -22° F (-30° C) (CGSB 37-gp-56m)              | PASS  |
| Service Temperature   | -40° F to 158° F                              |
| Lap Peel Strength @ 39° F (4° C) (ASTM D903, 180°)                          | 10 lbf/in width (1.75 N/mm)                   |

**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.
- Cross-laminated polyethylene film has excellent tensile strength, elongation, and tear resistance.
- Modified membrane is flexible at low temperatures.
- 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-sealing around fasteners; for more information, see TECHNICAL BULLETIN: FASTENER PENETRATION THROUGH AIR-SHIELD MEMBRANES at [www.wrmeadows.com](http://www.wrmeadows.com).
- No flame required.
- Low temperature version also available - can be applied at temperatures between 20° F (-7° C) and 60° F (16° C).
- AIR-SHIELD XLT can be applied at minimum temperatures of 0° F (-18° C).

**Air leakage tested per ASTM E2178-01 and ASTM E2357**

| Pressure | Air Leakage (National Building Code of Canada Requirement) | Results for AIR-SHIELD | Air Leakage (National Building Code of Canada Requirement) | Results for AIR-SHIELD |   |       |
|----------|--|------------------------|--|------------------------|---|-------|
| Pa       | lb./ft. <sup>2</sup>                                       | L/S/M <sup>2</sup>     |  | cfm/ft. <sup>2</sup>   |   |       |
| 75       | 1.57   | 0.02                   | < 0.02   | 0.004                  | < | 0.004 |

\*\*Air leakage tested per ASTM E 283

## 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 must be clean of oil, dust, and excess mortar. Strike masonry joints flush. All walls to receive AIR-SHIELD should 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 and masonry must be cured a minimum of 14 days and must be dry before AIR-SHIELD 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 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 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 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 should either be tied into the wall system or mechanically fastened with TERMINATION BAR from W. R. MEADOWS. AIR-SHIELD 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 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.

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

## COVERAGE

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

## 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/Cartron

## 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. AIR-SHIELD is not designed to perform as a permanently exposed membrane and should be covered as soon as possible. AIR-SHIELD should not be used in direct contact with flexible PVC membranes or gaskets. Membrane adhesion of self-adhesive 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 is compromised, 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.

**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.