

# PERM-A-BARRIER® VPS 20 WALL MEMBRANE

Primer-less self-adhered air & vapor barrier membrane

## Product Description

Perm-A-Barrier® VPS 20 Wall Membrane is ideal for protecting the building superstructure from the damaging effects of the elements. By minimizing air and water penetration through the building exterior, Perm-A-Barrier VPS 20 Wall Membrane:

- Prevents premature deterioration of the building envelope
- Enhances thermal performance of the structure and saves energy costs
- Improves comfort for the building occupants

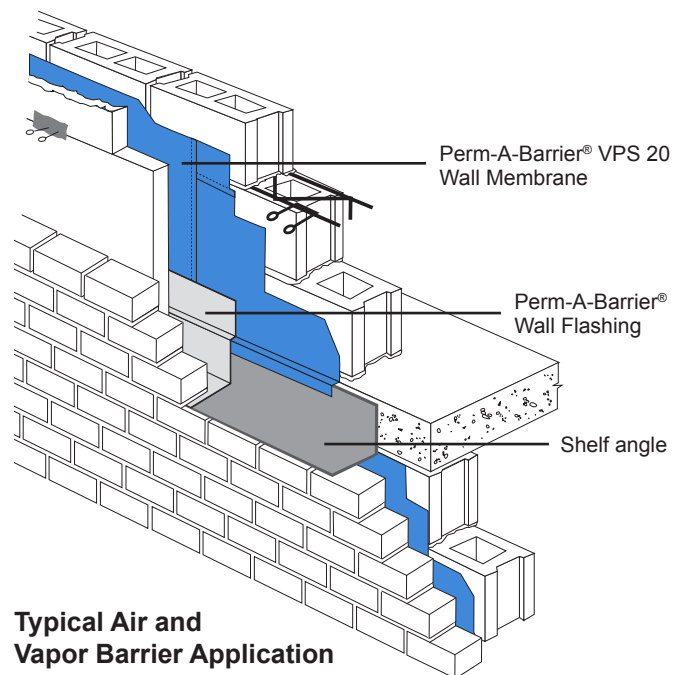
## Advantages

- **Primer-less self-adhered sheet** — reduces installation time by up to 50%
- **Fire Resistant** — meets **NFPA 285** as part of various wall assemblies
- **Fully bonded** — transmits wind loads directly to the substrate
- **Water resistant** — resists hydrostatic water pressure and wind driven rain
- **Air tight** — exceeds requirements for air barrier membranes, complies with Massachusetts State Energy Code

- **Vapor Permeable** — "breathable membrane prevents moisture from being trapped in the wall cavity by allowing wall the ability to dry
- **Flexible** — accommodates minor settlement and shrinkage movement
- **Controlled thickness** — factory made sheet ensures constant, non-variable site application
- **Aggressive, conformable adhesive** — allows self-sealing around mechanical fasteners
- **Wide application window** —  
— **Perm-A-Barrier VPS 20 Wall Membrane**  
surface and ambient temperatures at 40°F (5 °C) and above

### Product Advantages

- Primer-less, saves installation time and money
- **NFPA 285** compliance
- Fully bonded
- Vapor permeable
- Air tight
- Extended UV exposure
- Flexible
- Controlled thickness
- Aggressive, conformable adhesive
- Wide application window



**Typical Air and Vapor Barrier Application**

Drawings are for illustration purposes only. Please refer to [gcpat.com](http://gcpat.com) for specific application details.

## System Components

- **Perm-A-Barrier® VPS 20 Wall Membrane** — Use at installation temperatures above 40°F (5 °C). For installations between 20 °F (-6 °C) and 40 °F (5 °C) Perm-A-Barrier Adhesive is required as a Primer.
- **S100 Sealant** — one part neutral curing, ultra low modulus silicone sealant for sealing penetrations, terminations, brick ties and final terminations.
- **Bituthene® Mastic** — rubberized asphalt mastic for sealing penetrations, terminations, brick ties, etc.
- **Bituthene® Liquid Membrane** — two component, trowel grade, asphalt modified urethane for sealing patches, terminations, brick ties, etc.
- **Perm-A-Barrier® Wall Flashing** — fully adhered throughwall flashing system
- **Perm-A-Barrier® Detail Membrane** — fully adhered flashing for protecting and sealing critical detail areas

## Installation

### Safety

Perm-A-Barrier products must be handled properly. Vapors from the mastic and solvent-based primer are harmful and flammable. For these products, the best available information on safe handling, storage, personal protection, health and environmental considerations has been gathered. Refer to product label and SDS (Safety Data Sheet) before use. All users should acquaint themselves with this information prior to working with the material. Carefully read detailed precaution statements on the product labels and SDS before use. SDSs can be obtained from our web site at [gcpat.com](http://gcpat.com) or by contacting us toll free at 866-333-3SBM (3726).

### Surface Preparation

Surface must be smooth, clean, dry and free of voids, spalled areas, loose aggregate, loose nails, sharp protrusions or other matter that will hinder the adhesion or regularity of the wall membrane installation. Clean loose dust or dirt from the surface to which the wall membrane is to be applied by wiping with a clean, dry cloth or brush.

If the substrate is damp, allow to dry or use Bituthene® Primer B2 LVC to prepare the area to receive the membrane.

### Temperature

Perm-A-Barrier VPS 20 Wall Membrane may be applied only in dry weather when air and surface temperatures are above 40 °F (5 °C).

### Membrane Application

Cut membrane into easily handled lengths. Apply membrane horizontally or vertically to substrates receiving post-applied masonry anchors (ties), such as gypsum sheathing.

Apply Perm-A-Barrier VPS 20 Wall Membrane horizontally to the blockwork with projecting masonry anchors (ties), beginning at the base of the wall. Each length of the membrane must be installed so that the upper edge runs continuously along the underside of the line of masonry anchors (ties). Subsequent sheets applied above must overlap the sheet below by 2 in. (51 mm) immediately below the line of anchors (ties). Since the membrane width appropriate for this application of 18 in. (457 mm) is wider than the typical spacing between the lines of anchors (ties) 16 in. (406 mm), it will be necessary to cut the membrane at the location of the tie wires projecting from the wall to enable the sheet to be laid in place. End laps that occur in subsequent lengths that follow should maintain a minimum overlap of 2 in. (51 mm). See Figures 1 and 2.

The membrane must be pressed firmly into place with a hand roller or the back of a utility knife as soon as possible, ensuring continuous and intimate contact with the substrate to prevent water from migrating under the membrane.

In certain applications such as on soffits, ceilings or substrates such as oriented strand board (OSB), backnail the membrane along the side lap prior to installing the next sheet of membrane to ensure positive contact to the substrate.

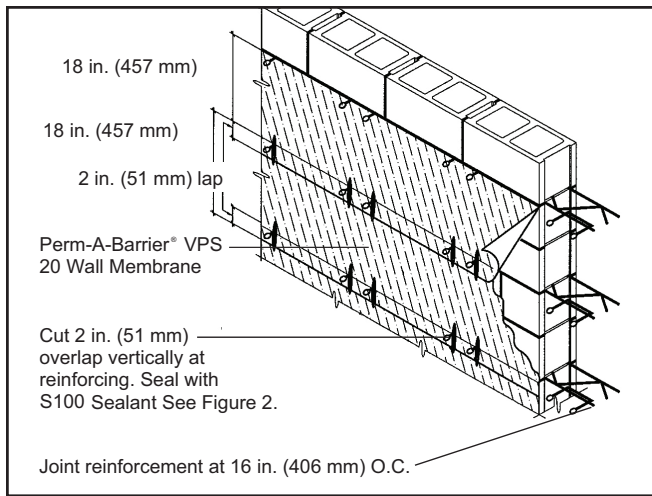
In certain applications such as on soffits, ceilings or substrates such as oriented strand board (OSB), backnail the membrane along the side lap prior to installing the next sheet of membrane to ensure positive contact to the substrate. Additional fastening may be required through the field of the membrane in these applications and must be sealed with S100 Sealant, Bituthene Liquid Membrane or Bituthene Mastic.

Apply S100 Sealant, Bituthene Mastic or Bituthene Liquid Membrane to seal around the tie wire projections. Fit the Perm-A-Barrier VPS 20 Wall Membrane tightly around all penetrations through the membrane and seal using S100 Sealant or Bituthene Liquid Membrane.

Continue the membrane into all openings in the wall area, such as windows, doors, etc., and terminate at points that will prevent interior visibility. The installation must be made continuous at all framed openings. Coordinate installation of the Perm-A-Barrier VPS 20 Wall Membrane with the roofing trade to ensure continuity with the roofing system at this critical transition area.

At the end of each working day, if the wall has been only partially covered, apply a bead of Bituthene Mastic or Bituthene Liquid Membrane along the top edge of the membrane at its termination to prevent vertical drainage of precipitation from penetrating the end and undermining the membrane adhesion. Tool the Bituthene Mastic or Bituthene Liquid Membrane to ensure it is worked into the surface. For final terminations that will not be covered with membrane, S100 Sealant can be used in lieu of Bituthene Mastic or Bituthene Liquid Membrane. Inspect the membrane before covering and repairing any punctures, damaged areas or inadequately lapped seams.

All non water shedding edges must be sealed with S100 Sealant, Bituthene Liquid Membrane or Bituthene Mastic.



**Figure 1: Membrane System Detail**

### Membrane Repairs

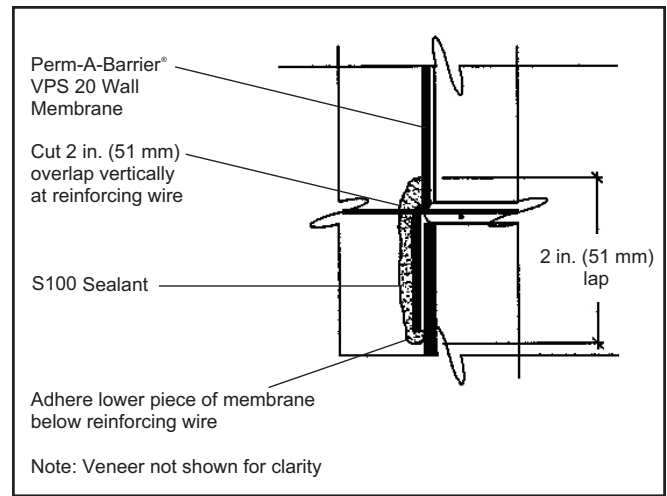
Repairs must be made using Perm-A-Barrier VPS 20 Wall Membrane sized to extend 6 in. (150 mm) in all directions from the perimeter of the affected area. The repair piece must be pressed into place with a hand roller as soon as possible to ensure continuous and intimate contact with the substrate.

### Membrane Protection

Perm-A-Barrier VPS 20 Wall Membranes must be protected from damage by other trades or construction materials.

### Storage and Handling Information

All materials must be protected from rain and physical damage. Pallets of Perm-A-Barrier VPS 20 Wall Membrane must not be double stacked on the job site. Provide cover on top and all sides, allowing for adequate ventilation. Store membrane where temperatures will not exceed 90 °F (32 °C) for extended periods. All products must be stored in a dry area away from high heat, flames or sparks. Store only as much material at point of use as is required for each day's work.



**Figure 2: Horizontal Reinforcing**

### Limitations

Perm-A-Barrier VPS 20 Wall Membrane must not be applied in areas where it will be exposed to direct sunlight permanently, and must be covered within 6 months. Refer to Technical Letter 19, *Exposure Guidelines for Perm-A-Barrier Self-Adhered Membranes*.

Perm-A-Barrier VPS 20 Wall Membrane and all other Perm-A-Barrier self-adhered membranes should not be applied over S100 Sealant.

### Warranty

Perm-A-Barrier products are warranted to be free of defects in manufacture for a period of 5 years. Material will be provided at no charge to replace any defective product.

### Technical Service

Support is provided by full-time technically trained GCP field sales representatives and technical service personnel, backed by a central research and development technical services staff.

## Supply

Product	Unit of Sale	Approximate Coverage	Weight	Palletization
<b>Perm-A-Barrier VPS 20 Wall Membranes</b>	1 roll	400 ft <sup>2</sup> (37.2 m <sup>2</sup> ) per roll 4 x 100 ft (0.76 x 27.7 m) roll	59 lbs/roll	25 cartons (25 rolls) per pallet
<b>Perm-A-Barrier Wall Flashing</b>				
- 12 in. (305 mm)	3 rolls	75 linear ft per roll	25 lbs/roll	25 cartons (75 rolls) per pallet
- 18 in. (457 mm)	2 rolls	75 linear ft per roll	37.5 lbs/roll	25 cartons (50 rolls) per pallet
- 24 in. (610 mm)	1 roll	75 linear ft per roll	55 lbs/roll	35 cartons (35 rolls) per pallet
- 36 in. (914 mm)	1 roll	75 linear ft per roll	75 lbs/roll	25 cartons (25 rolls) per pallet
<b>Perm-A-Barrier Aluminum Flashing</b>				
- 6 in. (152 mm)	12 rolls	50 linear ft per roll	6 lbs/roll	30 cartons (360 rolls) per pallet
- 9 in. (225 mm)	6 rolls	50 linear ft per roll	9 lbs/roll	30 cartons (180 rolls) per pallet
- 12 in. (305 mm)	6 rolls	50 linear ft per roll	12 lbs/roll	30 cartons (180 rolls) per pallet
<b>Bituthene Mastic - 5 gal pail</b>	1 pail	approx. 120 ft <sup>2</sup> at 60 mils	54 lbs/pail	36 pails per pallet
<b>Bituthene Mastic - 30 oz tube</b>	12 tubes	approx. 30 linear ft x ¼ in. bead	32 lbs/carton	72 cartons (864 tubes) per pallet
<b>S100 Sealant - 29 oz. Cartridge</b>	1 cartridge	approx. 30 linear ft x 1/4 in. bead	29 oz. cartridge	10 cartridges/ carton 42 cartons/ pallet
<b>Bituthene Liquid Membrane - 1.5 gal pail</b>	1 pail	approx. 200 Linear ft/gal @ 1" wide x 90 mils.	16 lbs/pail	100 pails per pallet
<b>Bituthene Liquid Membrane - 4 gal pail</b>	1 pail	approx. 200 Linear ft/gal @ 1" wide x 90 mils.	44 lbs/pail	24 pails per pallet
<b>Perm-A-Barrier Adhesive - 5 gal pail</b>	1 pail	250-300 ft <sup>2</sup> /gal (7-7 m <sup>2</sup> /L)	43 lbs/pail	36 pails per pallet

## Physical Properties

Property	Perm-A-Barrier VPS Wall Membrane	Test Method
Thickness	0.015 in.	ASTM D3767 method A
Color	White	
Pull Adhesion	>15 psi. Gypsum board	ASTM D4541
Water Resistance	> 5 hours 55 cm	AATCC 127 Hydrostatic head test
Air permeance of in-place membrane	0.0019 - 0.0028 L/s/m <sup>2</sup>	ASTM E2178
Low Temperature Flexibility	Pass	ICC - AC 38
Water Vapor Permeance	Minimum 10 perms	ASTM E96, wet cup
Water penetration around nails	Pass	ASTM D1970 modified

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GCP Applied Technologies Inc., 62 Whittemore Avenue, Cambridge, MA 02140 USA.

In Canada, 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

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