MemBrain™ Continuous Air Barrier & Smart Vapour Retarder

PRODUCT DESCRIPTION

Basic Use: CertainTeed’s MemBrain™ Continuous Air Barrier & Smart Vapour Retarder is a vapour retarder sheathing intended for use with unfaced, vapour-permeable mass insulation (fibreglass and mineral wool) in wall and ceiling cavities.

Benefits: MemBrain Continuous Air Barrier & Smart Vapour Retarder is a polyamide film that changes its permeability with ambient humidity conditions, all while providing a continuous air seal. The product’s permeance is 1 perm or less when tested in accordance with ASTM E96, dry cup method, and increases to greater than 10 perms using the wet cup method. This process allows closed building envelope systems to increase their drying potential with seasonal climatic changes. With a high resistance to water vapour in winter, MemBrain reacts to relative humidity by altering pore size, allowing water vapour to pass through it. When conditions change and relative humidity increases above 60%, the pores in the material expand and its permeability increases. This transformation permits drying to occur, in either direction, through the process of vapour diffusion. Thus, its lowered resistance value supports the drying process, therefore decreasing moisture accumulation within the construction and potential moisture damage. When installed with standard tape and sealing practices, it creates an air barrier that has been tested under stringent performance guidelines.

This product can be used in place of traditional vapour retarders with unfaced fibreglass insulation to provide an insulation system that is ideal in our Canadian climate in terms of both temperature and humidity. In addition, MemBrain may be installed as an interior air barrier system combined with recommended tapes and sealants.

Composition and Materials: MemBrain Continuous Air Barrier & Smart Vapour Retarder is formed by blowing a 2 mm thick film of polyamide (nylon).

Limitations: MemBrain Continuous Air Barrier & Smart Vapour Retarder is recommended for use in heating and mixed climates. The product is not suited for cooling climates with high outdoor humidities. MemBrain is not suitable in buildings with exceptionally high, constant indoor humidity levels, such as swimming pools and spas. This product should also not be used with specialty-conditioned spaces with relative humidities intentionally greater than 50%. Use of MemBrain is not recommended where residential humidification systems are set at relative humidities greater than 50%. MemBrain’s performance in rooms with short peaks of high humidity, such as bathrooms and kitchens, will not be affected because of the buffering action of interior finishes.

Do not use low permeance interior finishes such as vinyl wallpaper or vapour retarding paints with MemBrain. The drying benefits of MemBrain will diminish with the use of low permeance finishes. MemBrain has not been tested for use with wet spray insulation systems and is not recommended at this time. MemBrain should not be used as a vapour barrier between concrete subfloors and flooring materials, or as a ground cover in basements and crawl spaces. This product is not recommended for applications having direct or indirect (reflected) ultraviolet light exposure due to solar or electrical sources. Special care should be taken when working with an open flame. Check local practice and/or building codes for use of vapour retarders. To avoid danger of suffocation, keep this and all plastic film away from babies and small children.

Sizes: This product is manufactured in nominal widths to cover interior walls that are 8, 9, 10 and 12 feet (2.4, 2.7, 3, 3.7 metres) high. The material is folded and rolled to create rolls containing 100 linear feet (30.5 metres) of product. Available standard sizes are listed in Table 1.

TECHNICAL DATA

Applicable Standards

- Model Building Codes:
  - ICC
  - Articles 9.25.4.2
  - Articles 9.25.3
  - CCME Evaluation Report #13278-R
- Material Standards:
  - ASTM C665
  - Section 7.4, Water-Vapour Permeance
  - ASTM E96
- Fire Resistance:
  - ASTM E84
  - Surface burning characteristics
  - Max. Flame Spread Index: 20
  - Max. Smoke Developed Index: 55

Quality Assurance

CertainTeed was the first fibreglass insulation manufacturer to have its manufacturing plants, R&D centre and corporate headquarters registered to ISO 9001-2000 standards.

PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>RESULT</th>
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</thead>
<tbody>
<tr>
<td>Water Vapour Permeance (57ng/Pa•s•m²)</td>
<td>ASTM E96 Desiccant Method</td>
<td>≤1.0 perm</td>
</tr>
<tr>
<td>Water Vapour Permeance (57ng/Pa•s•m²)</td>
<td>ASTM E96 Water Method</td>
<td>&gt;10 perms</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>ASTM C665</td>
<td>No unusual aspect of corrosion such as pitting, cracking and adhesive cure inhibition</td>
</tr>
<tr>
<td>Fungi Resistance</td>
<td>ASTM C1338</td>
<td>No growth</td>
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</table>
INSTALLATION

For most areas, vapour retarders should be installed on the warm-in-winter side of the insulation (toward the interior). For some warm and humid areas, the vapour retarder should be installed toward the exterior of the building envelope. MemBrain is not intended to be used as an exterior vapour retarder. Check local practice and/or building codes.

Installation in wood framing: Same as polyethylene sheeting. Please see MemBrain Installation Instructions for Wood Framing and Steel Framing (30-28-142).

Installation as an Air Barrier System: MemBrain may be installed as a continuous interior air barrier system. Please see MemBrain Air Barrier Installation for Wood Framing (30-28-137).

AVAILABILITY AND COST
Manufactured and sold throughout the United States and Canada. For availability and cost, contact your local contractor, retailer or distributor, or call CertainTeed Sales Support Group at 800-233-8990.

MAINTENANCE
Not required.

TECHNICAL SERVICES
Technical assistance can be obtained from either the local CertainTeed sales representative, or by calling CertainTeed Sales Support Group at 800-233-8990.

Table 1

<table>
<thead>
<tr>
<th>IMPERIAL WIDTH</th>
<th>METRIC WIDTH</th>
<th>COVERAGE</th>
<th>LENGTH</th>
<th>ROLL WGT. (WITH BOX &amp; CORE)</th>
<th>ROLLS/PALLET*</th>
<th>WEIGHT/PALLET</th>
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<tbody>
<tr>
<td>ft</td>
<td>in</td>
<td>Actual</td>
<td>m</td>
<td>mm</td>
<td>Actual</td>
<td>ft</td>
</tr>
<tr>
<td>8</td>
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<td>1000</td>
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<td>3658</td>
<td>3759</td>
<td>1200</td>
</tr>
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</table>

* 48” (1219 mm) maximum pallet height.

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