



# Permate™ Vapour Retarder

## Product Data

### DESCRIPTION & USE

Permate™ Vapour Retarder is a membrane designed to restrict moisture vapour from passing into conventional low slope roof assemblies. It is ideal for use in buildings located in colder climatic regions that are subject to strong wintertime vapour drives.

#### Why use a Vapour Barrier?

Internal building humidity has long been identified as a major source of premature roof failure, particularly in colder climates with higher vapour pressure differentials between interior and exterior spaces. Excessive humidity migrating into the roof assembly can lead to all of the following problems:

- Reduced thermal resistance of insulation,
- Mold growth,
- Blistering, delamination or ridging of the roof membrane,
- Rotting of organic components such as organic felts and fibreboards,
- Condensation occurring underneath the roof membrane,

Use of a vapour retarder reduces the amount of humidity passing into the roof assembly, thereby minimizing these potential problems. For further information on how and when to use a vapour retarder, refer to Lexcor's Technical Paper #1.15, "Vapour Control in Low Slope Roofing Systems".

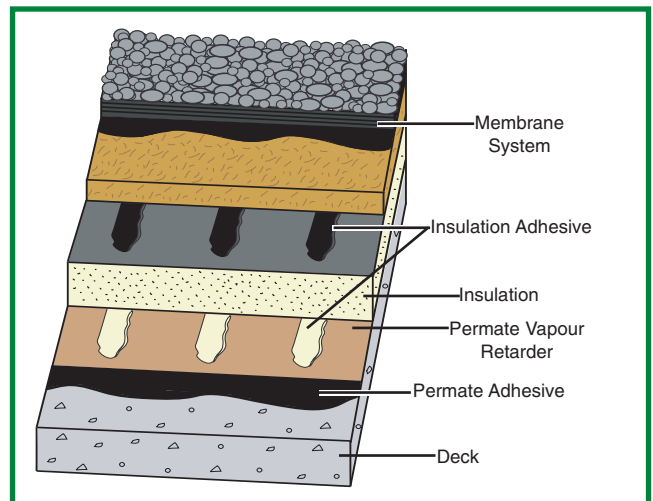
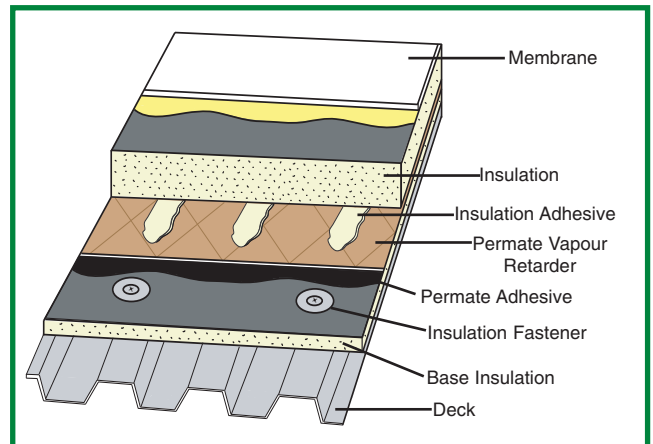
Permate™ Vapour Barrier is fabricated from two plies of high strength kraft paper, laminated together with a specially modified asphalt. Edges are reinforced with glass fibre for strength and tear resistance during construction.

### FEATURES & BENEFITS

- **Inexpensive Roof Protection** - Permate™ Vapour Barrier helps protect the roof assembly from the damaging effects of internal building humidity.
- **Edge Reinforced** - to better resist accidental tearing during construction.
- **Resistant to Hot Bitumen** - Permate™ Vapour Barrier will not melt or deteriorate when contacted with hot bitumen.
- **Excellent Adhesion** - Permate™ adheres well to hot bitumen and most insulation adhesives.
- **Works with Mechanically Fastened Insulation** - The performance of Permate™ is not significantly impaired by mechanically fastened insulation or membrane.

### TECHNICAL DATA

Property	Metric	Imperial
MVTR (Unaged):	30 ng/Pa•s•m <sup>2</sup>	0.50 Perms
MVTR (Aged): (ASTM E-96, Proc. A)	33 ng/Pa•s•m <sup>2</sup>	0.55 Perms
Tensile Strength: XD:	5.2 kN / m	30.0 lbf / in
MD:	9.7 kN / m	55.0 lbf / in
Shrinkage	Negligible	
Flexibility @ 15°C (5°F):	Excellent	
Weight:	0.163 kg / m <sup>2</sup>	8.4 lbs / 100ft <sup>2</sup>
Roll Sizes:	160 cm x 116 m 244 cm x 76 m	63" x 381' 96" x 250'



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## Approvals & Compliances

Factory Mutual: FM Class 1 Construction  
CAN/CGSB-51.33-M89, Type II.

## Limitations

- Though used in fire-rated assemblies, Permamate™ is flammable. Keep torch flames away from Permamate™ vapour barrier.
- Permamate™ vapour barrier should be kept dry during construction. The adhesive and sealing characteristics of the membrane will be impaired if the surface is wet.

## INSTALLATION

### Preparation

1. Store the vapour barrier at the job site in a clean, dry location above the ground. Protect rolls from cuts, nicks and other abuse.
2. Only install as much vapour barrier (and insulation) as can be completely protected by the roofing membrane each day. Do not install vapour barrier in rain or inclement weather.
3. Broom clean the deck prior to installation, removing all dirt, debris, oil and grease. Substrate must be free of all sharp or protruding objects that could tear the vapour barrier membrane.

### Installation

4. If applying to a fluted steel deck, vapour barrier must be installed parallel to the flutes, with all side laps centred over an upper flute. Side laps must be lapped a minimum of 2" (50 mm), ends; 6" (150 mm).
5. FULLY ADHERED APPLICATION: Apply continuous parallel ribbons of Permamate Adhesive on 6" (15 cm) centres over the area to be covered by the vapour barrier roll (centred along each flute on steel decks) at the rate of 0.16 l / m<sup>2</sup> (0.4 gallons / 100 ft<sup>2</sup>). Ensure that one ribbon of adhesive is applied to the top of any previous roll's edge to seal the lap. Unroll the vapour barrier into the adhesive, ensuring a positive contact. Roll the side laps with a roller to ensure a good seal. Repeat this procedure for all subsequent rolls, sealing all end laps with a minimum 6" (150 mm) wide strip of Permamate Adhesive.
6. LOOSE LAID APPLICATION (Acceptable only if ballasting or mechanically fastening insulation over vapour barrier): Unroll the first vapour barrier roll and immediately install the (ballasted or mechanically fastened) roof insulation over top, leaving at least one foot (30 cm) of vapour barrier exposed on all sides. Using a brush or roller, liberally apply a minimum 2" (50 mm) wide strip of Permamate Adhesive to the upper surface of the side laps and a 6" (150 mm) wide strip of Permamate Adhesive to the upper surface of the end laps. Unroll the next vapour barrier roll, overlapping the previous roll the required distance to form the seam. After rolling the seam area to ensure a good seal, continue positioning insulation over the lap and onto the adjacent vapour barrier roll. Repeat this procedure for the remaining area to be covered.

7. FLASHING: Apply Permamate™ Adhesive to the substrate and adhere the vapour barrier tightly around the detail. Cut pieces of vapour barrier (minimum 2" (50 mm) wider on all sides than the affected area) may be adhered in liberal applications of adhesive to ensure a tight seal. At perimeters, carry the vapour barrier up to the upper level of the roof insulation and adhere it to the underside of the roof membrane with a membrane compatible adhesive (see Detail 2). Use good flashing practices to ensure a moisture tight seal.
8. EXPANSION JOINTS: Ensure that Permamate Adhesive is applied to either edge of the expansion joint. Carry vapour barrier over the expansion joint but provide sufficient slack to allow for the maximum expected expansion of the joint. Press the vapour barrier into the adhesive on either side of the joint.

## SPECIFICATION

Vapour retarder shall be a Factory Mutual approved, bitumen resistant Type II vapour retarder in accordance with CAN/CGSB 51-33-M89, consisting of a kraft / asphalt / kraft lamination, edge reinforced with glass fibre strands and demonstrating a typical moisture vapour transmission rate of [30 ng/Pa•s•m<sup>2</sup>; 0.5 perms] according to ASTM E 96, Procedure A. Vapour retarder shall be [seamed; applied] with the manufacturer's approved adhesive, in strict accordance with the manufacturer's installation instructions.  
ACCEPTED PRODUCT: Permamate™ Vapour Retarder by Lexcor (www.lexcor.net, Tel: 800-268-2889, E-Mail: info@lexcor.net).