

MemBrain™ Continuous Air Barrier & Smart Vapor Retarder

PRODUCT DESCRIPTION

Basic Use: CertainTeed's MemBrain™ Continuous Air Barrier & 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 Continuous Air Barrier & Smart Vapor 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 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. 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 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 Continuous Air Barrier & Smart Vapor Retarder is a Class A Fire Rated 2-mil thick film of polyamide (nylon).

Limitations: MemBrain Continuous Air Barrier & 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 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 vapor retarders. To avoid danger of suffocation, keep this and all plastic film away from babies and small children.

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|---------------------|--|
| Product Name | MemBrain™ Continuous Air Barrier & Smart Vapor Retarder |
| Manufacturer | CertainTeed Corporation |
| Address | 20 Moores Road Malvern, PA 19355 |
| Phone | 800-233-8990 |
| 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
- Water Vapor Permeance:
 - ASTM C665
Section 7.4, Water-Vapor Permeance
 - ASTM E96

Fire Properties

- ASTM E84
Surface Burning Characteristics
Flame Spread Index < 25
Smoke Developed Index < 450

Quality Assurance

CertainTeed's commitment to quality and environmental management has ensured the registration of the Athens, Chowchilla and Kansas City plants to ISO 9001:2008 and ISO 14001:2004 standards.

PHYSICAL AND CHEMICAL PROPERTIES

| PROPERTY | TEST METHOD | RESULT |
|--------------------------------------|------------------------------|---|
| Water Vapor Permeance (57ng/Pa•s•m) | ASTM E96 Desiccant Method | ≤1.0 perm |
| Water Vapor Permeance (572ng/Pa•s•m) | 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 |

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.

Table 1

| MemBrain Continuous Air Barrier & Smart Vapor Retarder | | | | | |
|--|------------------|---|-------------------------------|---------------|-------------------|
| Width | Length | Coverage | Roll Weight (with Box & Core) | Rolls/Pallet* | Weight/Pallet |
| 8 ft. 4 in. (2.54m) | 100 ft. (30.48m) | 833 ft ² (77.4 m ²) | 11.1 lbs. (5.0 kg) | 45 | 545 lbs. (247 kg) |
| 9 ft. 4 in. (2.84m) | 100 ft. (30.48m) | 933 ft ² (86.7m ²) | 12.5 lbs. (5.7 kg) | 45 | 608 lbs. (276 kg) |
| 10 ft. 4 in. (3.15m) | 100 ft. (30.48m) | 1,033 ft ² (96.0 m ²) | 13.7 lbs. (6.2 kg) | 40 | 593 lbs. (269 kg) |
| 12 ft. 4 in. (3.76m) | 100 ft. (30.48m) | 1,233 ft ² (114.5 m ²) | 17.0 lbs (7.7 kg) | 30 | 555 lbs. (252 kg) |

* 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 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.

