

# Grace Ultra

## Self-adhered roofing underlayment for high temperature applications

Grace Ultra self-adhered roofing underlayment helps protect sloped roofs from the effects of wind-driven rain and ice dams in applications where the membrane must withstand high in-service temperatures for extended periods of time. This membrane offers the highest factor of safety for performance at elevated temperatures for applications in hot desert southwest climates or any application where superior heat resistance is needed.

The membrane meets or exceeds key performance requirements for self-adhered roofing underlayments used in severe climate areas, such as ICBO Standards. The membrane also has a UL Class A fire classification under fiberglass shingles, a Class C under organic felt shingles, and is approved in several UL fire-resistive roof design assemblies. The product offers outstanding adhesive qualities for a strong bond to the roof deck and for high quality laps.

Grace Ultra is part of the Grace family of roofing underlayments available from Grace Construction Products.



## Product Description

Grace Ultra 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 30 mil (0.76 mm) 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 198 ft<sup>2</sup> (18.4 m<sup>2</sup>) roll, and measures 34 in. (864 mm) wide.

### Features & Benefits

**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 standards for nail sealability of self-adhered roofing underlayments.

**Heat Resistance:** The membrane will resist elevated temperatures for extended periods of time without degradation of the adhesive.

**Slip Resistant Surface:** The slip resistant surface maximizes traction for safety without compromising the water integrity of the laps.

**Plastic Release:** Plastic is easy to remove and easy to dispose of.

## PRODUCT DATA

Roll Length	70 ft (21.3 m)
Roll Width	34 in. (864 mm)
Roll Size	198 ft <sup>2</sup> (18.4 m <sup>2</sup> )
Packaging	Corrugated Cartons
Roll Weight	42 lbs (19.0 kg)
Rolls per Pallet	25

**Aesthetically Pleasing:** The thin membrane meets code standards for fastener sealability but will not show through roof coverings.

**Reroofable:** Unlike some granular surfaced membranes, Grace Ultra will not adhere to the underside of the exposed roof covering making reroofing easier and less costly.

**Grace Expertise:** Grace is the recognized leader in self-adhered roofing underlayments, and is the manufacturer of Grace Ice & Water Shield®.

### Guidelines for Use

Grace Ultra 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 high in-service temperatures for extended periods of time.

### High Temperature Applications

Grace Ultra is the appropriate product for all applications in hot desert southwest climates or any application where superior heat resistance is needed. In addition, Grace Ultra is the appropriate product for use under certain types of metal roofs (those employing copper, zinc, or Cor-Ten® panels).

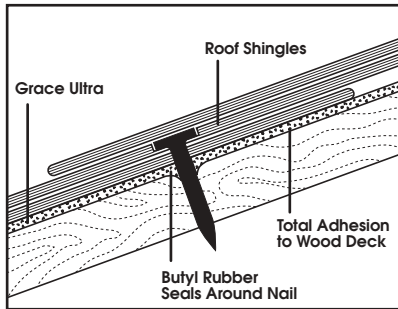
These metal roofs tend to readily conduct heat to the underlayment making them more likely to expose the membrane to high temperatures. It is up to the contractor and specifier to decide what level of performance is required based on the guidelines provided.

### 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. Grace Ultra applied beneath the sloped roof covering helps prevent wind-driven rain from entering the structure. For wind-driven rain protection, full coverage with Grace Ultra is recommended. Since Grace Ultra is a vapor barrier, the roof construction must allow for proper ventilation in full roof coverage applications.

### Ice Dams

For ice dam protection, Grace Ultra 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



Seals around nails or fasteners. Fully adheres to deck, resisting leaks from wind-driven rain or water backup due to ice dams.

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, Grace Ultra 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 Grace Ultra 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

Grace 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). Apply Perm-A-Barrier WB Primer at a rate of 6-8 m<sup>2</sup>/L (250-350 ft<sup>2</sup>/gal). Priming is not required for other suitable surfaces provided that they are clean and dry.

### Membrane Installation

Apply Grace Ultra only in fair weather when the air, roof deck, and membrane are at temperatures of 40°F (5°C) or higher. Apply roof covering material at temperatures of 40°F (5°C) or higher.

Cut the membrane into 10-15 ft (3-5 m) lengths and reroll loosely. Tack/secure end of roll with nail. Peel back 1-2 ft (300-600 mm) 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 3.5 in. (90 mm) and end laps a minimum of 6 in. (150 mm). For valley and ridge application, peel the release liner, center the sheet over the valley or ridge, drape, and press it in place. Work from the center of the valley or ridge outward in each direction and start at the low point and work up the roof.

Alternatively, starting with a full roll of membrane, unroll a 3-6 ft (1-2 m) 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 6 in. (150 mm) 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

## PERFORMANCE PROPERTIES

Property	Value	Test Method
Color	Gray-Black	
Thickness, Membrane	30 mil (0.76 mm)	ASTM D3767 Method A
Tensile Strength, Membrane	250 psi (1720 kN/m <sup>2</sup> )	ASTM D412 (Die C Modified)
Elongation, Membrane	250%	ASTM D412 (Die C Modified)
Low Temperature Flexibility	Unaffected @ -20°F (-29°C)	ASTM D1970
Adhesion to Plywood	3.0 lbs/in. width (525 N/m)	ASTM D903
Permeance (Max)	0.05 Perms (2.9 ng/m <sup>2</sup> s Pa)	ASTM E96
Material Weight Installed (Max)	0.22 lb/ft <sup>2</sup> (1.1 kg/m <sup>2</sup> )	ASTM D461
Butyl Based	Adhesive	

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 galvanized 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 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, 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 Grace Ultra directly over the old Grace underlayment in retrofit applications following the standard

membrane application procedure. Place metal drip edges or wood starter shingles over the membrane.

#### **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.
- 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 minimize condensation. Grace Ultra is a vapor barrier.
- Repair holes, fishmouths, tears, and damage to membrane with a round patch of membrane

extending past the damaged area 6 in. (150 mm) in all directions. If fasteners are removed leaving holes in the membrane, it 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 odor, do not apply where the membrane is exposed to interior living space.
- Compatible with EPDM's (refer to Technical Letter 5). Also for use in tie-ins in EPDM with other Grace underlayments.
- Not compatible with polysulfides, flexible PVC or high concentrations of resin (pitch). For more information, refer to Technical Letter 5.

#### **Standard Compliance**

Grace Ultra meets the following standards:

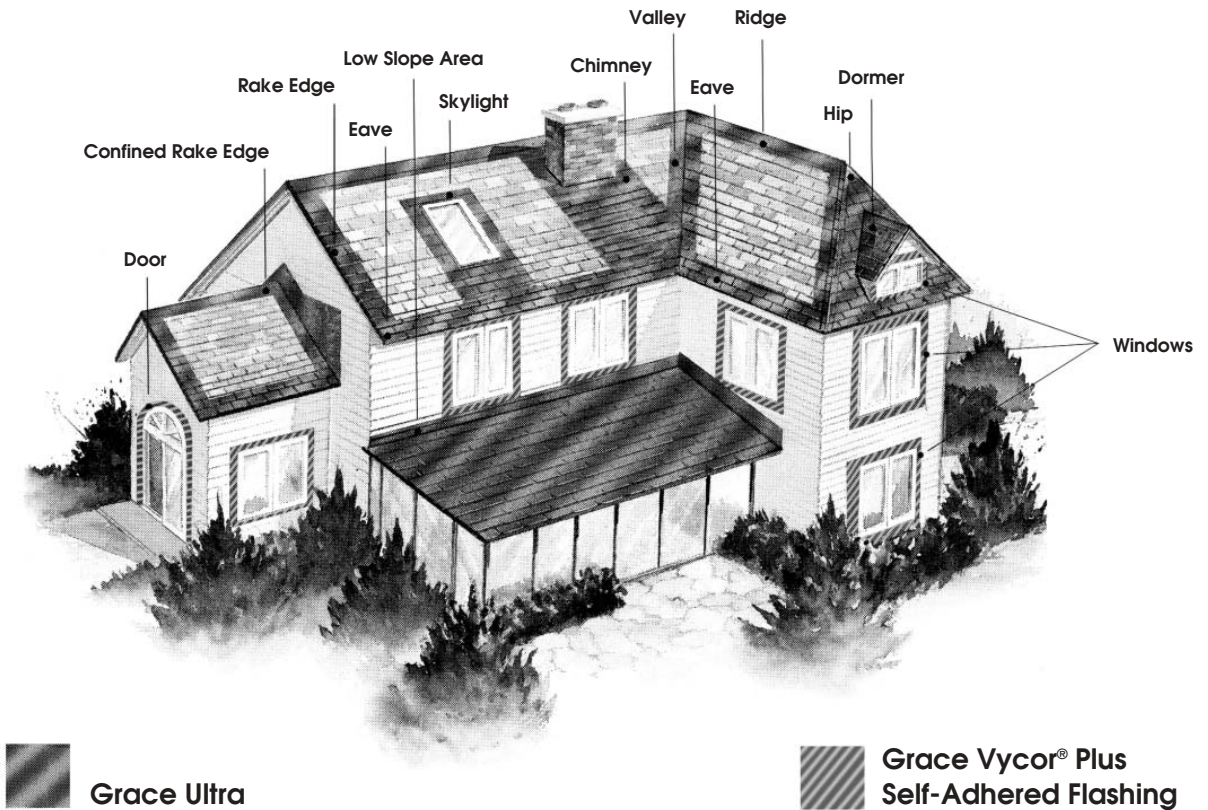
- International Conference of Building Officials (ICBO) Report No. 3997
- Underwriters Laboratories, Inc. R13399 Class A fire classification under fiberglass shingles and Class C under organic felt shingles
- Underwriters Laboratories, Inc. Classified Sheathing Material Fire Resistance Classification Design Numbers P225, P227, P230, P237, P259, P508, P510, P512, P514, P701, P711, P717, P722, P723, P732, P734, P736, P742, P803, P814, P818, P824

**Use Grace Ultra on all of these critical areas**

You know the “danger zones” where most roof leaks happen. Protect those areas with Grace Ultra, and you create a self-sealing barrier that neither melting snow nor wind-driven rain can penetrate through or travel beneath. It takes surprisingly little Grace Ultra to make danger zones safe. It adds very little

to the cost of a roofing job, but the benefits of using it are obvious . . . and important. That’s why it’s an easy sell.

The more danger zones a sloped roof has, the more sense it makes to use Grace Ultra. It neutralizes the danger zones in a way felts can’t.



## GRACE UNDERLAYMENTS PRODUCT SELECTION MATRIX

Application Guidelines	Grace Ultra	Grace Ice & Water Shield®	Grace Select	Grace Basik®
Desert Southwest United States	●	⊗	⊗	○*
Under Copper, Zinc or Cor-Ten® In High Altitude Climates	●	⊗	⊗	⊗
Under Architectural Metal Roofs	●	●	○	⊗
Roofing In High Altitude/Alpine Region	●	●	⊗	⊗
Premium Protection From Severe Ice Dams	●	●	⊗	⊗
As A Vapor Barrier	●	●	●	○
As A Temporary Roof (see product specific appropriate exposure guidelines)	●	●	○	○

\*For application on wood substrates only

● Best

○ Good

⊗ Not Recommended

For Technical Assistance call toll free at 866-333-3SBM (3726).



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