

# MemBrain™ The SMART Vapour Retarder

### 1. PRODUCT NAME

CertainTeed MemBrain™ Smart Vapour Retarder. Protected by one or more of the following patents: Can. Pat. No. 2215502; U.S. Pat. Nos. 6,808,772; 6,878,455; 6,890,666; and 7,008,800 Other U.S. and foreign patents pending.

### 2. MANUFACTURER

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### 3. PRODUCT DESCRIPTION

**Basic Use:** CertainTeed MemBrain Smart Vapour Retarder is a vapour retarder sheeting intended for use with unfaced, vapour permeable mass insulation (fibre glass and mineral wool) in wall and ceiling cavities.

**Benefits:** MemBrain Smart Vapour Retarder is a polyamide film that changes its permeability with the ambient humidity condition. 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. MemBrain allows closed building envelope systems to increase their drying potential with seasonal climatic changes. With a high resistance to water vapour in winter or low humidity, MemBrain behaves like a moisture vapour barrier such as 6-mil polyethylene sheeting. With an increase in relative humidity, MemBrain's permeability increases dramatically, permitting drying to occur and decreasing moisture accumulation within the construction and the potential moisture damage.

This product can be used in place of traditional vapour retarders with unfaced fibre glass insulation, loose fill, or spray foam to provide an insula-



tion system that is ideal in some of the more severe climate condition areas in terms of both temperature and humidity.

**Composition and Materials:** MemBrain Smart Vapour Retarder is formed by blowing a 2-mil thick film of polyamide (Nylon).

**Limitations:** MemBrain Smart Vapour Retarder is recommended for use in heating and mixed climates. The product is not suited for cooling climates with high outdoor humidities or in buildings with exceptionally high, constant indoor humidity levels, such as swimming pools and spas. This

TABLE 1

### MEMBRAN™ SMART VAPOUR RETARDER

Imperial Width			Metric Width			Coverage		Length		Rolls/Pallet	Weight/Pallet	
Ft.	In.	Actual	m	mm	Actual	Ft. <sup>2</sup>	(m <sup>2</sup> )	In.	(mm)		Lbs.	kg
8	96	100	2.44	2438	2540	800	(74.3)	28.3	(718)	45	545	247
9	108	112	2.74	2743	2845	900	(83.6)	31.5	(800)	45	608	276
10	120	124	3.05	3048	3150	1000	(92.9)	34.5	(876)	40	593	269
12	144	148	3.66	3658	3759	1200	(111.5)	41.0	(1041)	30	555	252

\*48" (1219 mm) maximum pallet height.

product should also not be used with specialty-conditioned spaces or 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 should not be used as a vapour barrier between concrete sub floors and flooring materials, or as a ground cover in basements and crawlspaces. 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 barriers. 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 high. The material is folded and rolled to create rolls containing 100 linear feet of product. Available standard sizes are listed in Table 1.

#### 4. TECHNICAL DATA

##### Applicable Standards:

- Model Building Codes:
  - National Building code of Canada 2005
  - Articles 9.25.4.2(1), (2) and (3)
  - Articles 9.25.3.1, 9.25.3.2 and 9.25.3.3
  - CCMC Report #13278-B
  - BOCA, ICBO, SBCCI and ICC
- Material Standards:
  - ASTM C665
  - Section 7.4, Water-Vapour Permeance
  - ASTM E96

##### Fire Resistance:

- Fire Hazard Classification:
  - ASTM E84
  - Surface burning characteristics
  - Max. Flame Spread Index: 20
  - Max. Smoke Developed Index: 55

##### Physical/Chemical Properties:

- Water Vapour Permeance:
  - $\leq 1.0$  perm ( $57\text{ng/Pa}\cdot\text{s}\cdot\text{m}^2$ ) (ASTM E96, Desiccant method)
  - $> 10$  perms ( $570\text{ng/Pa}\cdot\text{s}\cdot\text{m}^2$ ) (ASTM E96, Water method)
- Fungi Resistance:
  - No growth (ASTM C1338)
- Corrosivity:
  - No unusual aspect of corrosion such as pitting, cracking and adhesive cure inhibition (ASTM C665)

**Quality Assurance:** Many of CertainTeed's manufacturing plants are registered to ISO 9001-2000 standards.

#### 5. INSTALLATION

For most areas, vapour retarders should be installed on the warm-in-winter side of the insulation (toward

the interior). 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 Smart Vapour Retarder Installation Instructions For Wood Framing (30-28-083) and MemBrain Smart Vapour Retarder Installation Instructions For Steel Framing (30-28-089).

**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).

#### 6. AVAILABILITY AND COST

For availability and cost, contact your local retailer or distributor, or call CertainTeed at 800-233-8990.

#### 7. WARRANTY

This product is covered by a limited one-year warranty against manufacturer's defects.

#### 8. MAINTENANCE

Not required.

#### 9. TECHNICAL SERVICES

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

#### 10. FILING SYSTEMS

Additional product information is available upon request.



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