

## GRACE TRI-FLEX® High performance roofing underlayment

Grace Tri-Flex® is a high performance water-shedding underlayment, designed to overcome the shortcomings of traditional roofing felt. It is stronger than No. 30 felt and withstands high wind conditions; it is lighter than No. 30 felt and covers more area. The product is mechanically attached to the roof and can be used alone or in conjunction with Grace self-adhered underlayments.

Grace Tri-Flex provides a stable base for the application of mechanically-attached roof coverings and serves as a secondary water shed to help prevent leaks if water penetrates the primary roof covering. The product may also be used to temporarily “dry in” the structure for a period of 6 months before the roof construction is finished or if the primary roof coverings become damaged.

Grace Tri-Flex is suitable for application as part of all major roof systems.

### Product Advantages

- Lighter and covers more area
- Stronger
- More durable
- Slip resistant under wet conditions
- Suitable for use under all major roof coverings
- Facilitates faster and easier installation
- 25 Year Warranty

### Product Description

Grace Tri-Flex is a high strength woven synthetic roofing underlayment coated with a layer of UV stabilized polyolefin. This composition creates a tough, weather-resistant membrane that has been proven under some of the harshest conditions in North America.

Grace Tri-Flex is available in 10 sq rolls (48 in. wide x 250 ft long).

### Features & Benefits

Below are some of the major benefits of Grace Tri-Flex compared to conventional No. 30 roofing felt:

**It's lighter and covers more area—**  
10 times lighter per ft<sup>2</sup> with nearly 5 times the coverage of 30 lb felt

**It's stronger—**Grace Tri-Flex is 20 times stronger than felt and won't tear away from nails even in high winds.



**It's more durable**—Grace Tri-Flex can be left exposed for up to 6 months. It doesn't dry out or rot at high temperatures. It doesn't crack or become brittle at low temperatures.

**It's slip resistant**—Grace Tri-Flex is formulated for excellent skid-resistance even in wet conditions.

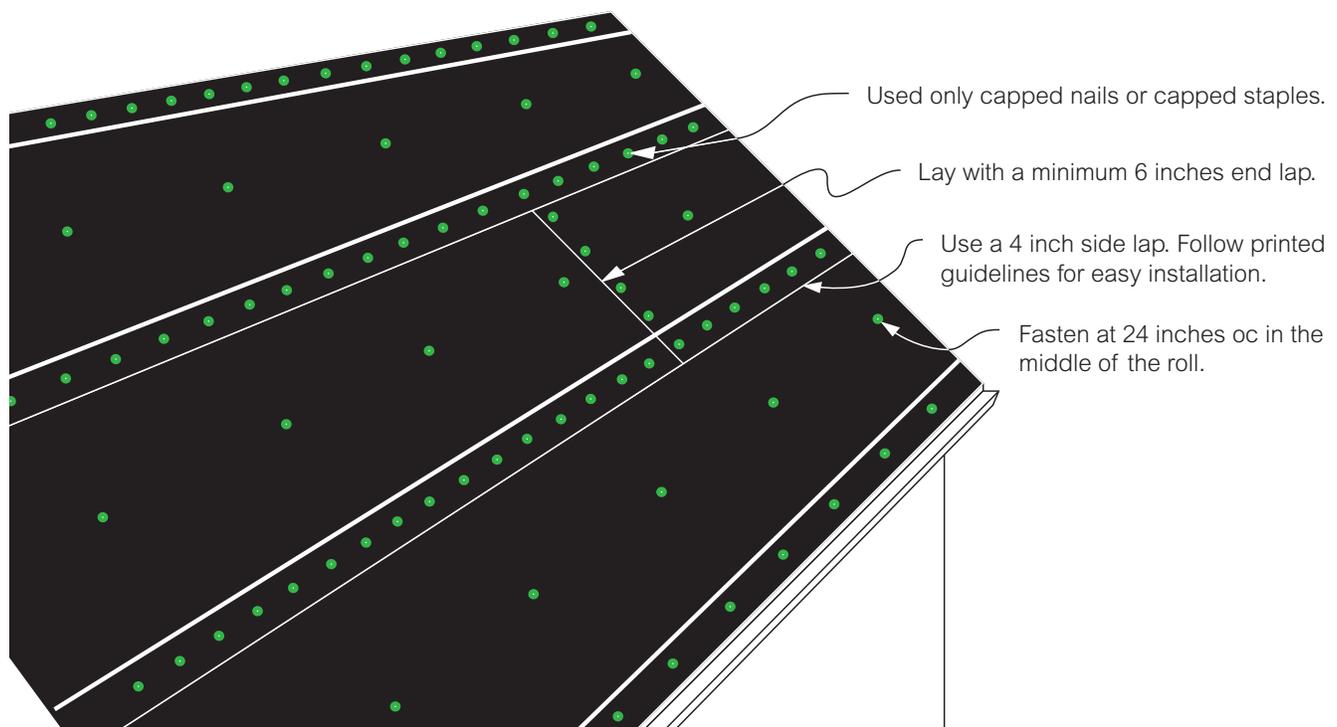
**Suitable for use under all major roof coverings**—Grace Tri-Flex can be used under shingles, tiles, slate, metal and cedar shakes. Refer to subsequent sections for more details.

**Facilitates faster and easier installation**—The lighter rolls make the one-person application fast and easy. It also means fewer trips up the ladder and lower labor costs.

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

## Installation Guidelines

1. The roof deck must be swept clean and be smooth and dry before installation begins.
2. Grace Tri-Flex is laid horizontally (parallel to eave), starting at the bottom of the roof, with printed side up and with 4-inch side laps and 6-inch end laps. Side laps run with the flow of water in a shingling manner.
3. Grace Tri-Flex 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 should be half-lapped a full 24 inches over the underlying course, shingle style.
4. Grace Tri-Flex is attached to the roof with roofing nails or staples both having 1-inch diameter plastic/metal caps or other fasteners approved by Grace, spaced at 8 inches 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 inches oc. In all cases fasten at 24 inches 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). 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 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 6 months.
8. For additional protection lay a single length of Grace Tri-Flex vertically in valleys and on hips prior to installing metal flashings (if used) and before installing horizontal underlayment. Return Grace Tri-Flex up all abutments at least 12 inches (more in heavy snow areas). Secure and trim to suit.
9. Prior to loading roofing materials on Grace Tri-Flex 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-ES ESR 2926
- Miami-Dade County, FL Notice of Acceptance No. 09-0326-06
- Complies with ASTM E108/UL 790 for use in the installation of Class A asphalt glass fiber mat shingles and Class C asphalt organic felt or metal shingles
- Meets ASTM D226 physical requirements of Type I and Type II (No. 15 and No. 30 asphalt felt)

### Product Data

	<b>10 sq Roll</b>
Roll length	250 ft (76.2 m)
Roll width	48 in (1.05 m)
Roll size	1,000 ft <sup>2</sup> (92.9 m <sup>2</sup> )
Roll weight	28 lbs (12.7 kg)
Rolls per pallet	30

### Performance Properties

<b>Property</b>	<b>Grace Tri-Flex</b>	<b>Test Method</b>
Color	Black	
Weight	28 lbs (10 sq roll)	
Tear strength	MD 58 lbs; CD 77 lbs	ASTM D4533
Accelerated aging	Pass (no damage, cracking, chipping)	ICC-ES AC48
Ultraviolet resistance	Pass (no peeling, chipping, cracking, flaking)	ICC-ES AC48
Water ponding	Pass (no percolation)	ASTM D779
Pliability	Pass (no cracks)	ASTM D226
Water transmisssion	Pass	ASTM D4869
Tensile strength	MD 96 lbs; CD 116 lbs	ASTM D828
Thickness	7 mils	ASTM D3767

## Precautions and Limitations

- Consistent with good roofing practice, always wear fall protection when working on a roof deck.
- Slippery when wet or covered by frost, debris or dust.
- Do not fold over the roof edge unless the edge is protected by a drip edge, gutter or other flashing material.
- 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.
- 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 does not self-seal open 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 during installation. The product should be pulled taut, but should not be stretched.

[www.graceconstruction.com](http://www.graceconstruction.com)

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

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This product may be covered by patents or patents pending.  
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