

Masonry Technology, Inc.  
24235 Electric Street  
PO Box 214  
Cresco, Iowa 52136  
Toll Free (800) 879-3348  
Phone (563) 547-1122  
Fax (563) 547-1133  
Website www.mtidry.com  
E-mail info@mtidry.com

February 2006

## Product Guide Specification

Specifier Notes: This performance guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, as described in *The Project Resource Manual—CSI Manual of Practice*.

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

Section numbers and titles are from *MasterFormat* 1995 Edition, with numbers and titles from *MasterFormat* 2004 Edition in parentheses. Delete version not required.

### SECTION 04090 (04 05 23.19)

#### THIN-SET BRICK, THIN-SET NATURAL STONE, MAN-MADE STONE RAIN SCREEN DRAINAGE SYSTEM

Specifier Notes: This section is based on Masonry Technology, Inc. “Sure Cavity™” drainage plane used as a rain screen drainage system for thin-set brick, thin-set natural stone, and man-made stone. Consult rain screen drainage system manufacturer for assistance in editing this section for the specific application.

Edit the section title above as required.

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Rain Screen Drainage System For:
1. Thin-set brick.
  2. Thin-set natural stone.
  3. Man-made stone.

## 1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 09220 (09 24 23) – Portland Cement Plaster (Portland Cement Stucco).
- B. Section 04400 (04 40 00) – Stone (Stone Assemblies).
- C. Section 04200 (04 20 00) – Masonry Units

## 1.3 REFERENCES

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

- A. ASTM C 1338 – Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings.
- B. ASTM D 1621 – Standard Test Method for Compressive Properties Of Rigid Cellular Plastics.
- C. ASTM D 4491 – Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
- D. ASTM D 4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- E. ASTM D 4833 – Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.
- F. ASTM E 96/E 96M – Standard Test Methods for Water Vapor Transmission of Materials.
- G. ASTM E 2273 – Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies.
- H. ASTM G 154 – Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.
- I. Federal Test Method Standard 191A, Method 5874 – Temperature, Low; Effect on Coated Cloth.
- J. ICC-ES AC356 – Acceptance Criteria for Moisture Drainage Systems Used With Exterior Cement Plaster or Adhered Masonry Veneer Walls.

## 1.4 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer's product and performance data, including installation instructions.
- C. Samples: Submit manufacturer's samples of each material specified.

- D. Certification:
  - 1. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
  - 2. Installer's Certification: Submit installer's certification indicating compliance with manufacturer's training requirements for installation of materials.
- E. Warranty: Submit manufacturer's standard warranty.

## 1.5 QUALITY ASSURANCE

- A. Installer's Qualifications: Complete manufacturer's training requirements for installation of materials.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

## PART 2 PRODUCTS

### 2.1 MANUFACTURER

- A. Masonry Technology, Inc., 24235 Electric Street, PO Box 214, Cresco, Iowa 52136. Toll Free (800) 879-3348. Phone (563) 547-1122. Fax (563) 547-1133. Website [www.mtidry.com](http://www.mtidry.com). E-mail [info@mtidry.com](mailto:info@mtidry.com).  
For assistance with locating Sure Cavity 10mm, please contact product distributor: Powerhouse Building Solutions Inc. Toll Free Tel: 1 (877) 337-2802, Tel: (604) 464-2895. Fax: (604) 464-2804

### 2.2 THIN-SET BRICK, THIN-SET NATURAL STONE, MAN-MADE STONE, 3-COAT STUCCO RAIN SCREEN DRAINAGE SYSTEM

Sure Cavity SCMM 2532 is formed with corrugations 10 mm (0.394 inches) deep and is 31-1/2 inches (800 mm) wide.
---

- A. Description:
  - 1. Maintains separation between cementitious materials and structural back-up walls, while creating drainage system that allows moisture to travel down and out of walls.
  - 2. Drainage plane with fabric attached to 1 side.
- B. Performance:
  - 1. Drainage plane.
  - 2. Fabric: Spunbond polypropylene fabric with 4-inch (102-mm) overlapping skirt on 1 edge.
    - a. Flux, Water Flow Rate, ASTM D 4491: 200 gallons per square foot per minute.

3. Water Vapor Transmission, ASTM E 96: Minus 8.5 grains/hr-ft-ft.
4. Permeance, ASTM E 96: 20.7 perms.
5. Permeability, ASTM E 96: 4.3 perm-inch.
6. Load at 10 Percent Strain, ASTM D 1621: 621 lbf.
7. Compressive Strength at 10 Percent Strain, ASTM D 1621: 38.5 psi.
8. Compressive Modulus, ASTM D 1621: 386 psi.
9. Cold Crack Resistance, Machine Direction, Federal Standard 191A, Method 5874: No cracking, flaking, or other apparent damage to specimen.
10. Breaking Load, ASTM D 4632:
  - a. Machine Direction: 251 pounds.
  - b. Transverse Direction: 168 pounds.
11. Puncture Resistance, ASTM D 4833: 62.9 pounds.
12. Fungi Resistance, ASTM C 1338: No fungal growth.
13. Drainage Efficiency, ASTM E 2273 Modified: Collected water greater than 75 percent of water sprayed into slot fault.
14. Accelerated Weathering:
  - a. ASTM G 154: Pass.
  - b. AC356: Pass.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas to receive rain screen drainage system.
- B. Notify Architect if areas are not acceptable.
- C. Do not begin installation until unacceptable conditions have been corrected.

### **3.2 INSTALLATION**

- A. Install rain screen drainage system in accordance with manufacturer's instructions.
- B. Drainage Plane:

Specifier Notes: Drainage plane must be installed over a water resistant barrier that has a water vapour transmission rating between 5 and 20 perms. (ASTM E-96-90, Method A) and a water penetration resistance of at least 800 cm in accordance with AATCC-127.

Roll stock material and drainage plane must extend down over top of foundation wall a minimum of 2 inches (51 mm). Terminate bottom of thin veneer 8 inches (203mm) above grade. Consult Masonry Technology if this is not possible.

1. Position drainage plane with fabric facing to weather with 2-inch (51-mm) skirt wrapped back under bottom on first course.
2. Install 4-inch (102-mm) skirt of fabric to overlap top edge of lower course of drainage plane.
3. Extend drainage plane down over top of foundation wall a minimum of 2 inches (51 mm).

### **3.3 PROTECTION**

- A. Protect installed rain screen system from damage during construction.

**END OF SECTION**