PRO-MASTER

ROOFSHIELD UDL™

SYNTHETIC ROOFING UNDERLAYMENT

PMUDL10

NEW Traction Twist Fiber™

PMUDL10P

May be used with Tile

Model #	*Description*
PMUDL10	10 Square Roll 52" x 231' 49 Rolls/Pallet
PMUDL10P (PLUS)	10 Square Roll 52" x 231' 36 Rolls/Pallet

- UV Stabilized Synthetic Material Rated for One Year Exposure
- Lightweight:
  UDL: 28 lbs.* for PMUDL10 Roll
  UDL PLUS: 30.3 lbs.* for PMUDL10P Roll
- Printed with Nail Pattern and Alignment Guides
- May be Used with: Asphalt Shingles, Wood Shakes, Non-Structural Metal Roofing, Synthetic & Quarry Slate and Tile Roofing
- UDL: Anti-Slip Coated for Safety
  UDL PLUS: Traction Twist Fiber™ for Safety
- 52" Width Makes Installation Quicker
- Resists Mold
- Stronger and Lighter than Organic Underlayment
- 25-Year Limited Warranty
- Florida Building Code Approved for Use in HVHZ (High Velocity Hurricane Zone) as per TAS 104

FBC: #FL4855

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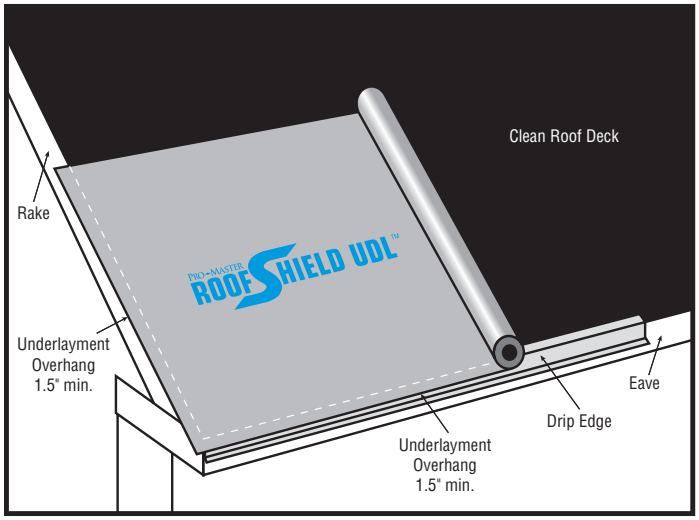
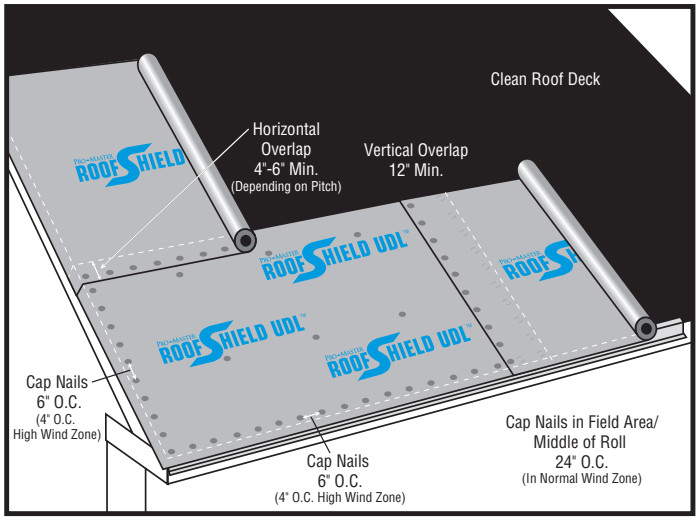
PRO-MASTER ROOF SHIELD UDL™ & UDL PLUS™ INSTALLATION ILLUSTRATIONS:

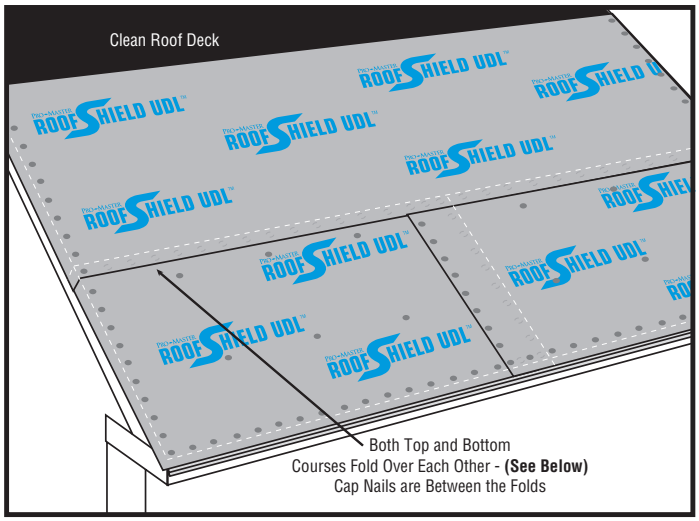
Underlayment Application - Start at Eaves and Rake

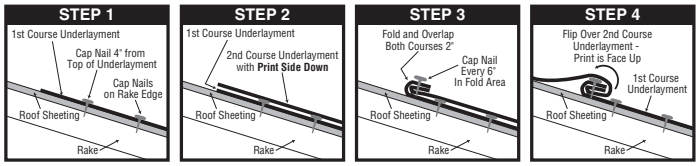


Cap Nailing Diagram

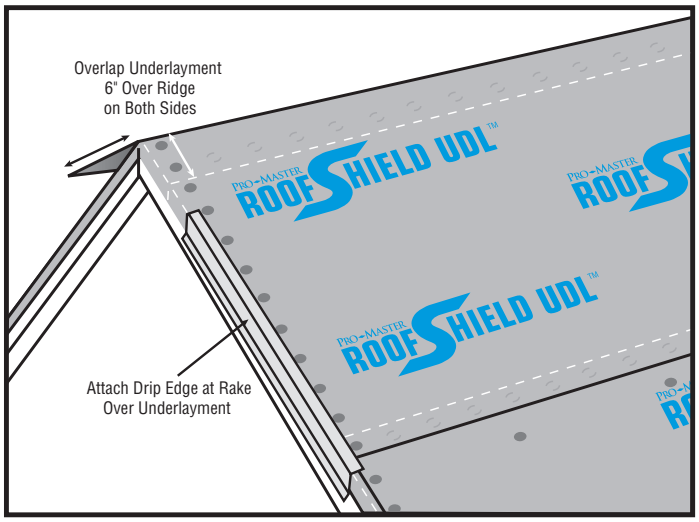


Lap Method - for Extra Protection





Overhang Underlayment at Ridge and Attach Drip Edge at Rake



PRO-MASTER ROOF SHIELD UDL™ & UDL PLUS™ INSTALLATION GUIDELINES AND SAFETY PRECAUTIONS:

These are the minimum safety standards. Your compliance is required at all times for your jobsite safety when using this product.

1. Observe and comply with all OSHA and other safety standards and codes that apply to roof safety.

2. Fall protection devices should always be used when working on roofs. Appropriate personal safety equipment and work shoes designed for roof traction must be used.

3. Before walking on the underlayment surface, roofers must fasten the Pro-Master Roof Shield underlayment securely to the roof deck with 1-inch plastic nails.

4. Observe caution when walking or standing on the underlayment because varied weather conditions may reduce traction.

5. Roof material staging devices such as roof jacks, storage platforms and toe boards must be securely fastened to the deck substructure to prevent the roofing materials from slipping on or falling off the roof.

6. Steep pitched roofs require the use of roof jacks, work supports or platforms to assure safe footing while working on the roof.

7. Follow the ladder safety standards and regulations. Observe the locations of all power lines and take precaution to avoid any contact with the workers or equipment.

8. Be aware of weather conditions. Do not work on the roof when lightning storms, high winds, rain, ice and snow conditions are in the work area or ready to occur. Care should also be exercised when prolonged high temperatures may cause heat exhaustion.

9. All jobsite debris must be removed from the roof daily and from the property when the job is completed.

10. Inspect installed underlayment that has been exposed to storms, wind or flying debris before installing the final roofing material. Repair or replace damaged areas. Remove any debris and take caution in coastal areas to remove any sand from roof before walking on it or covering the underlayment.

PRO-MASTER ROOF SHIELD UDL™ & UDL PLUS™ INSTALLATION:

Pro-Master Roof Shield is not intended for indefinite outdoor exposure and shall not be used as a primary roof covering. Final roofing material must be installed within ONE YEAR from the initial underlayment application. Use of staples or standard roof nails will void any warranty.

1. Pro-Master Roof Shield must be installed above properly ventilated attic spaces (follow local building code) as it is considered a vapor barrier. Inspect, remove, and replace any defective roof sheeting. The roof deck must be clean, smooth, and dry before starting installation. A sharp straight edge-cutting blade is recommended to cut this material.

2. Install drip edge at the roof eave edges. Pro-Master Roof Shield is to be laid horizontally (parallel to eave) with printed anti-slip side up, starting at the bottom of the lowest roof eave, with a 1.5" underlayment overhang at the eave covering the pre-installed eave drip edge. Overhang the roof rake edge 1.5" and cover the underlayment with a metal rake edge trim. Material should be rolled out evenly but not rolled tight or stretched. Lay loosely over valleys to allow for expansion and contraction due to temperature variation.

3. Lap allowance – 3:12 pitch or greater
Horizontal: 4" minimum overlap of the higher course over the lower course.
Vertical: 12" minimum overlap of the roll end
Lap allowance – 1.5:12 pitch to <3:12
Horizontal: 6" minimum overlap of the higher course over the lower course
Vertical: 20" minimum overlap of the roll end

4. ONLY USE* 1" diameter plastic cap roofing nails. Nail down squarely (90 degrees) into the deck to secure caps flush to the underlayment. In normal wind zones the nails should be driven at 6.0" O.C. (on center) on both head and end laps. Fasten the field area in the middle of the roll a minimum of 24" O.C. in normal wind zones. In high wind zones or coastal applications increase the fastening rate to 4.0" O.C. on head and end laps. The field area should be fastened at 12" O.C. minimum. Plastic capped nails may be hand or machine applied.
*Tin cap nails may be used when required by local codes.

Optional lap method at first head lap for enhanced protection in snow/ice areas: Install first horizontal course at eave with 1.5" overhanging bottom drip edge. Place a few cap nails 4" from top edge to hold in place. Nail all other areas at other edges and field nail per instructions. Place another layer with the print side down over the first layer. Fold over the 2 layers 2" at the top and nail every 6 inches in the middle of the fold area to secure the head lap. Lift the loose material and position as the second horizontal course. Nail all edges and field areas as instructed.

5. Overlap vertical roll end by 12" or 20" depending on pitch. Overlap successive vertical courses by 4" with the higher course lapping over the lower course, and by 6" on roofs with slopes of less than 3:12. Lap at least 6" over the ridge.

6. Use ASTM D4586 Type 1, Federal Spec SS153 Type 1 (Asbestos Free) plastic roofing cement on seams or joints that require sealant or adhesive. Butyl rubber roofing tape may be also used to seal lap seams. **When the underlayment will not be covered with roofing material for a prolonged period or it will be exposed to wind driven rain, the laps should be sealed with cement or taped. It should be nailed in accordance with the recommendation for high wind areas.**

7. Install a single vertical length of Pro-Master Roof Shield centrally over hips and down valleys before weaving horizontal underlayment across the valleys and hips. This also applies to metal hip or valley flashings that may be specified.

8. Install underlayment a minimum of 6 inches up roof protrusions or vertical abutments. Seal with adhesive sealant or tape as described in section 6. Install final flashing material.

9. When underlayment is to be covered immediately with battens, it can be secured with a minimum of fasteners to hold it in place while the battens are installed. Care should be exercised to place the 1" diameter plastic cap nails in an area that will not interfere or be covered with the batten strips.

10. Determine local building code requirements and check to ensure compliance of methods and materials required for the job.

PRO-MASTER ROOF SHIELD UDL™ & UDL PLUS™ MATERIAL SAFETY DATA SHEET:

1. PRODUCT IDENTIFICATION AND USE:
Product identification: Pro-Master Roof Shield
Product use/description: coated woven polypropylene for use as a roofing underlayment
Product composition: Polypropylene and polymer blend

2. HAZARDOUS INGREDIENTS:
This is not a hazardous product as defined by WHMIS

3. PHYSICAL DATA:
Physical state: Solid
Odor and appearance: Pigmented odorless woven fabric
Odor threshold (ppm): N/Ap
Vapor pressure (mmHg): N/Ap
Vapor density: (Air = 1): N/Ap
Evaporation rate: N/Ap
Boiling point (°F): N/Ap
Freezing point (°F): N/Ap
PH: N/Ap
Specific gravity: N/Ap
Coef. Water/oil dist: N/Ap

4. FIRE AND EXPLOSION DATA:
Flammability: Not flammable, but in case of fire it will contribute
Means of extinction: Water spray and dry chemicals
Flash point (°F) and Method: N/Ap
Upper flammable limit and Lower flammable limit (% by volume): N/Ap
Hazardous combustion products: Carbon Monoxide, carbon dioxide, nitrogen oxides
Explosion data: Not sensitive to impact or static discharge

5. REACTIVITY DATA:
Chemical stability: Yes
Incompatibility with other substances: None
Reactivity: Non-reactive
Hazardous decomposition products: No data

6. TOXICOLOGICAL PROPERTIES:
Route of entry: N/Ap
Effects of acute exposure to product: None known
Effects of chronic exposure to product: None known
Exposure limits: Not available
Irritancy of product: N/Ap
Carcinogenicity: Not on IARC list
Synergistic products: None known

7. PREVENTIVE MEASURES:
Special shipping information: None
No respirator required under normal use
Leak and spill procedure: N/ap
Storage requirements: N/Ap
Waste disposal: See local authorities for disposal instructions
Gloves: N/Ap
Handling and storage: Rolls should be adequately restrained to prevent shifting

8. FIRST AID MEASURES: N/AP

9. OTHER INFORMATION:
DOT shipping name and classification: Not Available

*N/Ap - Not applicable IARC – International Agency for Research on Cancer WHMIS – Workplace Hazardous Materials Information System

PRO-MASTER ROOF SHIELD UDL™

SYNTHETIC ROOFING UNDERLAYMENT

PRO-MASTER ROOF SHIELD UDL™ & UDL PLUS™ TECHNICAL SPECIFICATIONS:**

Meets or exceeds applicable National Building Code Requirements for AC48, AC188, and ASTM D226 Type II & TAS 104-95

	PMUDL10	PMUDL10P (PLUS)
Roll Dimensions 1000 Sq. Ft. Roll:	Width: 52 in. • Length: 231 ft. • Weight: 28.0 lbs.*	Width: 52 in. • Length: 231 ft. • Weight: 30.3 lbs.*
Material:	Woven black polypropylene with polymer and anti-slip coating	PLUS has addition of cross tapes laminated for enhanced traction
Weight:	3.83 ounces per square yard	4.42 ounces per square yard
Slip Resistance:	Test Standard CGSB 75.1 Rubber Shoe slip resistance exceeded standard by 37% dry and 46% when wet.	30% better traction
UV Resistance:	Material is UV stabilized and will withstand 1 year exposure	Same
Strip Tensile Strength:	Per ISO 13934-1 • MD: 123 lbs. • CD: 68 lbs. Per AC48	Per ISO 13934-1 • MD: 170 lbs. • CD: 104 lbs. Per AC48
Strip Elongation:	MD: 16% • CD: 12%	MD: 21% • CD: 13%
Grab Tensile Strength:	ASTM D4632 • MD: 180 lbs. • CD: 115 lbs.	Same
Grab Elongation:	ASTM D4632 • MD: 17% • CD: 13%	ASTM D4632 • MD: 21% • CD: 13%
Nail Tear Resistance:	Per EN 12310-1 • MD: 90 lbs. • CD: 54 lbs.	Same
Pliability:	Pass ASTM-D-1970	Same
Water Ponding:	Pass AC 48	Same
Water Vapor Permeance:	Pass .05 perms ASTM E 96-00	Same
Beach Puncture Test:	Pass Per Tappi T803 om_79	Same
Tensile after 21 Day UV Aging:	AC48 • MD: 120 lbs. • CD: 70 lbs.	AC48 • MD: 182 lbs. • CD: 96 lbs.
Tensile after 25 Day Accelerated Aging:	AC48 • MD: 117 lbs. • CD: 70 lbs.	AC48 • MD: 153 lbs. • CD: 125 lbs.
Fire Classification:	ASTM E108 • Class A	Same
TILE SLIP RESISTANCE:	N/A	Passed

*Nominal weight.
**Results based on independent testing of randomly selected rolls. Variations will occur due to manufacturing and process tolerance.

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