



## DATA SHEET NO. 5244-100

### PERMINATOR® EVOH Underslab Gas Vapour Barrier

#### DESCRIPTION

PERMINATOR EVOH is a seven-layer co-extruded barrier manufactured from state-of-the-art polyethylene and EVOH resins. Designed to provide superior resistance to gas and moisture transmission, PERMINATOR EVOH is a highly resilient underslab gas/vapour barrier designed to restrict naturally occurring gases, such as radon, methane, gasoline, solvents, oils, and hydrocarbons, from migrating through the ground and into the concrete slab.

#### USES

When properly installed, PERMINATOR EVOH resists gas and moisture migration into the building envelope to provide protection from toxic/harmful chemicals. It can be installed as part of a passive or active control system extending across the entire building, including floors, walls, and crawl spaces. PERMINATOR EVOH protects flooring and other moisture-sensitive furnishings in the building's interior from moisture and water vapour migration, greatly reducing condensation, mould, and degradation.

#### FEATURES/BENEFITS

- Resistant to gasoline, oils, solvents, hydrocarbons, radon, and methane.
- Available in 45.7 m (150') long rolls.
- Helps reduce the penetration of moisture and water vapour through the slab into the structure.
- Helps reduce fungus, mildew, and mould.
- Tough enough to withstand normal construction jobsite conditions and traffic ... will not crack, puncture, snag, split, or tear easily.
- Seven-layer construction with EVOH gas barrier core.

#### PACKAGING

3 m (10') x 45.7 m (150') Rolls

#### SPECIFICATIONS

- Meets or exceeds all requirements of ASTM E1745-11 Class A, B & C.

#### APPLICATION

**Surface Preparation** ... Level, tamp, or roll earth or granular material beneath the slab base as specified by supplied architectural drawings. Follow ASTM E1643-10 (standard practice and procedure for installation of vapour retarder used in contact with earth or fill under concrete slabs). Reference American Concrete Institute (ACI) 302.1R-04: Chapter 4, Section 4.1.4 – Base Material for sub-grade preparation prior to placement of PERMINATOR EVOH.

**Horizontal Application** ... Unroll 45.7 m (150') PERMINATOR EVOH over the area where the slab is to be poured. Cut to size if necessary. PERMINATOR EVOH should completely cover the pour area. All joints/seams, both side and end, should be overlapped 304.8 mm (12") and taped using 101.6 mm (4") wide PERMINATOR EVOH TAPE. (Note: The PERMINATOR EVOH TAPE area of adhesion should be free from dust, dirt, and moisture to allow maximum adhesion of the pressure-sensitive tape.) To ensure placement of laps, PERMINATOR BUTYL TAPE should be used underneath the overlap area to hold membrane in place as PERMINATOR EVOH TAPE is applied.

The most efficient installation method includes placing PERMINATOR EVOH on top of the footing and against the vertical wall. This will sandwich PERMINATOR EVOH between the footing, vertical wall, and poured concrete floor. This will help protect the concrete slab from external moisture sources once the slab has been placed.

Continued over ...

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## TECHNICAL DATA

Properties	Test Method	Result
Appearance		White/Green
Thickness, Nominal		20 Mil (0.51 mm)
Weight		102 lb./MSF (498 g/m <sup>2</sup> )
Classification	ASTM E1745	Class A, B, and C
Tensile Strength	ASTM E154, Section 9, (D-882)	58 lbf (10.2 Kn/m)
Impact Resistance	ASTM D1709	2600 g
Permeance (New Material)	ASTM E154, Section 7 ASTM E96, Procedure B	0.0098 Perms grains/(ft <sup>2</sup> ·hr·in·Hg) [0.0064 Perms g/(24hr·m <sup>2</sup> ·mm Hg)]
Permeance (After Conditioning) (Same Measurement as Above Performance)	ASTM E 154 Section 8, E96 Section 11, E96 Section 12, E96 Section 13, E96	0.0079 (0.0052) 0.0079 (0.0052) 0.0097 (0.0064) 0.0113 (0.0074)
WVTR	ASTM E96 Procedure B	0.0040 grains/hr·ft <sup>2</sup> (0.0028 gm/hr·m <sup>2</sup> )
Benzene Permeance	Aqueous Phase Film Permeance	1.57E-10 m/s
Toluene Permeance	Aqueous Phase Film Permeance	2.18E-10 m/s
Ethylbenzene Permeance	Aqueous Phase Film Permeance	1.71E-10 m/s
M & P Xylenes Permeance	Aqueous Phase Film Permeance	1.62E-10 m/s
O Xylene Permeance	Aqueous Phase Film Permeance	1.53E-10 m/s
Radon Diffusion Coefficient	K124/02/95	< 1.1 x 10 <sup>-13</sup> m <sup>2</sup> /s
Methane Permeance	ASTM D 1434	3.68E-12 m/s Gas Transmission Rate (GTR): 0.32 mL/m <sup>2</sup> ·day·atm
Maximum Static Use Temperature		180° F (82° C)
Minimum Static Use Temperature		-70° F (-57° C)

Before placing concrete slab, make sure all penetrations, block outs, and damaged areas are repaired/addressed. For detailed information on detailing penetrations, such as pipe clusters, please refer to INSTALLATION GUIDELINES: PERMINATOR EVOH PENETRATIONS available at [www.wrmeadows.com](http://www.wrmeadows.com).

Numerous municipal building codes do not allow the placement of vapor barriers over the footing, due to breaking of the bond between the wall and footing. Although this is not an optimal application method, W. R. MEADOWS approves this alternate method when required by building code.

### MASTERFORMAT NUMBER AND TITLE

03 33 00 - Architectural Concrete  
07 26 16 - Below-Grade Vapor Retarders  
07 26 23 - Below-Grade Gas Retarders

### 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).

2021-01-07

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