

# PERM-A-BARRIER<sup>®</sup> Liquid Flashing (US Version)

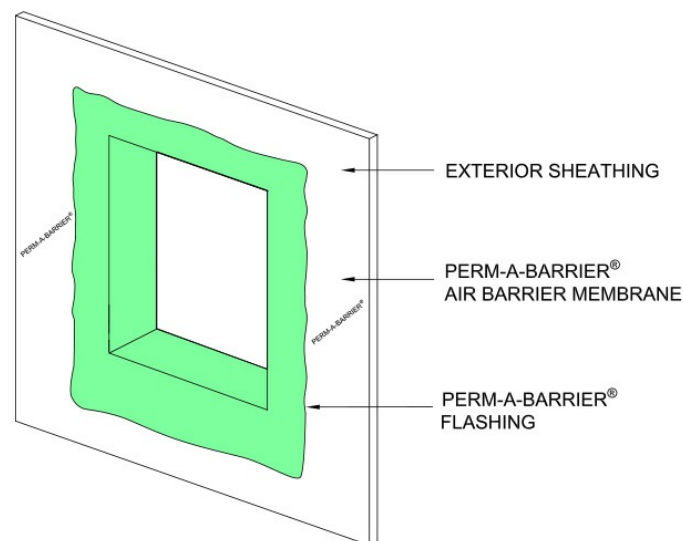
Fluid applied flashing membrane and detailing accessory

## Product Description

PERM-A-BARRIER<sup>®</sup> Liquid Flashing is a fluid applied, one component, membrane that cures to form a durable, resilient, monolithic and a fully bonded elastomeric flashing when applied to existing or new construction. It is an accessory to the PERM-A-BARRIER<sup>®</sup> portfolio of air barrier products.

PERM-A-BARRIER<sup>®</sup> Liquid Flashing membrane protects window and door rough openings from the damaging effects of air and liquid water ingress on building structures. By minimizing air and water vapor flow through the building, PERM-A-BARRIER<sup>®</sup> Liquid Flashing membrane:

- Provides flashing at window and door rough openings
- Fills joints and fasteners prior to window and door installation
- Counterflashes waterproofing and air barrier membranes
- Prevents premature deterioration of the building envelope



Typical Window Opening with Perm-A-Barrier<sup>®</sup> Liquid Flashing

<sup>†</sup> Drawings are for illustration purposes only. Please refer to Perm-A-Barrier Liquid Flashings details for further instruction

## Product Advantages

- Low volatile organic (VOC) content of 10g/L
- Solvent and Isocyanate free — safe and environmentally friendly
- Air tight — protects against air passage and associated energy losses • Water Vapor permeable — prevents moisture from being trapped in the wall cavity by allowing damp surfaces to dry
- Single component — no mixing required
- Fully bonded to framing — without priming
- Seamless — continuous membrane integrity with no laps
- Damp surface tolerant — can be applied to damp-to-touch surfaces
- Ease of installation — for hard to reach areas such as corners and framing “proud” of windows
- Strong adhesion — to common construction substrates such as wood, block, concrete, OSB, gypsum sheathing and metal
- Compatible — to common construction substrates such as wood, block, concrete, OSB, gypsum sheathing and metal
- Wide application window — 35°F (2°C) and rising
- Eliminates need for joint reinforcement tape

## Principal Applications

Liquid flashing for window and door rough openings in new and remedial commercial and residential applications:

- Steel or wood stud walls with exterior gypsum sheathing, plywood, OSB sheathing, brick veneer or pre-formed cladding panels
- Concrete block walls with brick veneer or pre-formed cladding panels

## System Components

The following are for use in above grade applications:

- PERM-A-BARRIER® VPL membrane
- PERM-A-BARRIER® NPL membrane
- PERM-A-BARRIER® NPL 10 membrane
- PERM-A-BARRIER® VPO membrane
- PERM-A-BARRIER® Aluminum Wall membrane
- PERM-A-BARRIER® NPS membrane
- PERM-A-BARRIER® Wall Flashing—heavy duty fully-adhered membrane for through-wall flashing detailing
- PERM-A-BARRIER® Detail Membrane—flexible, fully-adhered membrane for detail flashing areas
- PERM-A-BARRIER® Aluminum Flashing—flexible, aluminum faced, fully-adhered membrane for detail flashing

## Installation

### Safety

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.

## Surface Preparation

All surfaces must be sound and free from spalled areas, loose aggregate, loose nails or screws, sharp protrusions or other matter that will hinder the adhesion or regularity of the membrane installation. The surface must also be free from frost, dirt, grease, oil or other contaminants. Clean loose dust and dirt from the surface by brushing or wiping with a clean, dry cloth.

### Concrete and Other Monolithic Cementitious Surfaces

Surface irregularities greater than 1/4 in. (6 mm) across and/or 1/8 in. (3 mm) in depth should be repaired with a lean mortar mix or non-shrinking grout. Remove concrete form lines and any high spots greater than 1/8 in. (3 mm) in height to ensure uniform surface. On highly dusty or porous substrates it may be necessary to apply a scratch coat prior to spraying to full thickness. PERM-A-BARRIER® Liquid Flashing membrane may be applied to green (minimum 3 day cure time) concrete or over damp to-touch surfaces. Remove any visible water prior to application.

### Concrete Masonry Units (CMU)

The CMU surface should be smooth and free from projections. Strike all mortar joints full and flush to the face of the concrete block. Fill all voids and holes, particularly at the mortar joints, with a lean mortar mix or non-shrinking grout. Alternatively, a parge coat (typically one part cement to three parts sand) may be used over the entire surface.

### Exterior Sheathing Panels

PERM-A-BARRIER® Liquid Flashing membrane may be applied directly to steel or wood stud walls with exterior gypsum sheathing, plywood or exterior sheathing panels such as exterior drywall, plywood and oriented strand board (OSB) and glass faced wall boards. To avoid deflection at the panel joints, fasten corners and edges with appropriate screws—per the manufacturer.

## Principal Applications

PERM-A-BARRIER® Liquid Flashing can be used to flash the entire rough opening however PERM-A-BARRIER® Membranes, such as PERM-A-BARRIER® Aluminum Flashing, PERM-A-BARRIER® Detail Membrane or PERM-A-BARRIER® Wall Flashing may be applied in the horizontal sill as needed. PERM-A-BARRIER® Self-Adhered Membrane should be applied prior to PERM-A-BARRIER® Liquid flashing.

1. When using PERM-A-BARRIER® Self-Adhered Membrane as a sill flashing prepare and prime the surface and install per applicable data sheet and application instructions. Sill flashing may be installed in a single piece with a minimum 6 in. (150 mm) return up the inside face of the jamb extending 3 in. (75 mm) onto the face of the sheathing at the sill and the jamb.
2. If the gypsum core of glass-mat faced sheathing is exposed it is to be primed with either PERM-A-BARRIER® WB Primer or PERM-A-BARRIER® Primer Plus product. When using a self adhered flashing in the sill dog-boned shaped corner patches must then be installed at each corner at the sill over the self-adhered flashing extending onto the face of the sheathing.
3. Apply and tool PERM-A-BARRIER® Liquid Flashing membrane into small gaps (up to 1/4 in. (6 mm) or less and any other minor deficiencies in the substrate, such as nail holes, knots, etc.
4. Install PERM-A-BARRIER® Liquid Flashing product in a zig zag pattern into the rough opening as well as onto the air barrier and spread to achieve a min. 25 wet mils free of voids or pinholes. The product should lap onto the air barrier and optional sill flashing at least 3 in. (75mm).
5. As soon as the PERM-A-BARRIER® Liquid Flashing product is cured (approximately 24 hrs. after application at 50% R.H, 70°F), the product is ready to accept window or door installation.

## Equipment

Use a caulking gun to apply PERM-A-BARRIER® Liquid Flashing membrane to the substrate and then use a trowel, joint knife, spatula or similar to spread the flashing.

## Application Temperature

PERM-A-BARRIER® Liquid Flashing membrane may be applied at temperatures as low as 35°F (2°C) and rising. It can be applied to damp-to-touch surfaces however, it is not recommended for use when cold and/or damp conditions exist for prolonged periods. This product is a silane terminated polyether.

## Thickness Control

Application thickness is controlled in vertical applications by marking the area and spot-checking the thickness with a wet film thickness gauge. Swipe marks on the surface of the PERM-A-BARRIER® Liquid Flashing product are acceptable as long as the minimum thickness is maintained.

## Coverage Rates

PERM-A-BARRIER® Liquid Flashing membrane is typically applied at a minimum thickness of 25 mils. The theoretical coverage rate (not including waste) at a thickness of 25 mils is approximately 64 ft<sup>2</sup>/gal.

Coverage may vary depending on application technique and may be reduced over rough and uneven substrates. The applicator goal should be a continuous membrane at a thickness of 25 mils, adjust coverage rate accordingly.

## Curing

PERM-A-BARRIER® Liquid Flashing skins over within 2 hours at 50% relative humidity 70°F. Curing and skinning times may vary depending on temperature, humidity and surface conditions.

## Cleaning

Tools and equipment are most effectively cleaned using a dry cloth and/or mineral spirits to remove material as soon as possible to prevent curing on tools and equipment.

## Storage and Handling Information

20 oz. sausages of PERM-A-BARRIER® Liquid Flashing product should be stored in a controlled dry environment in the original sealed container 50°F (10°C) and below 80°F (27°C). The shelf life is 6 months from date of manufacture in unopened containers. Store opened containers with plastic protective liner covering the material. Minimize moisture and temperature swings. All materials must be protected from rain, physical damage and freezing.

## Limitations

PERM-A-BARRIER® Liquid flashing membrane should not be exposed in areas where it will be permanently exposed to sunlight, weather or traffic. Maximum UV exposure period is 6 months. Not for use below grade or in conditions completely covered in water hydrostatic conditions. Not for use as a substitute for BITUTHENE® Liquid Membrane or PERM-A-BARRIER® S100 Sealant.

Do not apply the product in wet weather. It should not be applied if rain or temperatures below 35°F (2°C) are expected within 12 hrs. The product has a maximum in-service temperature of 180°F (82°C). Do not dilute product. No mixing required. Finished and exposed surfaces should be protected. PERM-A-BARRIER® Liquid Flashing membrane is not compatible with petroleum solvents, fuels and oils.

GCP self-adhered membranes are not to be applied over PERM-A-BARRIER® Liquid Flashing membrane.

## Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Color	Dark Green	
Solids content by volume	100%	
Cure time @ 50% R.H., 70°F	24 hr.	
Elongation	250	ASTM D412
Tensile strength	200	ASTM D412
Permeability at 25 mil thickness (perms) Water vapor transmission	>10	ASTM E96 – Method B

## AAMA 714-12: Voluntary Specification for Liquid-Applied Flashing Used to Create a Water Resistant Seal Around Exterior Wall Openings in Buildings

PROPERTY	TYPICAL VALUE	TEST METHOD
Adhesion strength to substrates	Pass	ASTM C794, AAMA 714 Section 5.1 modified
Nail sealability	Pass	ASTM D1970, AAMA 711-07
Adhesion after accelerated UV aging peel adhesion appearance	>10 pli	ASTM C794, AAMA 714 Section 5.3
Adhesion after elevated temperature exposure level	>10 pli	ASTM C794, AAMA 714 Section 5.4
Adhesion after thermal cycling	>10 pli	ASTM C794, AAMA 714 Section 5.5
Crack cycling @ 60 mils	Pass	ASTM C 1305, AAMA 714 5.6
RA compatibility	Pass	AAMA713

### Footnotes:

1. Drying times may vary depending on temperature, humidity and surface conditions.
2. Finished and exposed surfaces should be protected. PERM-A-BARRIER® Liquid Flashing is not compatible with petroleum solvents, fuels and oils, materials containing creosote, pentachlorophenol or linseed oil.

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