

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION CWSF-08

Effective June 1, 2011

*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 **November 2015**.*

*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.*

**HMC 1000 LM Series Aluminum Storefront, Impact Resistant**, that are manufactured by members of the:

**Hurricane Manufacturing Corporation**  
**11850 Miramar Parkway**  
**Miramar, FL-33025**  
**Telephone: (954) 392-7933**

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

### General Description:

The HMC 1000 LM series aluminum storefront wall framing system is an aluminum frame system used for commercial storefront installations. All parts of the aluminum frame shall be constructed as indicated on the approved drawings using 6063-T5 or 6063-T6 aluminum extruded alloy. The aluminum window wall framing system is comprised of different configurations of fixed windows. The aluminum window wall framing system evaluated in this report is an impact resistant storefront framing system.

### Glazing Description:

System	Glass Construction <sup>1</sup>	Glazing Method <sup>2</sup>
A1	SG-1	GM-1
A2	SG-2	GM-1
A3	SG-3	GM-1
A5	SG-4	GM-1
B1	IG-1	GM-1
B3	IG-2	GM-1
B4	IG-3	GM-1
C1	IG-4	GM-1

Note: <sup>1</sup> See the "Glass Construction Key" for the glazing construction.

<sup>2</sup> See the "Glazing Method Key" for the glazing method description.

**Glass Construction Key:**

- SG-1: Single glazed with laminated glass. The laminated glass unit is comprised of a  $\frac{9}{16}$ " thick laminated glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.060" Solutia Saflex PVB interlayer;  $\frac{1}{4}$ " heat strengthened glass.
- SG-2: Single glazed with laminated glass. The laminated glass unit is comprised of a  $\frac{9}{16}$ " thick laminated glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.090" Solutia Saflex PVB interlayer;  $\frac{1}{4}$ " heat strengthened glass.
- SG-3: Single glazed with laminated glass. The laminated glass unit is comprised of a  $\frac{9}{16}$ " thick laminated glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.075" Vanceva composite interlayer;  $\frac{1}{4}$ " heat strengthened glass.
- SG-4: Single glazed with laminated glass. The laminated glass unit is comprised of a  $\frac{9}{16}$ " thick HRG-2 glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.050" urethane; 0.080" polycarbonate; 0.050" urethane;  $\frac{1}{4}$ " heat strengthened glass.
- IG-1: Insulating glass units. The insulating glass unit is comprised of a  $1\frac{5}{16}$ " thick insulated laminate glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.060" Solutia Saflex PVB interlayer;  $\frac{1}{4}$ " heat strengthened glass;  $\frac{1}{2}$ " air space;  $\frac{1}{4}$ " heat strengthened glass.
- IG-2: Insulating glass units. The insulating glass unit is comprised of a  $1\frac{5}{16}$ " thick insulated laminate glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.075" Vanceva composite interlayer;  $\frac{1}{4}$ " heat strengthened glass;  $\frac{1}{2}$ " air space;  $\frac{1}{4}$ " heat strengthened glass.
- IG-3: Insulating glass units. The insulating glass unit is comprised of a  $1\frac{5}{16}$ " thick insulated laminate glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.077" Vanceva composite interlayer;  $\frac{1}{4}$ " heat strengthened glass;  $\frac{1}{2}$ " air space;  $\frac{1}{4}$ " clear full tempered glass.
- IG-4: Insulating glass units. The insulating glass unit is comprised of a  $1\frac{5}{8}$ " thick insulated laminate glass unit consisting of the following components:  $\frac{1}{4}$ " heat strengthened glass; 0.075" Vanceva composite interlayer;  $\frac{1}{4}$ " heat strengthened glass;  $\frac{1}{2}$ " air space;  $\frac{1}{4}$ " heat strengthened glass; 0.050" Stormguard; 0.050" Stormguard;  $\frac{1}{4}$ " heat strengthened glass.

**Glazing Method Key:**

- GM-1: The laminated glass units and the insulating glass units are glazed as follows: the interior side utilizes a marine gasket (part #G2948) followed by a continuous strip of  $\frac{1}{2}$ " (F.C.) extruded EPDM wedge gasket (part #1127E); the exterior side utilizes a marine gasket (part #G2948) followed by a  $\frac{1}{4}$ " x  $\frac{9}{16}$ " bead of Dow Corning 995 silicone sealant.

**Frame Construction:** The frame head, side jambs, and sill consist of extruded aluminum part #HPO-12. The frame members are secured together with screws and a shear block.

**Mullions:** The vertical mullion is constructed by butting two adjacent jamb members together and mechanically fastening them per the approved drawings. The mullion bar is inserted to fill the gap between the members. There is a continuous row of Sikaflex Butyl tape in between the two jamb members.

**Glass Stop:** The glass stop member consists of aluminum part #HPO-13. The glass stop is secured to the frame with screws and the glass stop cover (part #HPO-14) snaps into the glass stop.

**Hardware Options:** N/A

**Product Identification:** A label, provided by the manufacturer, will be affixed to the assembly. The label includes the manufacturer's name; the product name: HMC 1000 LM Series Store Front System; the design pressure rating; and the applicable standards: ASTM E 330, ASTM E 1886, and ASTM E 1996 or other recognized impact standard.

## LIMITATIONS

**Design Drawings:** The storefront systems shall be installed in accordance with this product evaluation along with Hurricane Manufacturing Corporation drawings prepared by EngCo Inc. drawing number 11-086, sheets 1-12 of 12, dated April 26, 2011, signed and sealed by Pedro De Figueiredo, (Texas PE# 102937) on April 26, 2011. The stated drawings will be referred to as the approved drawings in this report. A copy of the approved drawings shall be available at the job site.

**Storefront Configurations:** The units may be installed as individual or multiple units in accordance with the approved drawings.

**Wall Framing:** The wall framing may be one of the following:

- Concrete: Pre-cast or cast-in-place. Minimum compressive strength of 3,000 psi.
- Concrete Masonry Units: C-90.
- Steel: Minimum  $\frac{1}{8}$ " thick metal (6063-T5 aluminum or ASTM A36 steel)
- Wood: Minimum Douglas-Fir ( $G \geq 0.46$ ).

**Impact Resistance:** These storefront assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I zone** and the **Seaward zone**. These storefront assemblies will not need to be protected with an impact protective system.

The storefront assemblies with Type A1 and B1 glazing have passed Missile Level A specified in ASTM E 1996-04. The storefront assemblies shall only be installed 30 feet or higher above grade on the structure as long as the design pressure rating for the assemblies is not exceeded.

The storefront assemblies with Type A2, A3, B3 and B4 glazing have passed Missile Level D specified in ASTM E 1996-04. These assemblies may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded.

The storefront assemblies with Type A5 and C1 have passed Missile Level E specified in ASTM E 1996-04. These assemblies may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded.

**Acceptance of Smaller Assemblies:** Assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

## INSTALLATION INSTRUCTIONS

**General:** The assembly shall be prepared and installed in accordance with the manufacturer's recommended installation instructions and the approved drawings. Detailed installation instructions and drawings are available from the manufacturer.

**Note:** The manufacturer's installation instructions 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.