PERM-A-BARRIER® NPS Detail Membrane (US Version)

Primerless self-adhered detail membrane for air and vapor barrier applications

Product Description

GCP Applied Technologies ("GCP") PERM-A-BARRIER® NPS Detail Membrane is specifically designed for protecting and sealing critical areas of the building superstructure from the damaging effects of the elements by minimizing air, water and water vapor flow through the building exterior at transition areas.

Advantages

- Primerless self-adhered membrane—allows for reduction of installation time by up to 40%
- Fully bonded—helps transmit wind loads directly to the substrate
- Waterproof and impermeable to moisture—impermeable to the passage of liquid water and water vapor
- Air tight—specifically designed to protect against air passage and associated energy losses.
- Cross laminated film—provides dimensional stability, high tear strength, puncture and impact resistance
- Flexible—elongation test value of 200% accommodates minor settlement and shrinkage movement
- Controlled thickness—factory made sheet allows for consistent, non-variable site application
- Aggressive, conformable adhesive—can be used to help seal around mechanical fasteners
- Wide application window—primerless application at surface and ambient temperatures of 25°F (-4°C) and above.
System Components

PERM-A-BARRIER® NPS Detail Membrane is fully adhered and is designed for use with other GCP sheet and fluid applied membranes. For specific product use with other GCP membranes and fluids please refer to the individual Sheet and Fluid Applied Membrane product data sheet instructions found at “gcpat.com”

Other Ancillary Products Specific product information and product packaging details for all GCP products (including ancillary products) can be found at gcpat.com

- PERM-A-BARRIER® Adhesive - Adhesive for difficult to bond areas
- PERM-A-BARRIER® Primer Plus- water-based vapor permeable primer which imparts an aggressive, high tack finish on the treated substrate.
- PERM-A-BARRIER® 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. as detailed in GCP Product Data Sheets
- BITUTHENE® Liquid Membrane—two component, trowel grade, asphalt modified urethane for sealing patches, terminations, brick ties, etc.

Limitations of use

- Approved uses only include those uses specifically detailed in this Product Data Sheet and other current Product Data Sheets that can be found at gcpat.com
- PERM-A-BARRIER® NPS Detail Membrane is not intended for any other use. Contact GCP Technical Services where any other use is anticipated or intended.
- Perm-A-Barrier NPS Detail Membrane must not be applied in areas where it will be exposed to direct sunlight permanently, and must be covered within 1 year of installation. Refer to Technical Letter 19, Exposure Guidelines for Perm-A-Barrier Self-Adhered Membranes.
- Maximum In Service Temperature (as installed) is 160°F (71°C)

Safety and Handling

- The most current Safety Data Sheet (SDS) can be obtained from our web site at gcpat.com or by contacting us toll free at 866-333-35BM (3726).
- PERM-A-BARRIER® NPS Detail membrane - must be handled properly. The best available information on safe handling, storage, personal protection, health and environmental considerations has been gathered. Refer to product label and 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.
Storage Information

- Pallets of Perm-A-Barrier® NPS Detail Membrane must not be double stacked on the job site.
- All materials must be protected from rain and physical damage.
- Store off ground under tarps with adequate ventilation or otherwise protected from rain and ground moisture.
- Store membrane where temperatures will not exceed 90°F (32°C) for extended periods.
- Store in dry conditions at 40°F (4.5°C)-90°F (32°C).
- Observe 1 year shelf life and use on a first in–first out basis.
- Review technical letter #30 Shelf Life/Storage and Handling of GCP Waterproofing and Air Barrier Products.
- Store only as much material at point of use as is required for each day’s work.

Installation

Details and Technical Letters

The most up to date detail drawings and technical letters are available at gcpat.com. For complete application instructions, please refer to the current GCP Applied Technologies Contractor Handbook and Literature on (www.gcpat.com). Documents in hardcopy as well as information found on websites other than www.gcpat.com may be out of date or in error. Before using this product it is important that information be confirmed by accessing www.gcpat.com and reviewing the most recent product information, including without limitation Product Data Sheets and Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations. Please review all materials prior to installation of PERM-A-BARRIER® NPS Detail Membrane. For technical assistance with detailing and problem solving please call toll–free at (866) 333–3SBM (3726)

Temperature

- PERM-A-BARRIER® NPS Detail Membrane may be applied to most surfaces without primer only in dry weather and when air and surface temperatures are above 25°F (-4°C).
- Maximum in service temperature is 160°F (71°C).

Substrate 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 membrane installation. Clean loose dust or dirt from the surface to which the membrane is to be applied by wiping with a clean, dry cloth or brush. It is best practice to first apply primer onto any gypsum sheathing cut edges that will receive PERM-A-BARRIER® NPS Detail Membrane to help reduce dust that may impact adhesion. In cold temperature installations do not apply over ice or frost.

Application
Pre-cut PERM-A-BARRIER® NPS Detail Membrane to easily handled lengths. Peel release paper from roll to expose adhesive and carefully position the membrane against substrate. The entirety of the membrane must be pressed firmly into place with sufficient pressure using a rubber or vinyl hand roller during application to ensure continuous and intimate contact with the substrate and to prevent water from migrating under the membrane. Overlap adjacent pieces 2 in. (51 mm) and roll overlap with a steel hand roller.

When applying PERM-A-BARRIER® NPS Detail Membrane to PERM-A-BARRIER® Wall Membranes and PERM-A-BARRIER® Wall Flashing – Apply a bead of S100 Sealant, BITUTHENE® Mastic or BITUTHENE® Liquid Membrane along top edges of cuts, penetrations, all laps and seams on horizontal surfaces (e.g. sill plates), critical areas and as shown in GCP detail drawings, and tool into place.

When applying PERM-A-BARRIER® NPS Detail Membrane to PERM-A-BARRIER® Liquid, PERM-A-BARRIER® NPL 10/NPL 10 LT, PERM-A-BARRIER® VPL, PERM-A-BARRIER® VPL Low Temp or PERM-A-BARRIER® VPO – Apply a bead of S100 Sealant or BITUTHENE® Liquid Membrane along top edges, cuts, penetrations, all laps and seams on horizontal surfaces (e.g. sill plates), critical areas and as shown in GCP detail drawings, and trowel into place.

If PERM-A-BARRIER® fluid applied membranes are more than 7 days old, contact GCP technical service for guidance. Refer to Technical Letter #11 for more information specific to PERM-A-BARRIER® Liquid.

No reglet is necessary when installing PERM-A-BARRIER® NPS Detail Membrane to vertical surfaces.

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

**Membrane Repairs**

- Repairs must be made using PERM-A-BARRIER® NPS Detail Membrane sized to extend 6 in. (150 mm) in all directions from the perimeter of the affected area.
- If wrinkles develop, carefully cut out affected area and replace.
- The entirety of the membrane patch must be pressed firmly into place with sufficient pressure using a rubber or vinyl hand roller during application to ensure continuous and intimate contact with the substrate and to prevent water from migrating under the membrane.

**Membrane Protection**

- PERM-A-BARRIER® NPS Detail Membrane must be protected from damage by other trades or construction materials.

**Supply**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>UNIT OF SALE</th>
<th>APPROXIMATE COVERAGE</th>
<th>WEIGHT</th>
<th>PALLETIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERM-A-BARRIER® NPS Detail Membrane</td>
<td></td>
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<tr>
<td>- 6 in. (152 mm)</td>
<td>12 rolls</td>
<td>109 linear ft per roll</td>
<td>7 lbs/roll</td>
<td>30 cartons (360 rolls) per pallet</td>
</tr>
<tr>
<td>- 9 in. (225 mm)</td>
<td>6 rolls</td>
<td>109 linear ft per roll</td>
<td>10 lbs/roll</td>
<td>30 cartons (180 rolls) per pallet</td>
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The most current supply information for ancillary products can be found at gcpat.com

Physical Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>PERM-A-BARRIER NPS DETAIL MEMBRANE</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness includes HDPE Film</td>
<td>0.018 in. (0.46 mm)</td>
<td>ASTM D3767 method A</td>
</tr>
<tr>
<td>Minimum tensile strength, membrane</td>
<td>400 psi (2.8 MPa)</td>
<td>ASTM D412</td>
</tr>
<tr>
<td>Minimum tensile strength, film</td>
<td>5000 psi (34.5 MPa)</td>
<td>ASTM D412</td>
</tr>
<tr>
<td>Minimum elongation, to failure</td>
<td>200%</td>
<td>ASTM D412</td>
</tr>
<tr>
<td>Pliability, at 180° bend over 1 in. (25 mm) mandrel</td>
<td>Pass at -20°F (-29°C)</td>
<td>ASTM D1970</td>
</tr>
<tr>
<td>Crack cycling, 1/8 in. (3.2 mm) at -25°F (-32°C)</td>
<td>Pass</td>
<td>ASTM C1305</td>
</tr>
<tr>
<td>Nail Sealability</td>
<td>Pass</td>
<td>ASTM D1970</td>
</tr>
<tr>
<td>Minimum puncture resistance, membrane</td>
<td>40 lbs. (178 N)</td>
<td>ASTM E154</td>
</tr>
<tr>
<td>Lap peel adhesion at minimum application temperature</td>
<td>3.5 lbs./in.</td>
<td>ASTM D1876</td>
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<tr>
<td>Maximum permeance to water vapor transmission</td>
<td>&lt;0.01 perms / 0.02 perms</td>
<td>ASTM E96 Method A/ Method B</td>
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<tr>
<td>Water absorption (weight gain at 48 hours)</td>
<td>0.1%</td>
<td>ASTM D570</td>
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<tr>
<td>Peel Adhesion to Gypsum board</td>
<td>&gt;5 pli.</td>
<td>ASTM D903</td>
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<tr>
<td>Peel adhesion: to concrete</td>
<td>&gt;5 pli</td>
<td>ASTM D903</td>
</tr>
<tr>
<td>Maximum In Service Temperature</td>
<td>160°F (71°C)</td>
<td>NA</td>
</tr>
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