PRODUCT EVALUATION

DR-650

Effective Date: November 1, 2013
Reevaluation Date: April 2016

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 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.

**Fiberglass Outswing Hinged Glazed Doors with Sidelites, Non-Impact Resistant,** manufactured by

Nan Ya Plastics Corporation USA / Neuma Doors
8989 North Loop East
Houston, Texas 77029
Telephone: (713) 674-7822

**General Description:**

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Label Rating</th>
<th>Design Pressure Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fiberglass Outswing Hinged Glazed Doors with Sidelites</td>
<td>R-PG70 144 x 83-SHD</td>
<td>+70/-70 psf</td>
</tr>
<tr>
<td>2</td>
<td>Fiberglass Outswing Hinged Glazed Doors with Sidelites</td>
<td>R-PG70 144 x 96-SHD</td>
<td>+70/-70 psf</td>
</tr>
</tbody>
</table>

**Product Dimensions:**

<table>
<thead>
<tr>
<th>System</th>
<th>Overall Size</th>
<th>Active/Passive Panel Size</th>
<th>Sidelite Panel Size</th>
<th>Glass Daylight Opening Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>143.13&quot; x 82.50&quot;</td>
<td>Two: 34.50&quot; x 80.31&quot;</td>
<td>Two: 34.50&quot; x 80.31&quot;</td>
<td>25.00&quot; x 63.00&quot;</td>
</tr>
<tr>
<td>3</td>
<td>143.25&quot; x 95.50&quot;</td>
<td>Two: 34.50&quot; x 93.38&quot;</td>
<td>Two: 34.50&quot; x 93.38&quot;</td>
<td>21.00&quot; x 79.00&quot;</td>
</tr>
</tbody>
</table>

**Product Identification (Certification Agency Label on Door):**

<table>
<thead>
<tr>
<th>System</th>
<th>Certification Agency</th>
<th>Manufacturer’s Name or Code Name</th>
<th>Product Name</th>
<th>Test Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>NAMI</td>
<td>Nan Ya Plastics USA</td>
<td>Outswing Fiberglass Glazed Double Door w/ or w/o Sidelites</td>
<td>AAMA/WDMA/CSA 101/I.S.2/A440-08</td>
</tr>
</tbody>
</table>
Hardware:

System 1:

- Hinges; Three required per door; Secured to the door panel with four No. 10 x 2” screws. Secured to the door jamb with two No. 10 x 7/8” screws and two No. 10 x 2” screws.

- Surface mount lever type handle with dead bolt, key operator; Located on the active panel.

- Strike plate; One required; Located on the inactive panel lockstile; Secured with two No. 9 x 3/4” screws.

- Flush mounted manually operated flush bolts; Located on the inactive panel lock stile at the head and sill; Each secured with two No. 10 x 1” screws.

- Strike plate – head; One required; Located on the door frame head; Secured with two No. 8 x 3” screws.

- Strike plate – sill; One required; Secured to the sill with two No. 8 x 3” screws.

System 2:

- Hinges; Four required per door; Secured to the door panel with four No. 10 x 2” screws. Secured to the door jamb with two No. 10 x 7/8” screws and two No. 10 x 2” screws.

- Surface mount 3-point locking system with lever type handle key operator; Located on the active door panel.

- Surface mount 2-point locking system with lever type handle key operator; Located on the inactive panel.

- Strike plate; One required; Located on the inactive panel lockstile; Secured with two No. 9 x 3/4” screws and two No. 10-32 x 3/16” screws.

- Strike plate; Two required; Located on the inactive panel lockstile; Each secured with two No. 9 x 3/4” screws.

- Strike plate – head; One required; Located on the door frame head; Secured with two No. 8 x 3” screws.

- Strike plate – sill; One required; Secured to the sill with two No. 8 x 3” screws.

Sill and Threshold:

- 1.625” high aluminum outswing sill

Impact Resistance:

<table>
<thead>
<tr>
<th>Impact Resistant</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Impact protective system required when product is installed in areas where windborne debris protection is required</td>
</tr>
</tbody>
</table>

Qualified Configurations: O / X / OX / XO / OXO / XX / XXO / OXX / OXXO. Sidelites may be installed without doors.
Installation:

Design Drawings:

**System 1:** The doors shall be installed in accordance with Drawing No. 08-01554, titled “Outswing Entrance Door w/ and w/o Sidelites,” sheets 1 through 9 of 9, dated May 31, 2012, Rev. A, dated June 13, 2012, signed and sealed by Luis R. Lomas., P.E on October 7, 2013. The stated drawings will be referred to as the approved drawings in this evaluation report.

**System 2:** The doors shall be installed in accordance with Drawing No. 08-01555, titled “Outswing Patio Door w/ and w/o Sidelites,” sheets 1 through 9 of 9, dated May 31, 2012, Rev. A, dated June 13, 2012, signed and sealed by Luis R. Lomas., P.E on October 7, 2013. The stated drawings will be referred to as the approved drawings in this evaluation report.

Wall Framing Construction: The doors may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,200 psi)
- Hollow concrete block; ASTM C-90, Grade N, Type 1 (or greater)
- Wood dimension lumber (minimum Spruce-Pine-Fir)

Installation:

- Refer to Sheet 1 of 9 of the approved drawings for the elevation and notes.
- Refer to Sheets 3 of 9 and 4 of 9 of the approved drawings for the anchor layout and notes.
- Refer to Sheets 5 of 9 through 9 of 9 of the approved drawings for installation details.
- The approved drawings indicate the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

**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.
OUT-SWING ENTRANCE DOUBLE DOOR W/ SIDELITES
EXTerior VIEW

DESIGN PRESSURE RATING  IMPACT RATING
±70PSF   NONE

NOTES:
1) THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF FLORIDA BUILDING CODE.
2) WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. WOOD FRAMING OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3) 1X BUCK OVER MASONRY/CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED DIFFERENT MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4) APPROVED IMPACT PROTECTIVE SYSTEM IS REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
5) UNITS MUST BE GLAZED PER ASTM E1300-04. SEE SHEET 3 FOR GLAZING DETAIL.
6) ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR CD=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
7) FRAME JAMB AND HEAD MATERIAL: CO-EXTRUDED PVC FOAM.
8) FRAME SILL MATERIAL: CO-EXTRUDED PVC FOAM WITH ALUMINUM CLADDING.
9) DOOR PANEL SIDELITE MATERIAL: FIBERGLASS SKIN WITH PVC FOAM TOP AND BOTTOM RAILS, AND PVC FOAM VERTICAL STILES WITH PINE REINFORCEMENTS AND POLYURETHANE FOAM CORE.
10) HINGE LOCATION: 9", 46 7/8" AND 72 1/2" FROM BOTTOM.
11) MAX PANEL SIZE: 34 1/2" X 80 5/16"
ANCHORING NOTES:

1) SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".

2) FOR ANCHORING INTO MASONRY/CONCRETE USE 3/16" TARCON OF SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ANCHORING LAYOUT AND INSTALLATION DETAILS.

3) FOR ANCHORING INTO 2X BUCK OR WOOD FRAMING USE #10 WOOD SCREW OF SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ANCHORING LAYOUT AND INSTALLATION DETAILS.

4) ALL FASTENERS TO BE CORROSION RESISTANT.

5) INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER’S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:

A. WOOD – MINIMUM SPECIFIC GRAVITY OF G=0.42
B. CONCRETE – MINIMUM COMpressive STRENGTH OF 3,200 PSI
C. MASONRY – STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).
ANCHORING LAYOUT FOR OXO, XXO AND OXX

ANCHORING LAYOUT FOR OXO, XXO AND OXX (MULL)

ANCHORING LAYOUT FOR XX, OX AND XO

ANCHORING LAYOUT FOR OX AND XO (MULL)
OUT-SWING PATIO DOUBLE DOOR W/ SIDELITES

EXTERIOR VIEW

DESIGN PRESSURE RATING | IMPACT RATING
-------------------------------
±70PSF                     | NONE

NOTES:
1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
2. WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. 1X BUCK OVER MASONRY/CONCRETE IS OPTIONAL WHERE 1X BUCK IS NOT USED. DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. UNITS MUST BE GLAZED PER ASTM E1300-04. SEE SHEET 5 FOR GLASS OPTIONS.
5. APPROVED IMPACT PROTECTIVE SYSTEM IS REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
6. FRAME JAMBE AND HEAD MATERIAL: CO–EXTRUDED PVC FOAM 1 1/2" THICK.
7. FRAME SILL MATERIAL: CO–EXTRUDED PVC FOAM 2" THICK WITH ALUMINUM CLADDING .063" THICK.
8. DOOR PANEL AND SIDELITE MATERIAL: .075" THICK FIBERGLASS SKIN WITH PVC FOAM TOP AND BOTTOM RAILS, AND PVC FOAM VERTICAL STILES WITH PINE REINFORCEMENTS AND POLYURETHANE FOAM CORE.
9. APPROVED CONFIGURATIONS: 0, X, OX, XO, XX, OXX, XXO, OXX AND OXXX. SEE SHEET 2.
10. HINGES LOCATED AT 9", 34 1/2", 60" AND 85 5/8" FROM BOTTOM OF PANEL.

SIGNED: 05/02/2012
ANCHORING NOTES:

1) SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".

2) FOR ANCHORING INTO MASONRY/CONCRETE USE 3/16" TAP CON OF SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ANCHORING LAYOUT AND INSTALLATION DETAILS.

3) FOR ANCHORING INTO 2X BUCK OR WOOD FRAMING USE #10 WOOD SCREW OF SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ANCHORING LAYOUT AND INSTALLATION DETAILS.

4) ALL FASTENERS TO BE CORROSION RESISTANT.

5) INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTH LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW.
   A. WOOD -- MINIMUM SPECIFIC GRAVITY OF G=0.42
   B. CONCRETE -- MINIMUM COMpressive STRENGTH OF 3200 PSI
   C. MASONRY -- STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).
ANCHORING LAYOUT FOROXO, XXO AND OXX

ANCHORING LAYOUT FOR OXO, XXO AND OXX (MULL)

ANCHORING LAYOUT FOR XX, OX AND XO

ANCHORING LAYOUT FOR OX AND XO (MULL)
NOTE:
INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
SIDELITE HORIZONTAL CROSS SECTION
2X BUCK/WOOD FRAMING INSTALLATION

2X BUCK/WOOD FRAMING BY OTHERS, 2X BUCK TO BE PROPERLY SECURED

1 3/8" MIN. EMBLEMMENT

1/4" MAX. SHIM SPACE

#10 WOOD SCREW

#10 x 2 1/2" SCREWS
LOCATED 6" FROM EACH CORNER
AND AT PANEL CENTER

INTERIOR

EXTERIOR

SILL TO BE SET IN BED OF APPROVED SEALANT

SIDELITE VERTICAL CROSS SECTION
2X BUCK/WOOD FRAMING INSTALLATION

1 3/8" MIN. EMBLEMMENT

#10 WOOD SCREW

#10 x 2 1/2" SCREWS
LOCATED 6" FROM EACH CORNER
AND AT PANEL CENTER

INTERIOR

EXTERIOR

BACKER ROD AND APPROVED SEALANT BY OTHERS

1/4" MAX. SHIM SPACE

#10 WOOD SCREW

#10 x 2 1/2" SCREWS
LOCATED 6" FROM EACH CORNER
AND AT PANEL CENTER

INTERIOR

EXTERIOR

BACKER ROD AND APPROVED SEALANT BY OTHERS