

TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION

Effective June 1, 2009

SHU-140

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **June 2013**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code and the Texas Engineering Practice Act.

Fabric-Shield™ Wide-Weld Fabric Storm Panels, Impact Resistant, manufactured by

Wayne-Dalton Corp.
3395 Addison Drive
Pensacola, FL 32514
(850) 474-9890

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation and with design drawings that are referenced in this evaluation report.

PRODUCT DESCRIPTION

The Fabric-Shield™ fabric storm panels are a windborne debris protective system. The windborne debris protective system consists of a translucent fabric storm panel system that is secured to the exterior perimeter of a window or door with fasteners. The fabric storm panel system consists of the following components:

Fabric: A 0.037" thick PVC coated woven polyester fabric. Two of the panel edges are reinforced with two extra plies of PVC coated polyester fabrics that are minimum 2.125" wide. The reinforcements are welded to the fabric forming a 0.111" thick edge.

Grommets: Nickel plated grommets and toothed grommet washer; ½" hole size, 1.05" flange diameter, 0.018" thick; trade size #4 (GR4/N). The grommets are installed along the reinforced edges of the fabric. The spacing of the grommets shall be as specified in this evaluation report.

Product Identification: The fabric storm panels shall be marked with a minimum of one label per panel. The label shall specify the manufacturer's name, panel, size, compliance with ASTM E 330, and compliance with ASTM E 1886, and ASTM E 1996.

LIMITATIONS

Design Drawings: The fabric storm panels shall be installed in accordance with Drawing No. 04-WDF-0004, titled "Fabric-Shield Storm Panel", sheets 1 through 4, prepared by Engineering Express, with the last revision dated September 17, 2008, signed and sealed by Frank L. Bennardo, P. E. September 24, 2008. In addition, there is an anchor schedule addendum with the same title, labeled Drawing No. 08-WDF-0001 dated October 21, 2008 and signed and sealed by Frank L. Bennardo, P. E. on October 24, 2008. The stated drawings will be referred to as "approved drawings" in this report. A copy of the approved drawings shall be available at the job site.

Wall Framing Construction: The fabric storm panel may be mounted to several types of wall framing construction. The types of wall framing construction and appropriate drawings/schedules are summarized below:

- Concrete (minimum compressive strength specified on the approved drawings); Drawing No. 04-WDF-0004 Sheet 3 of 4; Anchor Schedule 3.
- Hollow concrete block; Drawing No. 04-WDF-004 Sheet 4 of 4; Anchor Schedule 4.
- Wood dimension lumber:
 - SG \geq 0.42 means minimum Spruce-Pine-Fir (SPF) lumber; Drawing No. 04-WDF-0004 Sheet 3 of 4; Anchor Schedule 2.
 - SG \geq 0.54 means minimum Southern Yellow Pine (SYP) lumber; Drawing No. 04-WDF-0004 Sheet 2 of 4; Anchor Schedule 1.
- Steel – 18 gauge (0.0478" minimum); Fu = 50 ksi minimum; Drawing No. 08-WDF-0001 Sheet 1 of 1.
- Aluminum – 0.125" minimum; 6063-T6 alloy; Drawing No. 08-WDF-0001 Sheet 1 of 1.

Design Pressure Rating / Anchors: Refer to Design Schedule, Sheet 1 of 4 on Drawing No. 04-WDF-0004 of the approved drawings for the allowable design pressures associated with the panel span, mounting condition, and minimum flap reinforcing length requirements.

Panel Span: The maximum distance between rows of fasteners. Note: The fabric storm panel may be installed horizontally or vertically. Therefore, the panel span may be either a vertical dimension or a horizontal dimension. Refer to page 1 of 4 of the approved drawings; Drawing No. 04-WDF-0004.

Panel Length: The fabric dimension parallel to the rows of fasteners. There is no limitation on the fabric storm panel width. Refer to page 1 of 4 of the approved drawings; Drawing No. 04-WDF-0004.

Grommets (Fabric end and edge distance): The grommets are spaced a minimum of $1\frac{7}{16}$ inches from the ends of the fabric. The grommets shall be spaced a minimum of $1\frac{3}{8}$ inches from the edge of the fabric. Refer to page 1 of 4 of the approved drawings; Drawing No. 04-WDF-0004.

Fabric Overlaps: For large openings, it is permitted to overlap the ends of the fabric. Refer to Sheet 1 of 4 of the approved drawings; Drawing No. 04-WDF-0004.

Separation Distance from Glazed Openings: This product does not have a required minimum separation distance from the glazed openings.

Impact Resistance: This assembly satisfies the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The fabric storm panels passed Missile Level D specified in ASTM E 1996-04. The fabric storm panel assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded.

INSTALLATION INSTRUCTIONS

General Installation Requirements: The fabric storm panels shall be installed in accordance with manufacturer's installation instructions, the approved drawings, and this product evaluation report.

Refer to the appropriate anchor schedules and accompanying anchor notes for the wall framing construction as indicated in the Limitations section of this evaluation report. Anchor schedules indicate the minimum embedment depth for the fasteners, the minimum edge distance, and the maximum anchor spacing for various anchor types and design pressures.

Storage: The fabric storm panels are designed to be removed when not in use. Following the initial installation of the system, the assembly should be removed and stowed away. It is recommended that the fabric storm panels be marked or labeled in some manner to identify the proper window or door they will cover on the structure.

Note: The manufacturer's installation instructions and the approved drawings shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.