**ClarkDietrich E-Screen™ Rain Screen**

**Product Guide Specification**

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat, SectionFormat,* and *PageFormat,* as described in *The Project Resource Manual—CSI Manual of Practice, Fifth Edition.*

This section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.

Section numbers are from *MasterFormat 2018 Update*.

**SECTION 04, 07, or 09**

**EXTERIOR CLADDING RAIN SCREEN**

Specifier Notes: This section covers ClarkDietrich’s E-Screen™ Rain Screen, a mortar, plaster or siding deflection and ventilation drainage mat that acts as a pressure-equalized airspace between the structural envelope and the exterior masonry cladding. Consult ClarkDietrich Tech Service for assistance in editing this section for the specific application.

1. **GENERAL**
   * + 1. **SECTION INCLUDES**
          1. Exterior Cladding Rain Screen
       2. **RELATED REQUIREMENTS**

Specifier Notes: Edit the following list of related sections as required. Delete related sections not required. List other sections with work directly related to this section.

* + - * 1. Section 04 05 23.19 – Masonry Cavity Drainage, Weepholes, and Vents.
        2. Section 07 25 00 – Weather Barriers.
        3. Section 09 28 00 – Backing Boards and Underlayments.
      1. **REFERENCE STANDARDS**

Specifier Notes: List reference standards mentioned in this section, complete with designations and titles. Delete reference standards not included in this edited section. This article does not require compliance with reference standards but is merely a listing of those used.

* + - * 1. ASTM D 792 – Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
        2. ASTM D 4716 – Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.
        3. ASTM D 5261 – Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
        4. ASTM D 6525 – Standard Test Method for Measuring Nominal Thickness of Permanent Rolled Erosion Control Products.
        5. ASTM D 6566 – Standard Test Method for Measuring Mass per Unit Area of Turf Reinforcement Mats.
        6. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
        7. Erosion Control Technology Council (ECTC) TASC 00197 – Porosity Test.
      1. **SUBMITTALS**

Specifier Notes: Edit submittal requirements as required. Delete submittals not required.

* + - * 1. Comply with Section 01 33 00 – Submittal Procedures.
        2. Product Data: Submit manufacturer’s product data, including preparation and installation instructions.
        3. Samples: Submit manufacturer’s sample of masonry rain screen, minimum 5 inches by 5 inches.
        4. Manufacturer’s Certification: Submit manufacturer’s certification that materials comply with specified requirements and are suitable for intended application.
        5. Warranty Documentation: Submit manufacturer’s standard warranty.
      1. **QUALITY ASSURANCE**
         1. Manufacturer’s Qualifications: Manufacturer regularly engaged in supply of Wet Wall products of similar type to that specified.
      2. **DELIVERY, STORAGE, AND HANDLING**
         1. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer’s original, unopened containers, and packaging, with labels clearly identifying product name and manufacturer.
         2. Storage and Handling Requirements:

Store and handle materials in accordance with manufacturer’s instructions.

Keep materials in manufacturer’s original, unopened containers, and packaging until installation.

Store materials in clean, dry area indoors.

Protect materials during storage, handling, and installation to prevent damage.

1. **PRODUCTS**
   * + 1. **MANUFACTURER**
          1. ClarkDietrich – West Chester, OH, (888) 437-3244, [www.clarkdietrich.com](http://www.clarkdietrich.com)
       2. **EXTERIOR CLADDING RAIN SCREEN**
          1. Drain Mat/ Rain Screen: [E-Screen](https://www.clarkdietrich.com/products/e-screen)™.

Rain Screen System: Creates pressure-equalized airspace between structural envelope and exterior masonry cladding or siding.

Two-ply mat & fabric.

Core Entangled Mesh:

Polypropylene core mesh with geometric pattern.

Spun and heat welded into entangled mesh.

Creates airspace.

Filter Fabric:

Polyester.

Laminated to outside of core mesh.

Blocks mortar or plaster droppings and restricts mortar from entering airspace.

Permits moisture drainage.

Specifier Notes: Specify polypropylene core mesh with cornrow configuration when specifying 0.25- inch (6-mm) total thickness.

Specify polypropylene core mesh with waffle configuration when specifying 0.4-inch (10-mm) total thickness.

*Choose one of the two above*.

Total Thickness: [**0.25 inch (6 mm)**] [**0.4 inch (10 mm)**].

* + - * 1. Test Results:

Specifier Notes: Include Test results for the specified Rain Screen total thickness.

Rain Screen, 0.25-inch (6-mm) Total Thickness:

Thickness, ASTM D 6525: 0.268 inch (6.8 mm).

Density, ASTM D 792, Method A: 0.901 g/cm3.

Porosity, ECTC TASC 00197: 93.8 percent.

Mass per Unit Area, ASTM D 5261 and D 6566:

Composite: 11.25 oz per sq yd (382 g/m2).

Core: 9.20 oz per sq yd (312 g/m2).

Hydraulic Transmissivity, Machine Direction, ASTM D 4716:

Flow Rate: 3.70 GPM/ft width.

Transmissivity: 7.65E-03 m2/s.

Air Transmissivity, ASTM D 4716, Modified:

Estimated Flow Rate: 15.8 cu ft/min/ft width.

Incremental Transmissivity: 6.97E-04 m2/s.

Fire Rating, ASTM E 84: Class A.

Rain Screen, 0.4-inch (10-mm) Total Thickness:

Thickness, ASTM D 6525: 0.407 inch (10.3 mm).

Density, ASTM D 792, Method A: 0.903 g/cm3.

Porosity, ECTC TASC 00197: 95.3 percent.

Mass per Unit Area, ASTM D 5261 and D 6566:

Composite: 15.10 oz per sq yd (512 g/m2).

Core: 13.05 oz per sq yd (442 g/m2).

Hydraulic Transmissivity, Machine Direction, ASTM D 4716:

Flow Rate: 7.01 GPM/ft width.

Transmissivity: 1.45E-02 m2/s.

Air Transmissivity, ASTM D 4716, Modified:

Estimated Flow Rate: 54.5 cu ft/min/ft width.

Incremental Transmissivity: 2.41E-03 m2/s.

Fire Rating, ASTM E 84: Class A.

1. **EXECUTION**
   * + 1. **EXAMINATION**
          1. Examine areas to receive the cladding rain screen.
          2. Notify Architect of conditions that would adversely affect installation or subsequent use.
          3. Do not begin surface preparation or installation until unacceptable conditions are corrected.
       2. **SURFACE PREPARATION**
          1. Prepare surfaces adjacent to rain screen in accordance with manufacturer’s instructions.
       3. **INSTALLATION**
          1. Install rain screen in accordance with manufacturer’s instructions at locations indicated on the Drawings.
          2. Install rain screen after windows and doors have been installed and flashed.
          3. Install rain screen with blue matrix side against weather-resistant barrier and with mortar-deflection fabric facing outward.
       4. **PROTECTION**
          1. Protect installed masonry rain screen from damage during construction.

**END OF SECTION**