

# 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

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## PRODUCT EVALUATION SHU-190

Effective August 1, 2010

*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 **July 2014**.*

*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.*

**53 mm Herculean Aluminum Rolling Doors**, manufactured by

**Rolsafe LLC**  
**12801 Commonwealth Drive**  
**Suite 2**  
**Fort Myers, Florida 33913**  
**Telephone: (239) 225-2487**

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

## PRODUCT DESCRIPTION

The slats for the 53 mm Herculean rolling door are manufactured from 6063-T6 aluminum alloy. The extruded aluminum slats measure 2.53" in width and 0.558" in depth and have a typical wall thickness of 0.040". The end track of the rolling door measures 3.13" wide by 0.130" thick and is manufactured from 6063-T5 aluminum alloy. Multiple spans (up to three) can be made using mullions. The rolling door is designed as a permanently mounted impact protective system.

## LIMITATIONS

**Design Drawings:** The rolling doors shall be installed in accordance with "53 mm Herculean Impact Rolling Wall Large and Small Missile Impact Rated," manufactured by Rolsafe, Drawing No. 09-214, Sheets 1–9 of 9, dated September 26, 2009, with each sheet signed and sealed by Pedro Figueiredo, P.E. on November 4, 2009. 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.

**Rolling Door Configurations:** The rolling doors may be installed as a single span unit or as two-span or three-span assemblies with the use of mullions.

**Mounting Conditions:** The rolling doors may be wall mounted or inset mounted. Refer to the approved drawings for the mounting conditions.

**Wall Construction:** The rolling doors may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum 2,899 psi, 3,000 psi, or 5,000 psi)
- Grout-filled concrete masonry units (CMU), minimum 1,500 psi,
- Wood (minimum Southern Yellow Pine dimension lumber).
- Aluminum (6063-T5 or 6063-T6)
- Steel (A36)

**Allowable Design Pressure:** The allowable design pressure is a function of the track to track width, anchor type and spacing, mounting condition, mullion type and maximum mullion height. Refer to the approved drawings for the allowable design pressure. The maximum allowable design pressure is  $\pm 150$  psf.

**Anchorage:** The rolling doors shall be anchored to the structure in accordance with the approved drawings. Anchorage of the rolling doors to concrete, grout-filled concrete masonry units (CMU), wood framing, aluminum, and steel shall follow the mounting details on the approved drawings and the fasteners specified in the mounting details.

**Maximum Span:** The maximum allowable span (track to track) for single span, two-span, and three-span assemblies is a function of anchor type and spacing, mounting condition, mullion type and maximum mullion height. Refer to the approved drawings for specific requirements.

**Rolling Door Height:** The maximum allowable finished rolling door height is 252 inches. Refer to the approved drawings for the allowable rolling door height for single span, two-span, and three-span rolling doors.

**Minimum Separation from Glass:** The minimum separation distance to the glass is detailed in Table 1 on Sheet 1 of 9 of the approved drawings. The minimum separation from glass is only required when the rolling door is used in essential facilities as defined in ASCE 7.

**Product Identification:** The rolling door assemblies shall have a label that identifies the manufacturer, the name of the product, compliance with ASTM E 330, and compliance with ASTM E 1886, and ASTM E 1996.

**Impact Resistance:** This rolling door 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 rolling door assemblies passed Missile Level D specified in ASTM E 1996-04. The rolling door 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 rolling doors shall be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report.

**Wall Construction:** The roll-up shutters may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum 2,899 psi, 3,000 psi, or 5,000 psi)
- Grout-filled concrete masonry units (CMU), minimum 1,500 psi,
- Wood (minimum Southern Yellow Pine dimension lumber).
- Aluminum (6063-T5 or 6063-T6)
- Steel (A36)

Refer to the approved drawings for specific requirements.

**Anchorage:** The rolling doors shall be anchored to the structure in accordance with the approved drawings. Anchorage of the rolling doors to concrete, grout-filled concrete masonry units (CMU), wood framing, aluminum, or steel shall follow the mounting details on the approved drawings and the fastener requirements specified in the mounting details and on the approved drawings.

**Mullions:** Anchorage requirements for mullions shall be as specified on sheets 7 of 9 and 8 of 9 of the approved drawings. Allowable design pressures and track to track spans as a function of mullion type and maximum heights for mullions shall be as specified on Sheet 7 of 9 of the approved drawings.

**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.