

MemBrain™, The SMART Vapor Retarder & Air Barrier Film

PRODUCT DESCRIPTION

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

Benefits: MemBrain Smart Vapor Retarder is a polyamide film that changes its permeability with ambient humidity conditions. The product's permeance is 1 perm or less when tested in accordance with ASTM E 96, 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 vapor in winter, MemBrain reacts to relative humidity by altering pore size, allowing water vapor 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 vapor diffusion. Thus, its lowered resistance value supports the drying process, therefore decreasing moisture accumulation within the construction and potential moisture damage.



OPEN ATTIC APPLICATION

The following thermal performance values are achieved at the thicknesses, weights and coverages specified when insulation is installed with pneumatic equipment in a horizontal open blow application.

This product can be used in place of traditional vapor retarders with unfaced fiber glass insulation to provide an insulation system that is ideal in some of the more severe climate condition areas 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 Smart Vapor Retarder is formed by blowing a 2-mil thick film of polyamide (Nylon).

Limitations: MemBrain Smart Vapor 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 vapor 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 vapor barrier between concrete sub floors 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 vapor 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 high. The material is folded and rolled to create rolls containing 100 linear feet of product. Available standard sizes are listed in Table 1.

Product Name	MemBrain™, The SMART Vapor Retarder & Air Barrier Film
Manufacturer	CertainTeed Corporation
Address	P.O. Box 860 Valley Forge, PA 19482-0105
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Website	www.certainteed.com/membrain

TECHNICAL DATA

Applicable Standards

- Model Building Codes:
 - ICC
 - National Building code of Canada 2005 & 2010
Articles 9.25.4.2
Articles 9.25.3
CCMC Evaluation Report #13278-R
- Material Standards:
 - ASTM C 665
Section 7.4, Water-Vapor Permeance
 - ASTM E 96

Fire Resistance

- ASTM E 84
Surface burning characteristics
Max. Flame Spread Index: 20
Max. Smoke Developed Index: 55

Quality Assurance

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

PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	TEST METHOD	RESULT
Water Vapour Permeance (57ng/Pa•s•m ²)	ASTM E96 Desiccant Method	≤1.0 perm
Water Vapour Permeance (572ng/Pa•s•m ²)	ASTM E96 Water Method	>10 perms
Corrosivity	ASTM C665	No unusual aspect of corrosion such as pitting, cracking and adhesive cure inhibition
Fungi Resistance	ASTM C1338	No growth

Table 1

MEMBRAIN™ SMART VAPOUR RETARDER - CCMC REPORT #13278-R														
IMPERIAL WIDTH			METRIC WIDTH			COVERAGE		LENGTH		ROLL WGT. (WITH BOX & CORE)		ROLLS/PALLET*	WEIGHT/PALLET	
ft	in	Actual	m	mm	Actual	ft ²	(m ²)	in	(mm)	lbs	kg		lbs	kg
8	96	100	2.44	2438	2540	800	(74.3)	28.3	(718)	11.1	5.0	45	545	247
9	108	112	2.74	2743	2845	900	(83.6)	31.5	(800)	12.5	5.7	45	608	276
10	120	124	3.05	3048	3150	1000	(92.9)	34.5	(876)	13.7	6.2	40	593	269
12	144	148	3.66	3658	3759	1200	(111.5)	41.0	(1041)	17.0	7.7	30	555	252

* 48" (1219 mm) maximum pallet height.

INSTALLATION

For most areas, vapor retarders should be installed on the warm-in-winter side of the insulation (toward the interior). For some warm and humid areas, the vapor retarder should be installed towards the exterior of the building envelope. MemBrain is not intended to be used as an exterior vapor 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. For availability and cost, contact your local contractor, retailer or distributor, or call CertainTeed Sales Support Group in Valley Forge, PA 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 in Valley Forge, PA at 800-233-8990.



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