



*Exterior Commercial Air/Vapor Barrier*

# Armor AirBarrier 1800i

**Product:**

1800i Liquid Applied Air/Vapor Barrier

**Uses:**

1800i is a single component, liquid applied copolymer rubber air/vapor barrier membrane. 1800i cures to form a flexible seamless 100% rubber membrane which provides excellent resistance to air and vapor transmission. 1800i is designed to be used in conjunction with all sections of the building envelope to provide a continuous airtight system.

1800i can be used on new construction or retrofit, commercial, industrial or institutional applications as a non-accessible air/vapor barrier for all types of cavity wall construction e.g. over exterior face of the inner cavity wall.

**System Components:**

1800i is a spray applied coating providing a 100% bond to the substrate by manufacturer accredited applicators.

ArmorFlash Transition Strip is a self-adhering smooth surfaced modified bitumen membrane (transition strip). These strips come in multiple widths and should be located at beams, columns, changes in substrate material, and similar joints or connections to provide continuity of the air/vapor barrier assembly.

1800i Mastic is used to fill any cracks or voids in the masonry that will be receiving the system.

1800i Air & Vapor Barrier System meets all of the principal requirements and design criteria for a properly constructed air barrier for the building envelope, namely:

- Provides a continuous, durable air barrier;
- Resistance to air flow;
- Resistance to vapor drive;
- Provides an effective drainage plain in a cavity (secondary drainage) wall;
- Structural soundness, capable of resisting wind and other loads, over its expected life span;
- Continuity throughout the building envelope;
- Provides a structurally sound air barrier capable of resisting wind, stack effect and mechanical pressurization
- Water resistant – performs as a rain screen
- Self-priming

Limitations: Not designed to perform as a permanently exposed membrane. 30 days maximum.

**Technical:**

Applicable Standards: Meets and exceeds ASTM E283 for Air Leakage. 1800i meets the requirements of ASTM E96 for water vapor permeance. See Physical Properties Chart.

Environmental Considerations: 1800i Air/Vapor Barrier membrane is non-toxic, non-carcinogenic and environmentally friendly.

**Preparatory Work:**

Refer to Examination section of specification for substrate requirements by others (new construction).

Under the work of the air/vapor barrier section of work, the following preparatory requirements include:

- 1) Removing loose or foreign matter which might impair adhesion of materials.
- 2) Filling any voids with proprietary mastic substrate filler (1800 Mastic).
- 3) Cleaning and priming (1800i) substrate joint/connection surfaces and applying the self-adhering ArmorFlash (transition strip).
- 4) Substrate must be dry and free of frost.

**Methods:** 1800i is applied using manufacturer approved applicators who undergo extensive training and are monitored for quality performance.

**Installation:**

Applied over the exterior face of the inner cavity wall, 1800i is sprayed onto surfaces using alternating horizontal and vertical passes to ensure complete coverage of the substrate and transition strip material. Masonry anchors or other penetrations are sealed air tight. Transition joints are sealed using transition strip over firm bearing at beams, columns, changes in substrate material and similar joints or connections including at window frame perimeter and door frames.

Generally strips are applied so that a minimum of 2" coverage is achieved over both substrates and with 1" of full contact over window or door frames.

1800i should be applied within the recommended application temperature range of 100°F (at the spray tip). 1800i membrane may be applied successfully at ambient temperatures as low as 15°F.

Airless spray equipment having a minimum pressure of 3000 psi is used to apply the 1800i.

The coverage rate of the completed membrane application is 23-30 ft<sup>2</sup>/gal. that provides seamless, monolithic surface with a final thickness of 40 mils.

Typically one crew can apply approximately 4000-6000 ft<sup>2</sup> of area per day. Drying time is approximately one hour, given average conditions and standard thickness.

Board type cavity wall insulation is then adhered to the 1800i membrane after an initial set time of approximately 1 to 2 hours, to prevent convection currents occurring behind the insulation. Once applied the insulation is firmly and permanently adhered into place and cannot be removed. Wedges or clips, normally used to secure the insulation may be reduced.



*Exterior Commercial Air/Vapor Barrier*

# Armor AirBarrier 1800i

**Availability:**

1800i Liquid Air/Vapor Barrier System is available across the United States and throughout Canada from dealers. Contact Mar-flex Customer Service for the closest Dealer/Applicator. Current price lists available from Dealers/Applicators along with standard conditions of sale.

**Maintenance:**

1800i membrane does not require any maintenance. Damaged areas are easily repaired by spraying over affected areas. Re-coating and/or Cold joints are not a problem; newly applied material easily blends with existing 1800i material to provide a monolithic membrane.

**Typical Physical Properties\*1800i:**

Property	Test Method	Test Results
Type		100% Rubber Elastomeric
Air Leakage Rate	ASTM E283	0.0004 cfm/ft <sup>2</sup>
Elongation (%)	ASTM D412 (die C)	1800%
Low-Temperature Flexibility	Bend around 0.5 inch mandrel	Flexible to -20°F
Abrasion Resistance	700 psi on .06" x .06" point moving 1" per second	< 0.10% membrane loss
Asphalt Content	N/A	0.0%
180° Peel Adhesion	Metal Plate	18 lbs./inch
Crack Bridging	ASTM 836	Exceeds 10 cycles to 1/8" at -15°F
Water Vapor Permeance	ASTM E96 (water method)	0.08 perms for 40-mil dry coating grams/ft <sup>2</sup> /hr in Hg
Liquid Water Absorption	ASTM D95	< 0.5% (weight)
Resistance to Bacteria	ASTM D4299-83 (modified)	No attack

Resistance to Gust Wind Load	ASTM E330	Resists a suction pressure of 62.8 lbs./ft <sup>2</sup> maintained for 10 seconds with no delamination and no increase in air leakage rate when tested at 1.6 lbs./ft <sup>2</sup>
Resistance to Sustained Wind Load	ASTM E283	Resists a suction pressure of 20.9 lbs/ft <sup>2</sup> maintained for 1 hour with no delamination and no increase in air leakage rate when tested at 1.6 lbs/ft <sup>2</sup>
Resistance to Chemical Attack	Visual	Unaffected by chemicals in concentrations typically found in soils
Solvent Resistance	Visual	Exceeds performance of modified asphalts
Life Expectancy	ASTM D412 ASTM D2240	Exceeds 100 years
<b>Typical Physical Properties Cont.:</b>		
Density		6.8 – 7.8/gal.
Coverage		23-30 ft <sup>2</sup> /gal.
Thickness	60-80 mils wet	30-40 mils dry
Dry Time		12-24 hours
Color		Gray
Application Method		Brush, Roller, Spray

\*Tests conducted by the Ortech Corporation and the Akron Rubber Development Laboratory Inc., Akron, Ohio. Copy of test reports available upon request.



*Exterior Commercial Air/Vapor Barrier*

## **Armor AirBarrier 1800i**

### **Product Only Warranty:**

The information herein is the best available relating to 1800 and the recommendations contained herein are based on tests believed to be reliable. We warrant the Mar-flex 1800i Liquid Air/Barrier Membrane to be of good quality and manufactured to meet published physical properties and quality control standards.

Mar-flex Waterproofing and Building Products warrants the product to be of good quality and manufactured to meet published physical properties and quality control standards and will replace or refund the purchase price of this product if proved defective within one year of date of application. This warranty does not apply if there is no working drainage system.

Except as specifically provided herein, Mar-flex Waterproofing and Building Products makes no warranty, express, implied or oral including but not limited to any warranty or merchantability, fitness for a particular purpose, usage of trade, course of dealing or course of performance in connection with this agreement. In no event shall Mar-flex be liable on any such warranty with respect to the Mar-flex 1800 Liquid Air/Barrier Membranes. Mar-flex shall not be liable for incidental or consequential damages including, but not limited to damages of the structure, its replacement, contents or personal injury. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

### **Technical Services:**

Technical support is available from Mar-flex Waterproofing and Building Products. Call toll free: 1-800-498-1411

Tel: (513) 422-7285

[www.mar-flex.com](http://www.mar-flex.com)

[info@mar-flex.com](mailto:info@mar-flex.com)

Specification assistance.

Site advice and recommendations.

### **Related References:**

The state of Massachusetts criteria for Air Barriers section 1304.3.

National Master Specification (NMS) Section 07196 Air Barriers (Descriptive / Proprietary).

"An Air Barrier for the Building Envelope, National Research Council Canada, Proceedings Building Science Insight '86."

Construction Specifications Canada (CSC) Tek-Aid 07195 Air Barriers (Digest and Mater Specification).

**HEALTH AND SAFETY INFORMATION IS GIVEN IN THE SAFETY DATA SHEET AND THE PRODUCT DATA SHEET AVAILABLE FOR THIS PRODUCT. THESE SHOULD BE READ AND UNDERSTOOD BEFORE USING THIS PRODUCT.**

Mar-flex Waterproofing and Building Products  
500 Business Pkwy Carlisle, OH 45005  
(800) 498-1411 | (513) 422-7285 | Fax - (513) 422-7282  
E-mail: [info@mar-flex.com](mailto:info@mar-flex.com)  
Web-site: [www.mar-flex.com](http://www.mar-flex.com)

Rev 2.17sm