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## Guide Specification

Specifier Notes: This guide specification is written in Construction Specifications Institute (CSI) 3-Part Format in accordance with *The CSI Construction Specifications Practice Guide, MasterFormat, SectionFormat, and PageFormat.*

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 Division 01, other specification sections, and the Drawings. Delete all Specifier Notes after editing this Section.

Section numbers and titles are based on *MasterFormat 2014 Update.*

## SECTION 07 55 63.13

### VEGETATED PROTECTED MEMBRANE ROOFING DRAINAGE MATS

Specifier Notes: This Section covers Advanced Building Products, Inc. "Watairvent 601" and "Watairvent 602" green roof drainage mats. Consult Advanced Building Products, Inc. for assistance in editing this Section as required for the Project.

Use of "Watairvent" may contribute to LEED credits. Consult Advanced Building Products, Inc. for more information.

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Green roof drainage mats.

## 1.2 RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as required for the Project. Limit the list to sections with specific information that the reader might expect to find in this Section, but is specified elsewhere.

- A. Section 07 55 63 – Vegetated Protected Membrane Roofing.

## 1.3 REFERENCE STANDARDS

Specifier Notes: List reference standards used elsewhere in this Section, complete with designations and titles.

- A. ASTM International (ASTM) ([www.astm.org](http://www.astm.org)):
  1. ASTM D 747 – Standard Test Method for Apparent Bending Modulus of Plastics by Means of a Cantilever Beam.
  2. ASTM D 1117 – Standard Guide for Evaluating Nonwoven Fabrics.
  3. ASTM D 3776 / D 3776M – Standard Test Methods for Mass Per Unit Area (Weight) of Fabric.
  4. ASTM D 5034 – Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test).

## 1.4 SUBMITTALS

Specifier Notes: Edit the Submittals article as required for the Project. Delete submittals not required.

- A. Comply with Division 01.
- B. Product Data: Submit manufacturer's product data, including installation instructions.
- C. Samples: Submit manufacturer's sample of green roof drainage mats, 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 a minimum of 5 years, in the manufacturing of green roof drainage mats of similar type to that specified.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery 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 MANUFACTURERS

- A. Manufacturer: Advanced Building Products, Inc., PO Box 98, Springvale, Maine 04083. Toll Free 800-252-2306. Fax 207-490-2998. Website [www.advancedbuildingproducts.com](http://www.advancedbuildingproducts.com). Email [info@ABP-1.com](mailto:info@ABP-1.com).

Specifier Notes: Specify if substitutions will be permitted.

- B. Substitutions: [Not permitted] [Comply with Division 01].

### 2.2 MATERIALS

Specifier Notes: Specify "Watairvent 601" or "Watairvent 602" green roof drainage mats. Delete green roof drainage mat not required.

- A. Green Roof Drainage Mats: "Watairvent 601".
  - 1. Core bonded to filter fabric.
  - 2. Core:
    - a. Material: Polypropylene.
    - b. Type: Flexible, entangled open mesh.
    - c. Pattern: Waffle.
  - 3. Filter Fabric:
    - a. Material: Polyester.
    - b. Type: Nonwoven.
    - c. Fabric Flap: 3 inches (76 mm).
    - d. Weight, ASTM D 3776: 2.65 oz per sq yd (90 g/m<sup>2</sup>).
    - e. Grab Tensile Strength, ASTM D 5034:
      - 1) Machine Direction: 86 lbf (385 N).
      - 2) Transverse Direction: 81 lbf (365 N).
    - f. Grab Tensile Elongation, ASTM D 5034:
      - 1) Machine Direction: 55 percent.
      - 2) Transverse Direction: 55 percent.

- g. Trapezoidal Tear, Transverse Direction, ASTM D 1117: 31.0 lbf (140 N).
- h. Air Permeability, ASTM D 747: 1,425 L/m<sup>2</sup>/s.
- i. Thickness: 13.8 mils (0.35 mm).
- 4. Total Thickness: 0.40 inch (10 mm).
- 5. Recycled Content: 40 percent.

**B. Green Roof Drainage Mats: "Watairvent 602".**

- 1. Core bonded to filter fabric.
- 2. Core:
  - a. Material: Polypropylene.
  - b. Type: Flexible, entangled open mesh.
  - c. Pattern: Waffle.
- 3. Filter Fabric:
  - a. Material: Polyester.
  - b. Type: Nonwoven.
  - c. Fabric Flap: 3 inches (76 mm).
  - d. Weight, ASTM D 3776: 2.65 oz per sq yd (90 g/m<sup>2</sup>).
  - e. Grab Tensile Strength, ASTM D 5034:
    - 1) Machine Direction: 86 lbf (385 N).
    - 2) Transverse Direction: 81 lbf (365 N).
  - f. Grab Tensile Elongation, ASTM D 5034:
    - 1) Machine Direction: 55 percent.
    - 2) Transverse Direction: 55 percent.
  - g. Trapezoidal Tear, Transverse Direction, ASTM D 1117: 31.0 lbf (140 N).
  - h. Air Permeability, ASTM D 747: 1,425 L/m<sup>2</sup>/s.
  - i. Thickness: 13.8 mils (0.35 mm).
- 4. Total Thickness: 0.50 inch (13 mm).
- 5. Recycled Content: 40 percent.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine surfaces to receive green roof drainage mats.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

### **3.2 SURFACE PREPARATION**

- A. Prepare surfaces in accordance with manufacturer's instructions.

### **3.3 INSTALLATION**

- A. Install green roof drainage mats in accordance with manufacturer's instructions at locations indicated on the Drawings.

- B. Install green roof drainage mats to allow unobstructed water and air flow.
- C. Butt green roof drainage mats together without overlapping.

### **3.4 PROTECTION**

- A. Protect installed green roof drainage mats from damage during construction.

**END OF SECTION**