# *TEXAS DEPARTMENT OF INSURANCE*

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**PRODUCT EVALUATION** Effective October 1, 2010
DR-435

*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 January 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.*

**Energy Saver Contour, 24 gauge Steel Wood Edge, Opaque, Inswing and Outswing Impact Door Systems with or without Non-Impact Sidelites and/or Fixed Transom,** manufactured by

**JELD-WEN Windows and Doors**
**3737 Lakeport Blvd.**
**Klamath Falls, OR 97601**
**(541) 882-3451, ext. 2900**

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

While the door is impact rated, the side-lites and fixed transom evaluated in this report are non-impact resistant, requiring approved shutter coverage on glazed components. This product evaluation report is for steel wood edge door, side-lites and fixed transom, and is based on the following tested construction:

**General Description:**

| System | Description | Label Rating |
|---|---|---|
| 1 | Steel Entry Doors, O/OXO, In-swing | MST 5'-5" x 8'-0"<br>DP: ±55psf |
| 2 | Steel Entry Doors, O/OXO, Out-swing | MST 5'-5" x 7'-11"<br>DP: ±55psf |
| 3 | Steel Entry Doors, XX, Inswing | MST 6'-2" x 6'-10"<br>DP: ±55psf |
| 4 | Steel Entry Doors, XX, Outswing | MST 6'-2" x 6'-9"<br>DP: ±55psf |

**Maximum Overall Size:**

**System 1:** 64 ½" x 95 ¼"
**System 2:** 64 ½" x 94 ¼"
**System 3:** 74" x 81 ¾"
**System 4:** 74" x 80 ½"

**Component Dimensions:**

| System | Door Panel Sizes | Daylight Opening Glass Size |
|---|---|---|
| 1 & 2 | 35 3/4" x 79" | NA |
| 3 & 4 | 35 3/4" x 79" | NA |

| System | Sidelite Panel Sizes | Daylight Opening Glass Size |
|---|---|---|
| 1 & 2 | 12" x 79" | 7 1/2" x 63 1/8" |

| System | Transom Sizes | Daylight Opening Glass Size |
|---|---|---|
| 1 & 2 | 63" x 12" | 58 1/2" x 7 1/2" |

**Glazing Description:**

| System | Glass Construction [1] | Glazing Method [2] |
|---|---|---|
| 1 & 2 | IG-1 and IG-2 | GM-1 and GM-2 |

Note: [1] See the "Glass Construction Key" for the glass construction.
[2] See the "Glazing Method Key" for the glazing method description.

**Glass Construction Key:**

IG-1: Transom glass assemblies are constructed with an insulated glass unit comprised of two (2) single strength (3/32") annealed glass lites with a stainless steel spacer system.

IG-2: Sidelite glass assembly is constructed with 1" thick insulated glass. The insulating glass units are comprised of two (2) lites of 1/8" thick fully tempered glass with an aluminum spacer system.

**Glazing Method Key:**

GM-1: The glass is embedded against silicone sealant. The lites are interior glazed and retained on the interior side with cellular PVC glass stop with integral flexible PVC fin.

GM-2: The glass is embedded between two plastic lite frames, sealed against the exterior plastic lite frame using butyl glazing compound, and sealed against the leaf using a foam silicone bead as applied by ODL. The plastic lite frames are screw-connected to each other around the entire perimeter from the interior.

**Frame Construction:** The jambs and heads are constructed from wood sections. The frame jambs are milled and joined to the frame head using a rabbet joint and four (4) 16 gauge staples and one (1) No. 8 x 2" long screw at each end. The thresholds are attached to the side jambs with three (3) 16 gauge staples and one (1) No. 8 x 2" long screw at each end. Frames have two (2) types of mullion. One integral mullion between the door and sidelite and one combination mullion consisting of finger jointed wood frame head of the OXO SHD joined with the finger jointed wood frame sill of the fixed transom. Each integral mullion is milled at each end and fastened to the head and sill using three (3) No. 8 x 2.5" PFH screws. Each integral mullion, or side jamb, is mortised to receive three (3) hinges. Hinges are located 6 3/4", 36", and 65 ¼" from the top of door leaf to top of each hinge. The outswing frame utilizes AFCO aluminum bump thresholds measuring 4 5/8" and 5 5/8", kerfed to receive compression weather stripping. The inswing frame utilizes an Endura threshold measuring 5 5/8". On double door systems, the outswing systems have a 1/2" hole was drilled at the center of the frame head and threshold where a metal plate is fastened using two (2) No. 8 x 2 1/2" screws to receive the top and bottom astragal bolt. The inswing systems have a 7/16" hole drilled at the center of the sill and a plastic cover inserted to receive the bottom

astragal bolt. The head jamb has a ½" hole drilled at the center where a plate is fastened using two (2) No. 8 x 2 ½" screws, to receive the top astragal bolt.

**Door and Sidelite Panel Construction:** All panels are constructed from two face sheets of 24 gauge galvanized steel. The face sheets are bent 90 degrees over the stiles and top rail. The stiles and top rail are laminated veneer lumber (LVL). The bottom rail consists of roll-formed, galvanized 25 gauge steel. Each corner is fastened with one (1) nail. The core consists of 1.0 to 1.25 lb/ft$^3$ density expanded polystyrene (EPS). The face sheets are glued to the core and substrate.

**Astragal Construction:** The in-active panel utilized an aluminum astragal by Global.

**Hardware:**

| Description | Quantity | Location |
|---|---|---|
| Kwikset Lockset Series 400 | 1 | Lock stile, 35" from bottom of door leaf |
| Kwikset Deadbolt Series 660 | 1 | Lock stile, 40½" from bottom of door leaf |
| Radius Butt Hinges | 6 | 6¾", 36", and 65¼" from top of the door leaf to top of hinge |

**Product Identification:** A certification program label (NAMI) will be affixed to the assembly. The certification program label includes the manufacturer's name (**Jeld-Wen**); product name; performance characteristics; the approved inspection agency (NAMI); and that the product was tested, at least, in accordance with ASTM E330, ASTM E331, ASTM E1886, and ASTM E1996.

## LIMITATIONS

**Design pressures (DP):**

| System | Maximum Overall Width | Maximum Overall Height | Design Pressure (psf) |
|---|---|---|---|
| 1 | 64 ½ | 95 ¼ | ±55 |
| 2 | 64 ½ | 94 ¼ | ±55 |
| 3 | 74 | 81 ¾ | ±55 |
| 4 | 74 | 80 ½ | ±55 |

Note: Sidelites and transom are non-impact resistant.

**Impact Resistance:** These opaque door panels satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I** and the **Seaward zones**, however, door assemblies with sidelites or transoms will need to have the glazed components protected with an impact protective system when installed in areas where windborne debris protection is required.

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

## INSTALLATION INSTRUCTIONS

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

**Installation:** Door assemblies shall be fastened to minimum Southern Yellow Pine lumber wall framing in accordance with this product evaluation report. The sidelite assembly shall be secured to the wall framing as follows:

**Frame (System 1 & 2):** Total (42), No. 10 wood screws anchored at the following locations:

**Jambs:** Six (6) in each jamb located 5 inches from each end and 14 inches on center thereafter measuring from the head down.

**Sill:** Eleven (11) in the sill 5 inches from each end of unit, 3 inches and 6 inches on each side of the mullion, and one at mid-span of door.

**Transom Head:** Eleven (11) in the head 5 inches from each end of unit, 3 inches and 6 inches on each side of center line above mullion, and one at mid-span.

**Transom Jamb:** Four (4) in each jamb located 3 inches from each end.

**Frame (System 3 & 4):** Total (30), No. 10 wood screws anchored at the following locations:

**Jambs:** Six (6) in each jamb located 5 inches from each end 14 inches on center thereafter measuring from the head down.

**Head:** Nine (9) in the head located 5 inches from each end of unit, one in center of head jamb, one centered mid-span of both door panels, with additional anchors 3 inches and 6 inches on each side of the head jamb center.

**Sill:** Nine (9) in the sill located 5 inches from each end of unit, one in center of sill, one centered mid-span of both door panels, with additional anchors 3 inches and 6 inches on each side of the sill center.

If the frame is attached to concrete rather than wood framing members, a $\frac{3}{16}$" diameter flat head Tapcon concrete anchor may be substituted for the No. 10 screws noted above. The wood screws must have a minimum embedment of $1\frac{1}{2}$ inches into structural wood framing members, and Tapcon anchors must have a minimum embedment of $1\frac{1}{4}$ inches into the masonry.

**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.