

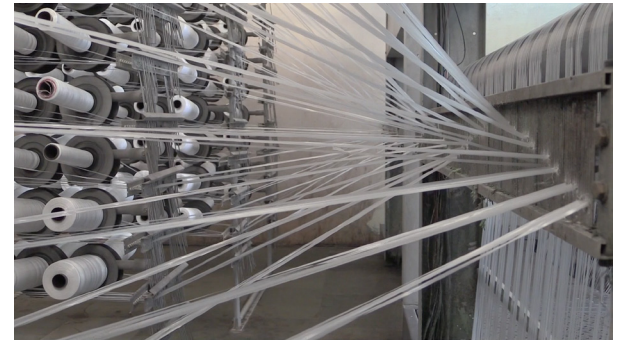
SOMEDAY ALL UNDERLAYMENT WILL BE LIKE RAPTOR



RAPTORTM

SYNTHETIC UNDERLAYMENT

Meets or Exceeds ASTM D226, D4869, D1970, D146
Class A Fire Rated with Asphalt Shingles ASTM E108-11
Perm rating .061 ASTM E 96
Passed Requirements for ICC – ES AC188(2012)
ICC applied for File # 13-10-12
Weight 27 # 10 square roll measures
4' x 250' or 5' x 200'



Imagine a roofing underlayment you can install with regular roofing nails. That won't tear or blow off the roof. That lies flat and stays flat, with a black surface that dries off quickly and shows chalk lines clearly. An underlayment with incredible traction, wet or dry.

Now imagine all of this for less than the cost of #30 asphalt saturated felt.



Imagine

Raptor Synthetic Roofing Underlayment™

Raptor is a unique combination of woven polypropylene, binders, tackifiers, and non-woven polymers. Lightweight but tough, Raptor has incredible traction, wet or dry and will not tear or blow off the roof.





Safety First

The first rule of fall prevention is “don’t slip”, and Raptor has been designed to provide the safest walking surface possible for contractors moving around on steep-sloped roofs. It provides incredible traction wet or dry. Slippery residues will not build up on the soles of roofer’s shoes. It won’t tear easily, eliminating the slip hazard created with loose and torn asphalt felt.

Raptor is black, but there is no mass to heat up, creating a product that remains cooler to the touch than regular felt. Raptor weighs only 27 pounds and one roll will cover 9 to 10 squares of decking. Fewer trips up the ladder and ergonomically better for the back.

Raptor will significantly reduce the likelihood of slipping, **BUT IT DOES NOT TAKE THE PLACE OF A PROPERLY DESIGNED AND IMPLEMENTED FALL PREVENTION PLAN.**

Slide guards should be properly installed along the eaves of every roof. Guardrails, full body harnesses or positioning belts need to be available and used when appropriate.

As a component of an effective fall prevention plan, Raptor Synthetic Underlayment™ can help ensure that everyone working on the roof returns home safely each night.





Roofer Friendly

Raptor was designed specifically for roofing contractors.

Regular roofing nails provide the best protection from water infiltration, and are the preferred fastener for Raptor. Cap nails may be used if required by code, but are not necessary. Staples can be used, but only if you plan to roof within a few days or before any severe weather. Fasteners should be concentrated in the horizontal laps, and placed sparingly in the field.

Raptor is black by design. The dark surface will dry off quickly and show chalk lines clearly, yet Raptor's low mass keeps the surface much cooler than asphalt saturated felt.

Raptor weighs only 27 pounds for a 10 square roll. Easier to carry and fewer trips up the ladder. Available in 4' or 5' widths, Raptor installs much faster and uses fewer fasteners than standard felt.





Builder Friendly

It can be left exposed for up to six months and will not tear or blow off the roof. No more torn or missing felt to replace before the shingles can be installed.

Raptor lays flat and stays flat. No more wrinkles telegraphing through today's lighter weight shingles.

Raptor is a suitable underlayment for use under all roofing materials.



Raptor Synthetic Underlayment™ Installation Instructions

Raptor should be installed with the black surface (printed surface) facing up. Horizontal seams should be lapped four inches and vertical side seams should be lapped six inches. Fasteners should be concentrated in the horizontal seams. To prevent wind blown rain from penetrating the vertical seams we recommend taping those seams with a quality, six inch flashing tape. There will only be a few vertical seams on every roof, and this simple trick can protect those laps until the shingles are applied.

Proper Placement of Metal Drip Edge

Raptor should lap over the drip cap at the bottom (eave edge) of the roof. If the framers install the Raptor before the roofers arrive, they should keep the fasteners at least three inches from the bottom of the roof, so that the roofers can properly slip the drip cap under the Raptor.

Drip cap should lap over the raptor along the eaves. This will prevent windblown rain from getting under the underlayment, and will help prevent wind damage to the underlayment before the shingles are installed.

Fastening Raptor to the Deck

- The correct location for fasteners is clearly printed on the surface of the Raptor Synthetic Underlayment™. For normal application, place a nail in each of the printed O's and ignore the printed X's.
- Fasteners for Raptor should be concentrated in the horizontal laps. When using regular roofing nails or large headed cap nails, fasteners should be spaced every 12 inches in the seams and staggered every 24 inches along two rows in the field of the underlayment.
- Regular roofing nails with a 3/8" head provide the best protection against water infiltration, and are our preferred fastener for most Raptor applications. One inch cap nails may be used when required by code or if unusually high winds are forecast, but are typically unnecessary.
- Raptor may be left exposed for up to six months using regular roofing nails or cap nails.
- For extended periods of time or extreme weather conditions, twice as many nails may be installed by placing fasteners in both the O's and the X's printed on the Raptor.
- Staples are commonly used to install asphalt saturated felt, and will perform just as well with Raptor. Staples should only be used if the roofing materials will be installed within a few days.
- A continuous line of staples should be placed along the seams, with only a few staples in the field. Raptor's superior tear strength allows you to install raptor using far fewer staples than you may have used with organic felt.



Recommended Stapling Pattern For Raptor



Nailing Pattern For Raptor In Normal Conditions

“Waterproofing” a Roof with Raptor Synthetic Underlayment™

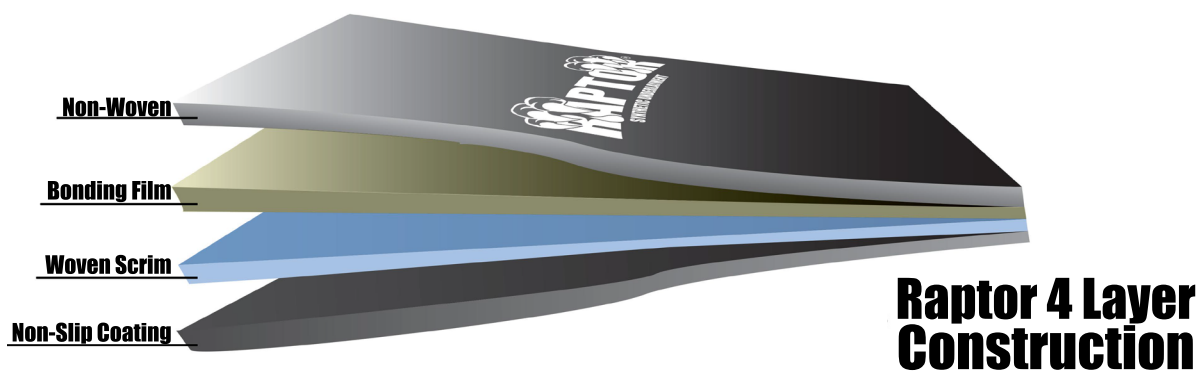
Underlayment is not roofing, and whether you're using Raptor, organic felt, or another synthetic underlayment, you should never count on underlayment to make a roof leak proof. Tarps should always be used for extra protection when leaving a re-roof unfinished for the night.

However, water will not pass through intact Raptor Synthetic Underlayment™, and if you will use the following tips, very little water will enter the building.

- Lap the seams correctly: 4" horizontal, 6" vertical (side)
- Tape the vertical seams with a good flashing tape
- Concentrate the fasteners along the seam laps, where there is a double coverage of underlayment.
- Install metal drip edge along the rake to prevent water from blowing under the Raptor and minimize blow offs
- Use flashing tape to seal the Raptor to the valleys and roof/wall interfaces, which is also great first step to waterproofing the finished roof.
- Cover the ridge with a good flashing tape or ice and water barrier

AC188 TEST RESULTS SUMMARY

Test Description	Standard	Test Requirement	Test Results	Pass/Fail
Pliability	ASTM D146 section 14	No cracking shall occur when bent 90° at a uniform speed over a rounded corner of ½-inch radius.	No cracking occurred	Pass
Accelerated Aging	AC48 Section 4.7	No visible damage to the specimens such as cracking, chipping or delamination shall occur.	No visible damage Occurred	Pass
UV Exposure	AC48 Section 4.8	No visible surface or structural changes such as peeling, chipping, cracking, flaking or pitting shall occur when observed under a minimum of five-power magnification.	No Visible Changes Occurred	Pass
Tensile Strength	AC48 Sections 4.1, 4.7, 4.8 and ASTM D1970	Control, accelerated-aged, and ultraviolet samples shall have a minimum breaking strength of 25 lbf/in-width for both machine and cross-directions.	Control Samples: CD= 40 lbf, MD= 71 lbf	Pass
			Aged Samples: CD= 37 lbf, MD= 77 lbf	Pass
			UV Exposed Samples: CD= 40 lbf, MD= 80 lbf	Pass
Adhesion In Peel	N/A	This was not a requirement for this product, as it is not an adhered membrane.	N/A	N/A
Liquid Water Transmission	ASTM D4869 Section 8.3.5	Shall meet the "Pass" requirements of Section 8.3.5 of ASTM D4869	Pass	Pass
Cycling & Elongation	N/A	This was not a requirement for this product, as it is not an adhered membrane.	N/A	N/A
Unroll-ability	AC188 Section 3.2	The finished product shall not crack or become so sticky as to cause tearing or other damage, upon being unrolled at temperatures between 50°F and 140°F (10°C and 60°C).	No cracking, tearing or other damage was observed upon being unrolled at specified temperatures	Pass
Water-vapor Transmission	PER ASTM E 96	Water Vapor Transmission (g/m ² /hr)	0.061	N/A
Warranty	N/A	25 Year	N/A	N/A





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Why wait?

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