SECTION 07 10 00

DAMPPROOFING AND WATERPROOFING

(Prefabricated Composite Drainage Mat)

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PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Prefabricated composite drainage mats for use in foundation walls, retaining walls, below-grade waterproofing, plaza decks, and balcony decks.
2. Drainage and protection layer for waterproofing membranes.

B. Related Sections:

1. Section 03 30 00 – Cast-in-Place Concrete.
2. Section 07 13 00 – Sheet Waterproofing.
3. Section 07 27 00 – Air Barriers.
4. Section 07 55 00 – Deck Waterproofing.

1.2 REFERENCES

A. ASTM D4716 – Flow Rate of Geosynthetics.
B. ASTM D1621 – Compressive Strength of Rigid Cellular Plastics.
C. ASTM D4632 – Grab Tensile Strength.
D. ASTM D4833 – Index Puncture Resistance.
E. ASTM D4751 – Apparent Opening Size (AOS).
F. ASTM D4355 – Deterioration of Geotextiles by UV Light.
G. ASTM D4491 – Water Permeability of Geotextiles

TriDent-DD-025-TDS

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1.3 SUBMITTALS

A. Product Data: Manufacturer’s technical data sheet and installation instructions.

B. Shop Drawings: Show seams, terminations, and transitions.
C. Samples: 12" x 12" drainage composite.
D. Warranty: Manufacturer’s standard limited warranty

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1.4 QUALITY ASSURANCE
A. Manufacturer: Minimum 5 years’ experience manufacturing polymeric drainage composites.
B. Installer: Minimum 2 years’ experience installing composite drainage mats.
C. Mock-Up: Provide minimum 100 sq. ft. sample installation for Architect’s review.

1.5 DELIVERY, STORAGE, AND HANDLING
A. Deliver materials in manufacturer’s original packaging with labels intact.
B. Store rolls indoors or under cover; protect from UV and weather.
C. Do not double-stack pallets

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1.6 WARRANTY
A. Manufacturer’s standard one-year limited warranty against defects in materials and workmanship

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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 PREFABRICATED COMPOSITE DRAINAGE MAT

A. Product: **TriDent™ DD 025 – High-Performance Dimpled Composite Drain**

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1. Part Number: 01-X-0154.
2. Core: High-impact polystyrene (HIPS), cuspated/dimpled, impermeable.
3. Filter Fabric: Nonwoven polypropylene geotextile, bonded to one side.
4. Dimensions:
    - Width: 48 in (122 cm).
    - Length: 50 ft (15.24 m).
    - Coverage: 200 ft² (18.58 m²).
    - Roll Weight: 36 lbs (16.33 kg).
    - Rolls per Pallet: 18.

2.3 PERFORMANCE REQUIREMENTS

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A. Flow Capacity: 12 gpm/ft (ASTM D4716).
B. Core Thickness: 1/4 in (6.35 mm).
C. Core Compressive Strength: 10,000 psf (ASTM D1621).
D. Fabric Tensile Strength: 110 lbf (ASTM D4632).
E. Fabric Puncture Strength: 65 lbf (ASTM D4632).
F. Index Puncture Strength: 60% retained strength (ASTM D4833).
G. Apparent Opening Size (AOS): 0.152 mm (#100 sieve) (ASTM D4751).
H. UV Resistance: 70% at 500 hrs (ASTM D4355).
I. Fabric Flow Rate: 150 gpm/ft² (ASTM D4491).

2.4 FEATURES & BENEFITS

TriDent-DD-025-TDS

A. Serves as both drainage and protection course.
B. Relieves hydrostatic pressure at below-grade walls.
C. Protects waterproofing membranes from backfill damage.
D. Provides long-term compressive strength under plaza/balcony decks.

E. Prevents soil intrusion with filter fabric.
F. Lightweight and easy to install.

2.5 ACCESSORIES
A. Keene-approved termination bars.
B. KeeneSeal 100 sealant for vertical terminations.
C. KeeneFlash 4" tape for fabric seams.
D. Approved adhesives: Peel 100 or 3M Hold Fast spray

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PART 3 – EXECUTION

3.1 EXAMINATION
A. Verify substrate is smooth, clean, and waterproofing fully installed and cured.
B. Confirm positive slope to drains or collection systems.

3.2 INSTALLATION

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A. **Vertical Walls:**

1. Place core against waterproofing, fabric facing backfill.
2. Lap fabric shiplap style over adjacent panels.
3. Secure at top with termination bar and KeeneSeal 100.
4. Ensure base drains into perimeter drain tile system.

B. **Horizontal Decks (Balcony/Plaza):**

1. Install directly over waterproofing membrane (with protection course if hot-applied).
2. Position fabric side up, allowing drainage of water above membrane.
3. Overlap fabric shiplap style to prevent soil intrusion.
4. Avoid overlapping core over fabric of adjacent sheet.

3.3 FIELD QUALITY CONTROL

A. Inspect overlaps, seams, and terminations.

B. Repair punctures or damage prior to covering.

3.4 PROTECTION

A. Protect installed drainage mats until covered by overburden.

B. Avoid prolonged UV exposure prior to backfilling or topping installation.