

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION DR-424

Effective September 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 **November 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.*

**Series 8'-0" Three-Quarter Lite Hinged Outswing Fiberglass Patio Door with Sidelite, Impact-resistant, manufactured by:**

**Nan-Ya Plastics Corporation USA**  
**8989 North Loop East**  
**Houston, TX 77029**  
**(713) 674-7822**

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

## PRODUCT DESCRIPTION

The three-quarter lite hinged outswing fiberglass door with sidelite is an impact resistant unit with the door panel and frame constructed of fiberglass skins with the interior cavities filled with polyurethane (PU) foam. This product evaluation report is for the following door assemblies:

### General Description:

Assembly	Description	Label Rating
1	8'-10" x 8'-0" Glazed Double Door with Sidelite, Outswing; (OXX) ASTM E 330-02, ASTM E 1886-05/1996-05	Fiberglass Hinged Outswing Patio Door Maximum Size: (105.75" x 95.5") Design Pressure: ±50 psf

### Product Dimensions:

Assembly	Overall Frame Assembly Size	Passive/Active Panel Size
1	105 <sup>3</sup> / <sub>4</sub> " wide x 95 <sup>1</sup> / <sub>2</sub> " high	34 <sup>1</sup> / <sub>2</sub> " x 93 <sup>5</sup> / <sub>16</sub> "
		Stationary Panel Size
		34 <sup>1</sup> / <sub>2</sub> " x 93 <sup>5</sup> / <sub>16</sub> "

**Frame Construction:** The frame head and hinge jambs are foam PVC members. The frame corners are mortised butted and joined using #10 x 2 <sup>1</sup>/<sub>2</sub>" screws. The threshold is foam PVC with an aluminum sill that is coped and butted to the side jambs.

### PRODUCT DESCRIPTION (continued)

**Panel Construction:** The panel members are 0.075" thick fiberglass skins, cored with wood, PVC foam, and steel reinforcement. The hinge and lock stiles are constructed of wood and PVC foam, with steel reinforcement.

**Day Lite Opening:** The maximum day lite opening for the active, passive, and stationary panels is 25 ¼" wide x 63 ¼" high.

**Glazing:** ¾" nominal laminated insulated glass unit by Cardinal Glass, consisting of a ⅛" tempered outboard lite, a 13 mm stainless steel spacer, and a ⅛" annealed, Solutia 0.090 PVB interlayer, ⅛" annealed laminated glass interior lite.

**Glazing Method:** The interior and exterior is fitted with PVC glazing beads measuring 0.5625" x 0.8125" and wet glazed with silicone.

**Mullion:** Each mullion is constructed utilizing aluminum mullion reinforcement measuring 1.3437" x 2.125" and is secured to the fixed panel with seven (7) #10 x 2 ½" located 1.5", 16.5" and 31.5" from each end, with one additional centered between them. The interior has a snap-in PVC mullion cover.

#### Hardware:

<u>Description</u>	<u>Location</u>
Nan Ya Royal multi-point (3-point) locking system	Active panel handle set is inserted into wood lock box of lock stile and secured to panel stile with three (3) ⅜"-30 x 2 ¼" Phillips oval head screws. One (1) multi-point lock keeper, secured with two (2) #9 x ⅞" screws, and two (2) hook keepers, secured with two (2) #10 x 2 ½" screws each.
(4) 4" steel butt hinges	Hinge stile of each active and stationary panel. Secured to the stiles with four (4) #9 x 2" long screws and secured to the frame using #10 x 2 ½" screws each.

**Product Identification:** A NAMI certification program label will be affixed to the assembly. The certification program label includes the manufacturer's name (Nan Ya); product name; performance characteristics; approved inspection agency; and that the product was tested in accordance with AAMA/NWWDA 101/IS2/NAFS-02, and ASTM E1886 and E1996.

### LIMITATIONS

#### Design pressures (DP):

Assembly	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	8'-10"	8'-0"	±50

**Impact Resistance:** These door and side-lite assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the Inland I zone and the Seaward zone. The door and side-lite assemblies passed Missile Level D specified in ASTM E 1996-05. The door and side-lite

assemblies satisfy windborne debris requirements within 60' of grade on the structure, as long as the design pressure rating for the assembly is not exceeded. These door and sidelite assemblies will not need to be protected with an impact protective system.

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

## INSTALLATION INSTRUCTIONS

### Assembly #1: Outswing Patio door; OXX

**Wall Framing:** Southern Yellow Pine (SYP).

**Fasteners:** Thirty-four (34) #10 x 2 1/2" screws fasten the door frame to the wood wall framing members as follows:

**Attachment:**

**Head:** Twelve (12) #10 x 3" screws; located at 4", 16", 28", 32.5", 40", 52", 64", 67", 72", 74.5", 87" and 100" measuring from the left jamb to the right jamb.

**Sill:** Twelve (12) #10 x 3" screws; located at 5", 18.5", 30.25", 33.5", 40", 52", 64", 67.5", 72.5", 76.5", 87" and 101.5" from the left jamb to the right jamb.

**Jambs:** Five (5) #10 x 3" screws each jamb; one (1) at 3" from the head, and four (4) at 21 3/8" o.c. from the frame head to the frame sill penetrating through the frame into the wall framing.

**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.