

# VYCOR<sup>®</sup> enV<sup>™</sup>

Fluid Applied Weather Resistive Barrier

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## Product Description

VYCOR<sup>®</sup> enV<sup>™</sup> is a rolled or spray-applied, one component, acrylic membrane that forms a continuous water and air barrier with seamless protection. Vycor<sup>®</sup>enV<sup>™</sup> protects against ingress of incidental water caused by severe weather, vapor or condensation. VYCOR<sup>®</sup> enV<sup>™</sup> protects moisture sensitive wood structures from damage in the event of a breach in exterior wall coverings. VYCOR<sup>®</sup> enV<sup>™</sup> is vapor permeable for wall assemblies requiring a “breathable” characteristic. As a vapor permeable membrane, VYCOR<sup>®</sup> enV<sup>™</sup> permits the diffusion of water vapor that may otherwise condense in the wall structure; but is impermeable to liquid water, which allows the material to act as a water drainage plane. VYCOR<sup>®</sup> enV<sup>™</sup> is water based, making it easy to clean up and environmentally friendly.

## Product Advantages

- Water resistant—eliminates water intrusion that can have a damaging effect on houses
- Air resistant—protects against air leakage and associated energy losses
- Vapor permeable—prevents moisture from being trapped in the wall cavity by allowing walls to breathe
- Easy installation—single component that can be easily spray-applied or roller-applied with standard equipment . Requires no mechanical fasteners.
- Fully adhered—strong adhesion to OSB and plywood. Unlike housewrap, will not tear away in the wind and expose house to weather damage
- Seamless—fluid applied membrane creates a continuous coating without laps
- Damp surface tolerant—can be applied to damp-to-touch surfaces
- Versatile—easy to use at details such as internal and external corners, brick ties, penetrations, etc.
- Low odor and VOC Content
- UV resistant—can be exposed for up to 4 months before cladding installed
- System solution—excellent weatherization system when combined with compatible VYCOR<sup>®</sup> flashing products

## Principle applications

Liquid weather resistive barrier for new and remedial residential applications on plywood and OSB.

## System components

- VYCOR<sup>®</sup> enV<sup>™</sup>—acrylic weather resistive barrier for vertical applications
- VYCOR<sup>®</sup> enV<sup>™</sup> Joint Tape—non-woven 4 1/2 in. (114 mm) wide fabric
- VYCOR<sup>®</sup> Flashing—heavy duty fully-adhered membrane for flashing detailing • Sealants—Refer to Technical Letter 1 for details on compatible waterproofing sealants

## Code Compliance

ICC-ES ESR-3063, AC 212 – Acceptance criteria for water-resistive coatings used as water-resistive barriers over exterior sheathing

## Installation

### Safety

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.

SDSs can be obtained from our web site or by contacting us toll free at 866-333-3SBM (3726).

### Surface Preparation

All surfaces must be sound and free from 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. Refer to Technical Letter 3, *Application Instructions for Oriented Strand Board (OSB) and Plywood* for further information.

Contact your GCP sales representative when applying to cementitious surfaces or gypsum based sheathing.

### Exterior Sheathing Panels

VYCOR® enV™ may be applied directly to exterior sheathing panels such as plywood and oriented strand board (OSB). To avoid deflection at the panel joints, fasten corners and edges with appropriate fasteners. Fasteners should be driven flush with the panel surface (not counter sunk) and into the framing system in accordance with the panel manufacturers recommendations. Joints and holes greater than 1/4 in. (6 mm) should be filled with mastic or caulk, allowing sufficient time for the caulk to fully cure before application of the tape and VYCOR® enV™. Spray 8 mil thickness of VYCOR® enV™ at the joints and embed in 4 1/2 in. (114 mm) wide VYCOR® enV™ Joint Tape.

### Detailing

Detailing should be completed prior to applying the full coverage of VYCOR® enV™. The field application should completely cover the detail areas to provide a continuous membrane.

For a complete description and instructions on individual details, consult the separate detail sheets found on our web site.

Transitions to beams, columns, window and door frames, etc. should be made with a strip of VYCOR® self-adhered flashing. As soon as the VYCOR® enV™ is cured (approximately 24 hrs after application at 50% R.H, 68 °F), it is ready to accept the VYCOR® enV™ Joint Tape.

Gaps around penetrations should be caulked with a compatible sealant. Consult Technical Letter 1 or contact your GCP sales representative.

## Membrane Application

VYCOR® enV™ can be installed through a spray application. VYCOR® enV™ may be applied by roller, however spray application is the preferred method. If applying VYCOR® enV™ by roller, multiple material passes may be necessary to ensure that the required wet thickness is achieved.

Contact us for additional details about local applicators, application techniques and spray equipment.

## Application Temperature

In spray applications, VYCOR® enV™ may be applied at temperatures as low as 40°F (4°C). VYCOR® enV™ is not recommended for use when cold and/or damp conditions exist for prolonged periods. VYCOR® enV™ is a water-based material. As with all water-based materials, it is subject to freezing at temperatures below 32°F (0°C).

## 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 VYCOR® enV™ are acceptable as long as the minimum thickness is maintained.

## Coverage Rates

VYCOR® enV™ is typically applied at a minimum thickness of 30 mils wet. The theoretical coverage rate (not including waste) at a thickness of 30 mils is approximately 55 ft<sup>2</sup>/gal (275 ft<sup>2</sup>/pail) to reach a 15 mil dry thickness.

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 30 mils wet, adjust coverage rate accordingly.

## Drying

VYCOR® enV™ is dry to touch and can be over coated within 4 hours under normal conditions (50% R.H, 68°F). VYCOR® enV™ dries through in 24 hours at normal conditions (50% R.H, 68°F). Drying and skinning times may vary depending on temperature, humidity and surface conditions.

## Application of Insulation and Finishes

VYCOR® enV™ is not suitable for permanent exposure. Insulation boards may be installed after VYCOR® enV™ has fully cured. If the insulation cannot be applied within 4 months of the VYCOR® enV™ application, some form of temporary protection (such as tarpaulins) should be used to protect the product from the effects of sunlight. Installation of insulation boards can be accomplished by using compatible mechanical fasteners or, solvent free insulation adhesive.

If stucco is used for siding, a separation is required between the stucco and VYCOR® enV™. Two options are:

- A layer of conventional building paper/felt between the stucco lath and VYCOR® enV™
- A type of metal lath or other method that stands the stucco away from the VYCOR® enV™

If a separation sheet is used, it must be permeable to allow the wall system to breath. Any separation sheet recommended by stucco manufacturers is acceptable. Separation sheet should not be applied on VYCOR® enV™ until the product is fully cured.

## Cleaning

Tools and equipment are most effectively cleaned using a damp cloth and removing material as soon as possible to prevent curing on tools and equipment. For short shutdown periods, material can remain in the lines and equipment. Material should not be left in the lines for any period of time if temperatures are expected to drop below 40 °F (4 °C). Follow manufacturer recommendations for long shut down, which may include adding anti-rust to the water or filling the pump with oil.

## Storage and Handling

VYCOR® enV™ is available in 5 gallon pails. VYCOR® enV™ should be stored under cover in original sealed containers above 40 °F (4 °C) and below 100 °F (38 °C).

The shelf life is 9 months in unopened containers.

Store opened containers with plastic protective liner covering the material.

## Limitations

Do not apply VYCOR® enV™ in wet weather. VYCOR® enV™ should not be applied if rain or temperatures below 40 °F (4 °C) are expected within 24 hrs.

Maximum UV exposure period is 4 months.

VYCOR® enV™ should be kept from freezing as it is subject to freezing at temperatures below 32 °F (0 °C).

Finished and exposed surfaces should be protected from overspray.

VYCOR® enV™ should not be used in waterproofing applications in hydrostatic condition.

VYCOR® enV™ is not compatible with petroleum solvents, fuels and oils, materials containing creosote, pentachlorophenol or linseed oil. VYCOR® enV™ has a maximum in-service temperature of 175 °F (80 °C).

## Physical Properties

PROPERTY	TYPICAL VALUE	TEST METHOD
Water penetration resistance	Pass	ASTM E331
Water vapor permeance	>20 perms	ASTM E96
Air leakage	<0.0002 cfm/ft <sup>2</sup> @ 1.57 psf	ASTM E283
Adhesion to plywood/OSB	10 lbs/in.*	ASTM D3330 Method F**
Adhesion of VYCOR® Flashings to VYCOR® enV™	3 lbs/in.	ASTM D3330 Method F**
Tensile strength	400 psi	ASTM D412 Die C
Elongation	200%	ASTM D412 Die C
Color	Green	
Solids content	50%	
Density	1.02 lbs/gal	
Application temperature	minimum 40 °F	
Drying time @ 50% R.H. 68 °F – initial set	4 hours	
Drying time @ 50% R.H. 68 °F	24 hours	
VOC content (g/L)	<40 g/L	

[gcpat.com](http://gcpat.com) | North America customer service: 1-866-333-3726

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate, and is offered for consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations, and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation, or suggestion is intended for any use that would infringe any patent, copyright, or other third party right.

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Last Updated: 2020-07-09

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