VYCOR ULTRA™

Self-adhered roofing underlayment for the highest temperature applications

Product Description

VYCOR ULTRA™ roofing underlayment is composed of two waterproofing materials — an aggressive butyl rubber-based adhesive backed by a layer of high density, cross-laminated polyethylene.

The product is 0.76mm thick making it easy to handle and apply. The unique, advanced adhesive formulation offers premium adhesion to the roof deck, high quality laps, superior seal around roofing fasteners, and outstanding high temperature stability.

The adhesive is backed by a protective plastic release liner that protects its adhesive quality. The release liner is easily removed allowing the adhesive to be bonded tightly to the roof deck.

The membrane comes in a 18.4m^2 roll, and measures 864mm wide.

Product Advantages

- Easy to Handle and Apply — The membrane bonds firmly to the roof deck and forms high quality laps.
- Self-Sealing — The membrane meets key building code standard for nail sealability of self-adhered roofing underlayments.
- Heat Resistance — The membrane is specially formulated to resist temperatures up to 300°F without degradation of the butyl adhesive.
- Better Chemical Resistance — Compatible with low slope roofing materials such as EPDM and TPO.
- Slip-Resistant Surface — The slip-resistant surface maximises traction for safety without compromising the water integrity of the laps.
- Plastic Release — Plastic is easy to remove and easy to dispose of.
- Reroofable — Unlike some granular surfaced membranes, VYCOR ULTRA™ underlayment will not adhere to the underside of the exposed roof covering making reroofing easier and less costly.
- Expertise — GCP Applied Technologies is the recognised leader in self-adhered roofing underlayments and is the manufacturer of VYCOR ICE AND WATER SHIELD® roofing underlayment.



Guidelines for Use

VYCOR ULTRA™ membrane can be used as a sloped roof underlayment to help protect against leakage from water that builds up behind ice dams, or from wind-driven rain in applications where the membrane must withstand the highest in-service temperatures for extended periods of time.

High Temperature Applications

VYCOR ULTRA™ membrane is the appropriate product for all applications where superior heat resistance is needed. In addition, VYCOR ULTRA™ underlayment is the appropriate product for use under certain types of metal roofs (those employing copper, zinc, or Cor-Ten® panels). These metal roofs tend to readily conduct heat to the underlayment making them more likely to expose the membrane to high temperatures. It is up to the contractor and specifier to decide what level of performance is required based on the guidelines provided.

Wind-Driven Rain

Sloped roofs are not waterproof. They protect structures by shedding rain water. Storm-driven winds can cause sloped roof coverings to lift. Rain can be easily driven under the roof covering directly to the unprotected deck where it causes leaks and damage to the interior of the structure. VYCOR ULTRA™ membrane applied beneath the sloped roof covering helps prevent winddriven rain from entering the structure. For wind-driven rain protection, full coverage with VYCOR ULTRA™ underlayment is recommended. Since VYCOR ULTRA™ underlayment is a vapour barrier, the roof construction must allow for proper ventilation in full roof coverage applications.

Ice Dams

For ice dam protection, VYCOR ULTRA™ membrane should be adhered at the edge of the roof deck by the eaves. The membrane should be applied to a point on the roof deck above the highest expected ice dam. Several variables influence the height of ice dams and the membrane coverage required. Local building codes should be consulted for specific requirements. Variables influencing the height of ice dams include climate (particularly the annual snowfall), slope, overhang, valleys, how well the structure is insulated and ventilated, and exposure (sun vs. shade). In addition to placement along the eaves, VYCOR ULTRA™ membrane can be used to help prevent roof leaks in a handful of danger zones like in valleys, at the rake edges, and around chimneys and skylights.

Installation Procedure

Surface Preparation

Install VYCOR ULTRA™ membrane directly on a clean, dry, continuous structural deck. Some suitable deck materials include plywood, wood composition, wood plank, metal, concrete, or gypsum sheathing. For all other substrates, contact your local GCP representative. Remove dust, dirt, loose nails, and old roofing materials. Protrusions from the deck area must be removed. Decks shall have no voids, damaged, or unsupported areas. Repair deck areas before installing the membrane.

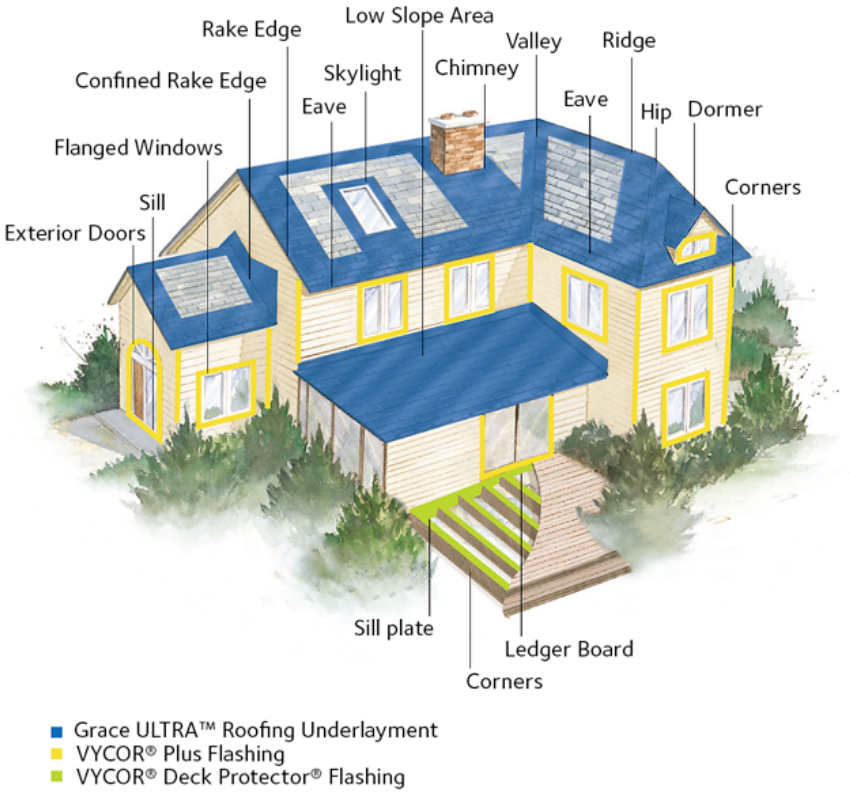
Prime concrete, masonry surfaces and DENSGLASS GOLD® with PERM-A-BARRIER® WB Primer. Prime wood composition and gypsum sheathing with PERM-A-BARRIER® WB Primer if adhesion is found to be marginal (refer to Technical Letter 12, Use on Oriented Strand Board (OSB) Roof Sheathing). Apply PERM-A-BARRIER® WB Primer at a rate of 6 to 8m^2 / L. Priming is not required for other suitable surfaces provided that they are clean and dry.

Membrane Installation

Apply VYCOR ULTRA™ membrane in fair weather when the air, roof deck, and membrane are at temperatures of 5°C or higher. Apply roof covering material at temperatures of 5°C or higher.

Cut the membrane into 3 to 5m lengths and reroll loosely. Tack/ secure the end of the roll with a nail. Peel back 300 to 600mm of release liner, align the membrane, and continue to peel the release liner from the membrane. Press the membrane in place with heavy hand pressure. Side laps must be a minimum of 90mm and end laps a minimum of 150mm . For valley and ridge application, peel the release liner, centre the sheet over the valley or ridge, drape, and press it in place. Work from the centre of the valley or ridge outward in each direction and start at the low point and work up the roof.

Use VYCOR ULTRA™ underlayment on all of these critical areas



Alternatively, starting with a full roll of membrane, unroll a 1 to 2m piece of membrane leaving the release liner in place. Align the membrane and roll in the intended direction of membrane application. Carefully cut the release liner on top of the roll in the cross direction being careful not to cut the membrane. Peel back about 150mm of the release liner in the opposite direction of the intended membrane application exposing the black adhesive. Hold the release liner with one hand and pull the roll along the deck with the release liner, leaving the applied membrane behind. Use the other hand to apply pressure on the top of the roll. Stop frequently to press the membrane in place with heavy hand pressure. When finished with the roll go back to the beginning, reroll and pull the remaining release paper from the material, finishing the installation.

Consistent with good roofing practice, install the membrane such that all laps shed water. Always work from the low point to the high point of the roof. Apply the membrane in valleys before the membrane is applied to the eaves. Following placement along the eaves, continue application of the membrane up the roof. The membrane may be installed either vertically or horizontally.

Use smooth shank, electroplated galvanised nails for fastening shingles. Hand nailing generally provides a better seal than power- activated nailing. If nailing of the membrane is necessary on steep slopes during hot or extreme cold weather, backnail and cover the nails by overlapping with the next sheet.

Extend the membrane on the roof deck above the highest expected level of water back-up from ice dams and above the highest expected level of snow and ice on the wall sheathing on vertical side walls (dormers) and vertical front walls for ice dam protection. Consider a double layer of membrane in critical areas, such as along the eaves or in valleys and in climates where severe ice dams are anticipated. Apply the membrane to the entire roof deck for wind-driven rain protection. Apply a new layer of VYCOR ULTRA™ underlayment

directly over the old underlayment in retrofit applications following the standard membrane application procedure.

Performance Properties

PROPERTY	VALUE	TEST METHOD
Colour	Gray-black	-
Thickness	0.76mm (30 mil)	ASTM D3767 method A
Tensile Strength	1720 kN/m^2 (250 psi)	ASTM D412 (Die C modified)
Elongation	250%	ASTM D412 (Die C modified)
Low Temperature Flexibility	Unaffected @ -29°C (-20°F)	ASTM D1970
Adhesion to Plywood	525 N/m width (3.0 lbs/in.)	ASTM D903
Permeance (Max)	2.9 ng/m^2s Pa (0.05 Perms)	ASTM E96
Material Weight Installed (Max)	1.1kg/m^2 (0.22 lb/ft^2)	ASTM D461
Butyl Based	Butyl Based	-

Product Data

Roll Length	21.3m
Roll Width	864mm
Roll Size	18.4m^2
Packaging	Corrugated cartons
Roll Weight	19.0kg
Rolls Per Pallet	25

Detailing

Sealing of penetration, brackets, bolt heads etc. to the installed VYCOR ULTRA™ membrane. Detailing may only be carried out using Dow Corning DC758 sealant, approved for use with VYCOR ULTRA™ by both GCP and Dow Corning. No other sealant shall be used, whether from Dow Corning or any other supplier, as adhesion cannot be guaranteed. Specific preparation and sealant application methods must be followed. Please contact GCP technical department for further details.

Precautions and Limitations

- Slippery when wet or covered by frost.
- Consistent with good roofing practice, always wear fall protection when working on a roof deck.
- Release liners are slippery. Remove from work area immediately after membrane application.
- Do not leave permanently exposed to sunlight. Maximum recommended exposure is 60 days.
- Place metal drip edge or wood starter shingles over the membrane.
- Place metal drip edges or wood starter shingles over the membrane (refer to Technical Letter 15, Roof Eave Application).
- Do not fold over the roof edge unless the edge is protected by a drip edge, gutter, or other flashing material.
- Do not install on the chamfered edges of wood plank.
- Do not install directly on old roof coverings.
- Check with the manufacturer of the metal roofing system for any special requirements when used under metal roofing. Do not install directly under roof coverings especially sensitive to corrosion, such as zinc, without providing proper ventilation.
- Provide proper roof insulation and ventilation to help reduce ice dams and to minimise condensation. VYCOR ULTRA™ underlayment is a vapour barrier.
- Repair holes, fishmouths, tears, and damage to membrane with a round patch of membrane extending past the damaged area 150mm in all directions. If fasteners are removed leaving holes in the membrane, they must be patched. The membrane may not self-seal open fastener penetrations.
- Do not install fasteners through the membrane over unsupported areas of the structural deck, such as over the joints between adjacent structural panels.
- Due to its slight rubber-like odour, do not apply where the membrane is exposed to interior living space.
- Compatible with EPDMs (refer to Technical Letter 5, Chemical Compatibility). Also for use in tie-ins in EPDM with other underlayments.
- Not compatible with polysulfides, flexible PVC or high concentrations of resin (pitch). For more information, refer to Technical Letter 5.

Standard Compliance

- ICC ESR-1677 approval according to AC-48 Acceptance Criteria for Self-Adhered underlayments used as Ice Barriers
- Underwriters Laboratories, Inc. R13399 Class A fire classification under fiberglass shingles and Class C under organic felt shingles
- Underwriters Laboratories, Inc. Classified Sheathing Material Fire Resistance Classification Design Numbers P225, P227, P230, P237, P259, P508, P510, P512, P514, P701, P711, P717, P722, P723, P732, P734, P742, P824.

Release Date: 02/11/18. The information contained in this product data sheet supersedes all previous versions.

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