

Synthetic Underlayment Applications



Synthetic System Components Corporation MetShield Synthetic Weather Tightness Warranty Approved!

Drexel Metals
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#8700 MAMM 1203 ISO 9001 NOA # 06-0919.01 AC 207 ASTM D 226-97a ASTM D 2626-04 CAN/CSA A 123.3 CAN/CSA A 220.1 FL #8700 MAMM 1203 ISO 9001 NOA # 06-0919.01 AC 207 ASTM D 226-97a



MetShield® Synthetic roof underlayments are among the safest, strongest, and best-performing roof underlayments on the market. Woven of heavyweight polymer fabric, MetShield® Synthetic offers superior strength and durability, dynamic steep slope traction, water resistance, a wrinkle-free surface, and resistance to UV-breakdown. The textured woven fabric surface offers dynamic traction and is ideal for steep slopes in a variety of weather conditions. MetShield® Synthetic is rated for commercial and residential applications using plastic caps and roofing nails (3/8" head), and is an ideal roof underlayment for asphalt shingles, metal, tile, slate, and a variety of other sloped roofing materials.

It's also available with the best printing in the industry, DM-ARM custom printing (additional fee applies – 36 roll minimum).

Features and Benefits

Safer: Skid-resistant polymer coating and proprietary Fiber Claw™ walking surface offers dynamic steep slope traction.

Stronger: MetShield® Synthetic is stronger than Type 15 or 30 felt and resistant to tearing and stretching around fasteners in high traffic areas or during high winds.

Lighter: MetShield® Synthetic is lighter than Type 15 or 30 felt and easier to handle during all stages of installation.

Simpler to Apply: MetShield® Synthetic installs quickly, easily and with less risk. It's lighter, stronger and covers more area. Won't buckle, warp, or crack: Superior lay-flat properties and water resistance keeps MetShield® Synthetic from warping, wrinkling, and cracking in cold weather.

- Roll Size: 48" x 250'
- 35-Year Warranty
- Up to 6 month UV exposure
- Use 3/8" Roofing Nails instead of plastic caps:
 - MetShield Synthetic: 51 per SQ
 - Brand X – 180 per SQ
 - That's 129 less fasteners and SAVES LABOR!

Code and Standards

- ASTM D 226, Type II
- ICC-ES AC 207
- CSA A 123.3
- ASTM E 108 / UL790 Assembly – Class A
- CSA A 220.1

Product Specifications

Property	Test Method	Typical
Tensile Strength	ASTM D146-04 (lb/in)	MD113 CD100
Tear Resistance	ASTM D1922-00 (g)	MD >3200 CD > 3200
Rupture Resistance	ASTM D3462-.02	87
Bench Puncture	ICC AC-08	Pass
Long Term Sag	ICC AC-08	Pass
Liquid Water Transmission	ASTM D4869-02	Pass
Ultra Violet Aging	ICC AC 207	Pass
Accelerated Aging	ICC AC 207	Pass

Test Data is based on average results and should not be considered or interpreted as minimum or maximum values. Values are typical data and not limiting.

Installation

Before Installing MetShield® Synthetic: Ensure the roof deck or substrate is properly fastened, has no significant delamination, warpage, bowing or separation from the rafters, trusses or support structures and is free of debris, clean and smooth before the underlayment is applied. MetShield® Synthetic shall be installed using compatible materials and conform to best building practices. Verify the application is compliant with applicable building codes.

MetShield® Synthetic Underlayment

MetShield® Synthetic is not designed or intended to be the final or primary roof. Consult with your local Drexel Metals sales representative for further information. As with all roofing materials, always observe safe roofing practices (OSHA) and local building and safety codes. Use caution when walking or standing on MetShield® Synthetic. Moisture, dust, snow, ice, debris and other job-site conditions may change the coefficient of friction of MetShield® Synthetic. Failure to use proper safety equipment and footwear can result in serious injury or death.

Installation General: Fastening methods and materials should conform to best building practices and local job-site conditions. Verify final application to be compliant with the requirements of applicable building codes. Verify compatibility according to geographical region, structure type and roof specification with applicable building codes and/or by review of a building professional. Install MetShield® Synthetic print side up, horizontal (parallel) to the eave, with minimum 4 inch (102 mm) horizontal laps and 6 inch (152mm) vertical laps. Overlaps shall run with the flow of water in a shingling fashion.

Installation Guidelines and 35-Year Limited Warranty:

- Minimum finished roof slope is 2:12 (17%) for MetShield® Synthetic. In the cases where the roof pitch is less than 2:12 use MetShield® High Temp Peel and Stick by Drexel Metals. For roof slopes greater than 2:12 (17%) and less than 4:12 (33%), laps shall be increased to 25 inches (635 mm).
- In jurisdictions where the use of MetShield® Synthetic in valley applications is permitted by local building codes, Drexel Metals recommends that MetShield® Synthetic be applied as a valley liner in accordance with applicable building codes and industry standards/guidelines. Woven or closed-cut valleys are not recommended.
- Extend MetShield® Synthetic one inch past gable/rake edge, turn down over edge, fasten approximately 4 inches on center and cover with code-compliant flashing prior to the installation of the final roof covering.

Short-Term Exposure:

- For short-term exposure (less than 24 hours before the primary roof installation is completed) without exposure to precipitation or high wind (any signs of underlayment uplifting), corrosive-resistant fasteners may be used to nominally attach the underlayment only as necessary to prevent distortion around fasteners in high traffic areas. The final roof covering will permanently affix the underlayment in place.

Two to 29-Day Exposure:

- Applications that are not immediately covered (within 24 hours) by the primary roof covering or are subject to basic wind speeds (fastest mile) in excess of 90 miles per hour

(145 km/hour, Uniform Building Code) or basic wind speeds (3-second gust) in excess of 110 miles per hour (177 km/hour, International Residential Code and International Building Code) shall be attached using corrosive resistant mechanical fasteners, spaced 8 inches (203 mm) on center along both horizontal and vertical laps and 24 inches (610 mm) on center along the center of the roll in the field of the roof.

Thirty to 180-Day Exposure:

- For underlayment applications that are not covered by the primary roof covering within 30 days and/or for applications in high wind (any signs of underlayment uplifting) zones, lap widths shall be doubled and fastening frequency increased to 4 inches (10.2 cm) on center for horizontal and vertical laps and 24 inches (61 cm) on center along the center of the roll. Additionally, it is recommended that a caulk or sealant material (1) be applied between laps before fastening to prevent moisture ingress in areas of high wind. For a primary roof covering requiring attachment through a batten system, the underlayment need only be preliminarily attached pending attachment of battens or counter battens. Battens or counter battens shall not be secured directly over raised fasteners, including plastic capped roofing nails.

Repairs:

Repair damage to the underlayment with caulk or sealant material maintaining a water-tight seal around the damaged area and proper overlaps to run with the flow of water in a shingling fashion. Ensure any incorrectly applied fasteners are caulked and/or sealed to prevent possible moisture ingress.

Precautions:

- MetShield® Synthetic can be exposed to ultraviolet conditions for up to 6 months.
- Severe weather and/or local job-site conditions may require a shorter exposure period. Please contact Drexel Metals for further information.
- MetShield® Synthetic is not designed to function as the primary roof covering and is intended to function as a secondary water shedding layer under most steep-sloped roofing materials.
- Verify final application to be compliant with applicable building codes.

A 35-YEAR LIMITED WARRANTY APPLIES TO DREXEL METALS. NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS GIVEN AS TO THE MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR OTHERWISE FOR APPLICATIONS OUTSIDE THE SCOPE OF THESE INSTALLATION GUIDELINES AND THE PUBLISHED 35-YEAR LIMITED WARRANTY.



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