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February 2011

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 2010 Update*.

SECTION 04 05 23.19

MASONRY CAVITY WALL DRAINAGE MAT

Specifier Notes: This section covers Advanced Building Products, Inc. “Mortairvent® CW” masonry cavity wall drainage mat that creates a mortar-free airspace between structural envelope and exterior masonry cladding to promote moisture drainage and ventilation of a full height, masonry cavity wall application. Mortairvent® CW should be used in conjunction with a high quality, through-wall flashing and weep system in order to maximize moisture protection of the full cavity wall. Consult Advanced Building Products, Inc. for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Masonry mortar deflection, drainage, and ventilation.

1.2 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.

- A. Section 04 05 23 – Masonry Accessories.

1.3 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.

- A. ASTM D 792 – Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
- B. 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.
- C. ASTM D 5261 – Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
- D. ASTM D 6525 – Standard Test Method for Measuring Nominal Thickness of Permanent Rolled Erosion Control Products.
- E. ASTM D 6566 – Standard Test Method for Measuring Mass per Unit Area of Turf Reinforcement Mats.
- F. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- G. Erosion Control Technology Council (ECTC) TASC 00197 – Porosity Test.

1.4 SUBMITTALS

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

- A. Comply with Section 01 33 00 – Submittal Procedures.
- B. Product Data: Submit manufacturer’s product data, including preparation and installation instructions.
- C. Samples: Submit manufacturer’s sample of masonry rainscreen, minimum 6 inches by 6 inches.
- D. Manufacturer’s Certification: Submit manufacturer’s certification that materials comply with specified requirements and are suitable for intended application.
- E. Warranty Documentation: Submit manufacturer’s standard warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer’s Qualifications: Manufacturer regularly engaged, for past 5 years, in manufacture of masonry cavity wall drainage products of similar type to that specified.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage and Handling Requirements:
 - 1. Store and handle materials in accordance with manufacturer's instructions.
 - 2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
 - 3. Store materials in clean, dry area indoors.
 - 4. Protect materials during storage, handling, and installation to prevent damage.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Advanced Building Products, Inc., 95 Cyro Drive, Sanford, Maine 04073. Toll Free 800-252-2306. Phone 207-490-2306. Fax 207-490-2998. Website www.mortairvent.com. E-mail info@abp-1.com.

2.2 MASONRY CAVITY WALL DRAINAGE MAT

Specifier Notes: Use of "Mortairvent® CW" can contribute toward LEED credits. Consult Advanced Building Products, Inc. for more information.

- A. Masonry Cavity Wall DrainageMat: "Mortairvent® CW".
 - 1. Creates a mortar-free airspace between structural envelope and exterior masonry cladding to promote moisture drainage and ventilation of a full height, masonry cavity wall.
 - 2. Two-ply mat (core mesh heat bonded to mortar deflection fabric).
 - 3. Core Mesh:

Specifier Notes:

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

Specify polypropylene core mesh with random configuration when specifying 0.8-inch (20-mm) total thickness.

- a. [Polypropylene core mesh with waffle configuration]
[Polypropylene core mesh with random configuration].
- b. Spun and heat welded into entangled geomatrix.
- c. Creates airspace.
- 4. Mortar Deflection Fabric:
 - a. 100% recycled polyester.
 - b. Laminated to outside of core mesh.
 - c. Blocks mortar droppings and restricts mortar from entering airspace.

- d. Permits moisture drainage.

Specifier Notes: Specify the masonry cavity wall drainage mat thickness. The mortar deflection fabric of the drainage mat must be within 0.25 in. (6mm) of the inside surface of the outer masonry wall to maintain proper drainage of weep system. Add rigid insulation of appropriate thickness against the outside face of inner wall to fill the width of the cavity.

5. Total Thickness: [0.4 inch (10 mm)] [0.8 inch (20 mm)].

Specifier Notes: Specify masonry cavity wall drainage mat width. 16 inch (40.64 cm) width is specifically designed to roll out and fit tightly between masonry wall anchors.

6. Product Width: [16 inches (40.64 cm)] or [39 inches (99.06 cm)].

B. Test Results:

Specifier Notes: Include test results for the specified masonry cavity wall drainage mat thickness.

1. Masonry Cavity Wall Drainage Mat: 0.4-inch (10-mm) Total Thickness:
 - a. Thickness, ASTM D 6525: 0.407 inch (10.3 mm).
 - b. Density, ASTM D 792, Method A: 0.903 g/cm³.
 - c. Porosity, ECTC TASC 00197: 95.3 percent.
 - d. Mass per Unit Area, ASTM D 5261 and D 6566:
 - 1) Composite: 15.10 oz per sq yd (512 g/m²).
 - 2) Core: 13.05 oz per sq yd (442 g/m²).
 - e. Hydraulic Transmissivity, Machine Direction, ASTM D 4716:
 - 1) Flow Rate: 7.01 GPM/ft width.
 - 2) Transmissivity: 1.45E-02 m²/s.
 - f. Air Transmissivity, ASTM D 4716, Modified:
 - 1) Estimated Flow Rate: 54.5 cu ft/min/ft width.
 - 2) Incremental Transmissivity: 2.41E-03 m²/s.
 - g. Fire Rating, ASTM E 84: Class A.
2. Masonry Cavity Wall Drainage Mat: 0.80-inch (20-mm) Total Thickness:
 - a. Thickness, ASTM D 6525: 0.768 inch (19.5 mm).
 - b. Density, ASTM D 792, Method A: 0.910 g/cm³.
 - c. Porosity, ECTC TASC 00197: 97.7 percent.
 - d. Mass per Unit Area, ASTM D 5261 and D 6566: 12.15 oz per sq yd (412 g/m²).
 - e. Hydraulic Transmissivity, Machine Direction, ASTM D 4716:
 - 1) Flow Rate: 12.00 GPM/ft width.
 - 2) Transmissivity: 2.48E-02 m²/s.
 - f. Air Transmissivity, ASTM D 4716, Modified:
 - 1) Estimated Flow Rate: 89.5 cu ft/min/ft width.
 - 2) Incremental Transmissivity: 3.96E-03 m²/s.
 - g. Fire Rating, ASTM E 84: Class A.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive the masonry cavity wall drainage mat.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin surface preparation or installation until unacceptable conditions are corrected.

3.2 SURFACE PREPARATION

- A. Prepare surfaces adjacent to masonry cavity wall drainage mat in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. Install masonry cavity wall drainage mat continuously throughout full-height of masonry cavity wall in accordance with manufacturer's instructions at locations indicated on the drawings. Masonry cavity wall drainage mat should be used in conjunction with a high quality, through-wall flashing and weep system in order to maximize moisture protection of the full cavity wall.
- B. The mortar deflection fabric of the drainage mat must be within 0.25 in. (6mm) of the inside surface of the outer masonry wall to maintain proper drainage of weep system. Add rigid insulation of appropriate thickness against the outside face of inner wall to fill the width of the cavity.
- C. Install masonry cavity wall drainage mat with blue matrix side against the weather-resistant barrier or rigid insulation and mortar-deflection fabric facing outward. Butt adjacent sections together tightly.
- D. As the exterior wall is constructed, roll out the masonry cavity wall drainage mat horizontally from right to left and tightly between the masonry anchors. Ensure masonry anchors are positioned properly between the inner and outer masonry wythes. Stager vertical joints in adjacent rows. Cut or notch mat around any penetrations including doors and windows.
- E. Install masonry cavity wall drainage mat to perform the following:
 - 1. Create a mortar-free airspace between structural envelope and exterior masonry cladding to promote moisture drainage and ventilation of a full height, masonry cavity wall.
 - 2. Block mortar droppings from entering airspace.
 - 3. Permit moisture drainage.
 - 4. Permit convective airflow and drying.

3.4 PROTECTION

- A. Protect installed masonry cavity wall drainage mat from damage during construction.

END OF SECTION