

GRACE TRI-FLEX® XTREME™ Synthetic roofing underlayment

Grace Tri-Flex® Xtreme™ is an innovative synthetic roofing underlayment featuring an advanced skid-resistant technology. It provides a superior walking surface in both dry and wet conditions on steep-slope applications. The product is extremely strong, durable, lays flat and is easy to install. It provides outstanding water-shedding protection to the roof and thus represents the next generation in synthetic roofing underlayments.

Grace Tri-Flex Xtreme's excellent performance makes it appropriate for application in all areas of the roof where a self-adhered membrane is not required. The product can be used as a part of all major roof systems, such as shingles, tiles, slate, metal or cedar shakes. It is mechanically attached to the roof deck and can be used alone or together with Grace self-adhered roofing underlayments.

Grace Tri-Flex Xtreme can be used to provide a temporary water-shedding protection to the roof before the primary roof covering is installed. This allows for flexibility in accommodating construction schedules.

Product Advantages

- Skid-resistant surface
- Durable
- Strong
- Lays flat, stays flat
- Lightweight
- Fast, easy installation
- Grace technical support

Product Description

Grace Tri-Flex Xtreme is comprised of a durable woven fabric, coated with layers of uv-stabilized polyolefin plus a proprietary anti-skid coating on both sides. This unique blend of materials contributes to its outstanding performance characteristics, compared to both conventional roofing felts and other synthetic type materials.

Grace Tri-Flex Xtreme is available in 10 sq rolls (40 in. wide x 300 ft long).

Features & Benefits

Below are some of the features that make Tri-Flex Xtreme unique:

Skid resistance—Tri-Flex Xtreme is specifically engineered using a *breakthrough anti-skid technology* (patent pending) to ensure unmatched performance both under wet and dry conditions. Its skid-resistant properties have been evaluated and endorsed by experienced contractors around the country.



Durability—Unlike conventional roofing felt that typically buckles and “telegraphs” after exposure, Tri-Flex Xtreme *can withstand extreme weather conditions* and still remains flat. This is even more important when drying in the roof. It does not dry out or rot at high temperatures; it does not crack or become brittle at low temperatures; it does not shrink after hot and cold temperature cycles. Product can be left exposed for up to 120 days.

Strength—It is *15 times stronger than #30 felt* and also stronger than many synthetic underlayments. Tri-Flex Xtreme is designed for superior strength and durability—it does not tear away from nails, even in high wind conditions.

Lays flat and stays flat—The unique woven technology and proprietary coatings enable Tri-Flex Xtreme to *lay flat*—free of wrinkles and other defects. It remains flat even after exposure to the elements.

Light weight—One roll weighs about 31 lbs —*nearly 9 times lighter than #30 felt* and significantly lighter than competitive synthetic underlayments. Contractors can cover more area with fewer trips up the ladder, increasing installation efficiency and saving labor cost.

Fast and easy installation—The light rolls and convenient dimensions make even one-person application *fast and easy, increasing installation productivity*.

Grace technical support—Grace Tri-Flex Xtreme is backed by a team of local technical support personnel that help ensure every application goes smoothly. Grace Tri-Flex Xtreme has a *20 year warranty*.

Guidelines for Use

Grace Tri-Flex Xtreme can be used on sloped roofs to provide water-shedding protection and to temporary dry-in until the primary roof covering is installed.

Installation Procedure

1. The roof deck must be swept clean and be smooth and dry before installation begins.
2. Grace Tri-Flex Xtreme is laid horizontally (parallel to eave), starting at the bottom of the roof, with printed side up and with 4 in. side laps and 6 in. end laps. Side laps run with the flow of water in a shingling manner.
3. Grace Tri-Flex Xtreme should not be used at slopes less than 2:12, provided the slope is also acceptable to the primary roof covering. On slopes of less than 3:12, Grace Tri-Flex Xtreme should be half-lapped a full 20 in. over the underlying course, shingle style.
4. Grace Tri-Flex Xtreme is attached to the roof with roofing nails or staples both having a minimum of 1 in. diameter plastic/metal caps or other fasteners approved by Grace, spaced at 8 in. on center (oc) on both side and end laps in normal wind zones. In high wind zones or coastal applications, double the fastening to 4 in. oc. In all cases fasten at 24 in. oc down the middle of the roll in the field of the roof. Capped nails and staples may be hand or machine applied. Nails or staples without caps cannot be used.
5. Where seams or joints require sealant or adhesive, use a high quality, low solvent, asbestos free plastic roofing cement meeting ASTM D4586 Type 1, Federal Spec SS-153 Type 1 (Asbestos Free) or, consult your local Grace representative for more details.
6. Install drip edge at eaves under underlayment and at rake over underlayment.
7. Installation of the roof covering can proceed immediately following underlayment application. Grace Tri-Flex Xtreme cannot be used as a primary roof covering. The product is not designed for permanent outdoor exposure. The installation of the final roof covering should take place within 120 days.
8. For additional protection lay a single length of Grace Tri-Flex Xtreme vertically in valleys and on hips prior to installing metal flashings (if used) and before installing underlayment horizontally. Return Grace Tri-Flex Xtreme up all abutments at least 12 in. (more in heavy snow areas). Secure and trim to suit.
9. Prior to loading roofing materials on Grace Tri-Flex Xtreme it is recommended that roof jacks, toe-boards or a storage platform be secured to the underlying roof deck to prevent slippage of stored materials on steep sloped roofs. See OSHA Regulations (Standards—29 CFR), Fall Protection Systems Criteria and Practices—1926.502.

10. Check local building code to ensure compliance in your area, as local building codes may vary.

Code Approvals

- ICC Approval Pending according to ICC-ES AC 188 *Acceptance Criteria for Roof Underlayments*. A technical letter can be provided upon request.

Precautions & Limitations

- Consistent with good roofing practice, always wear fall protection when working on a roof deck. Comply with all OSHA and other safety standards and codes for roof work.
- Never walk on or leave roofing material on Tri-Flex Xtreme that has not been securely fastened to the roof deck.
- Exercise caution when walking on product—in wet, dusty or snow and ice conditions, all underlayments may be slippery.
- Do not fold over the roof edge unless the edge is protected by a drip edge, gutter or other flashing material.
- Do not install directly under roof coverings especially sensitive to corrosion, such as zinc, without providing proper

ventilation. Check with the manufacturer of the metal roofing system for any special requirements when used under metal roofing.

- Do not install under copper, Cor-Ten®, or zinc metal roofing in high altitudes or in the desert southwest. These roofs can reach extremely high temperatures due to the low reflectivity, high absorption, and high conductivity of the metals.
- Provide proper roof insulation and ventilation to help reduce ice dams and to minimize condensation.
- Repair holes, fishmouths, tears and damage to product. Grace Tri-Flex Xtreme does not self-seal fastener penetrations.
- Use nails and staples ONLY with plastic or metal caps.
- Do not install fasteners through the product over unsupported areas of the structural deck, such as over the joints between adjacent structural panels.
- Do not stretch Grace Tri-Flex Xtreme during installation. The product should be pulled taut, but should not be stretched.

Product Data

Roll length	300 ft (91.4 m)
Roll width	40 in. (1.02 m)
Roll size	1,000 ft ² (92.9 m ²)
Weight per pallet	980 lbs (445 kg)
Rolls per pallet	30

Performance Properties

Property	Value	Test Method
Class A fire	Pass	ASTM E108
Unrollability	Pass (no cracks)	ICC-ES AC188
Pliability	Pass (no cracks)	ASTM D226
Accelerated aging	Pass (no damage, cracking, chipping)	ICC-ES AC188
Ultraviolet resistance	Pass (no damage, cracking, chipping, flaking)	ICC-ES AC188
Tensile strength	56 lbs/in.—CD, 137 lbs/in.—MD	ASTM D1970
Tensile strength—after accelerated aging	56 lbs/in.—CD, 137 lbs/in.—MD	ASTM D1970
Tensile strength—after ultraviolet aging	56 lbs/in.—CD, 137 lbs/in.—MD	ASTM D1970
Liquid water transmission	No wetness	ASTM D4869
Permeability	0.04 perms	ASTM E96, procedure A
Tear strength	67.4 lbf—CD 29.04 lbf—MD	ASTM D4533
Waterponding	Pass (no percolation)	ICC-ES AC48
Nail pull out (plastic cap nails)	98.57 lbs (44.7 kg)	TAS 117 B
Nail pull out	187.64 lbs (85.1 kg)	TAS 117 B
Thickness	8 mils (0.20 mm)	ASTM D3767
Weight	31 lbs/roll	
Color	White	
Recommended exposure limit	120 days	

Grace Underlayments Product Selection Matrix

Waterproofing Membranes

Water-Shedding Membranes

Application Guidelines	Waterproofing Membranes				Water-Shedding Membranes
	Grace Ultra	Grace Ice & Water Shield®	Grace Select	Grace Basik®	Grace Tri-Flex®
Desert southwest United States	●	⊗	⊗	○*	●**
Under copper, zinc or Cor-Ten® in high altitude climates	●	⊗	⊗	⊗	⊗
Under architectural metal roofs	●	●	○	⊗	●
Roofing in high altitude/alpine regions	●	●	⊗	⊗	○***
Premium protection from severe ice dams	●	●	⊗	⊗	⊗
As a vapor barrier	●	●	●	○	○
As a temporary roof (see product specific appropriate exposure guidelines)	●	●	○	○	●

Note: When interpreting the above chart, consider that all Grace self-adhered underlayments, including Grace Ice & Water Shield, Grace Ultra, Grace Select and Grace Basik, are *waterproofing membranes*, while Grace Tri-Flex Underlayments provide a premium *water-shedding* roof protection.

* For application on wood substrates only

** White color only

*** White color is recommended

● Best ○ Good ⊗ Not Recommended

www.graceathome.com
www.graceconstruction.com

For technical assistance call toll free at 866-333-3SBM (3726)

Grace Ice & Water Shield and Grace Tri-Flex are registered trademarks and Xtreme is a trademark of W. R. Grace & Co.–Conn. Cor-Ten is a registered trademark assigned to USX Corporation.

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 the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations or 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 which would infringe any patent or copyright. W. R. Grace & Co.–Conn., 62 Whittemore Avenue, Cambridge, MA 02140. In Canada, Grace Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

This product may be covered by patents or patents pending.
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