



SECTION 07 55 63

VEGETATED ROOFING – N-VIRE™ MAT 075

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PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Ventilation and drainage mat for vegetated roof systems.
2. Root reinforcement and soil stabilization mat.

B. Related Sections:

1. Section 07 14 00 – Fluid-Applied Waterproofing.
 2. Section 07 92 00 – Joint Sealants.
 3. Section 32 93 00 – Plants.
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1.2 REFERENCES

- A. ASTM D5261 – Standard Test Method for Mass per Unit Area of Geotextiles.
 - B. ASTM D4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
 - C. ASTM D4533 – Standard Test Method for Trapezoid Tearing Strength of Geotextiles.
 - D. ASTM D4716 – Standard Test Method for Constant Head Hydraulic Transmissivity of Geosynthetics.
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1.3 SUBMITTALS

- A. Product Data: Manufacturer's data sheets and installation guidelines.
 - B. Shop Drawings: Layout drawings showing seam overlaps, drainage outlets, and transitions at penetrations.
 - C. Verification Samples: Minimum 12" x 12" sample.
 - D. Warranty: Manufacturer's standard limited warranty.
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1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience manufacturing entangled net drainage/ventilation mats.

B. Installer Qualifications: Minimum 2 years' documented experience installing green roof systems of similar scope.

C. Mock-Up: Provide minimum 100 sq. ft. area for review. Approved mock-up may remain as part of final work.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver rolls in original unopened packaging with labeling intact.

B. Store flat, protected from sunlight, precipitation, and physical damage.

C. Do not store vertically or under compressive loads.

1.6 PROJECT CONDITIONS

A. Install only under manufacturer-recommended environmental conditions.

B. Ensure waterproofing and root barrier membranes are installed before mat installation.

1.7 WARRANTY

A. Manufacturer's standard one-year limited warranty against defects in material and workmanship.

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Keene Building Products

2926 Chester Avenue, Cleveland, OH 44114

Toll Free: (877) 514-5336

Phone: (440) 605-1020

Website: www.keenebuilding.com

2.2 PRODUCT DESCRIPTION

A. Product: N-VIRE™ Mat 075

1. Thickness: 0.75 inch (19 mm).
2. Core: Extruded polymeric monofilament matrix, cusped geometric pattern, heat-welded junctions.
3. Fabric: Nonwoven geotextile filter fabric, charcoal color, polyester spun-bond/flat-bond.
4. Functions: Ventilation, drainage, soil separation, and root reinforcement.

B. Features and Benefits:

1. High water flow rates (>10 gpm).

2. Fire resistant – Class A fire-rated for roofing.
 3. Carbon black for UV stability.
 4. Lightweight, flexible, and easy to handle.
 5. Promotes optimal growing conditions for vegetation.
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2.3 PERFORMANCE REQUIREMENTS

A. Flow Rate (ASTM D4716):

- 250 psf: 26.53 gpm/ft width @ 1.0 gradient.
- 500 psf: 24.50 gpm/ft width @ 1.0 gradient.
- 1,000 psf: 23.35 gpm/ft width @ 1.0 gradient.
- 2,000 psf: 7.76 gpm/ft width @ 1.0 gradient.

B. Fabric Properties:

- Weight: 1.4 oz/yd² (136 g/m²).
 - Grab Tensile Strength: 57 lbs (254 N).
 - Trapezoid Tear Strength: 31 lbs (139 N).
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2.4 PACKAGING

A. Roll Dimensions:

- Width: 48 in (122 cm).
 - Length: 50 ft (15.2 m).
 - Area: 200 ft² (18.6 m²).
 - Weight: 27.1 lbs (12.3 kg).
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2.5 ACCESSORIES

- A. Root barrier (if specified by design).
 - B. Flashing tape for seam overlaps (optional).
 - C. Compatible adhesives for securing seams if required.
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PART 3 – EXECUTION

3.1 EXAMINATION

- A. Confirm waterproofing membrane is installed, tested, and approved.
 - B. Verify roof surface is clean and free of debris prior to installation.
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3.2 INSTALLATION

- A. General: Install N-VIRE™ Mat 075 in accordance with manufacturer's instructions.

B. Root Reinforcement Configuration (Filament Side Up):

1. Unroll mat filament side up.
2. Overlap seams minimum 4 inches.
3. Cut to fit around penetrations.
4. Place growing medium evenly.
5. Plant vegetation; water thoroughly.

C. Drainage & Ventilation Configuration (Fabric Side Up):

1. Unroll mat fabric side up.
 2. Overlap seams minimum 4 inches.
 3. Ensure access to drains and weep holes.
 4. Place growing medium evenly.
 5. Plant vegetation; water thoroughly.
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3.3 FIELD QUALITY CONTROL

- A. Inspect mat seams, overlaps, and placement.
 - B. Confirm drainage pathways are unobstructed.
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3.4 CLEANING AND PROTECTION

- A. Protect completed installation until overburden is in place.
- B. Replace damaged mats prior to soil/planting installation.