



**SECTION 08 16 13**  
**FIBERGLASS PATIO DOORS**  
Neuma Doors Fiberglass Patio Doors

**Specifier Note:** This guide has been designed to assist specification of Neuma Doors and is written in accordance with the Construction Specifications Institute (CSI) Format.

The Design Professional must edit this specification guide to fit the individual project needs and local building code requirements. Delete items which are not applicable and modify or add items as necessary. Text within brackets [\_\_] indicates a required selection or decision for the specifier. Delete "Specifier Notes" when editing. Contact an authorized Neuma Doors representative for assistance.

**PART 1 - GENERAL**

1.1 SECTION INCLUDES

- A. In-Swing Patio Doors.
- B. Out-Swing Patio Doors.
- C. Gliding Patio Doors.
- D. Transoms.

1.2 REFERENCES

- A. American Architectural Manufacturer Association (AAMA).
  - 1. ANSI/AAMA/NWDA 101/I.S.2 /NAFS; Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.

**Specifier Note:** In applications where hurricane resistance is not required DELETE AAMA 506 reference.

- 2. AAMA 506; Voluntary Specifications for Hurricane and Impact and Cycle Testing of Fenestration Products.

- B. ASTM International.

**Specifier Note:** In applications where hurricane resistance is not required DELETE ASTM E 1886 and E 1996 references.

1. ASTM E 1886; Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
  2. ASTM E 1996; Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.
- C. National Fenestration Rating Council (NFRC).
1. NFRC 100: Procedure for Determining Fenestration Thermal Properties.
  2. NFRC 200: Solar Heat Gain Coefficient and Visible Transmittance.
  3. NFRC 500: Condensation Resistance Values.
- Specifier Note:** *DELETE Florida TAS information if project is not within the High Velocity Hurricane Zone.*
- D. South Florida Building Code Impact Test Procedures (Miami-Dade TAS).
1. TAS 201; Impact Test Procedures.
  2. TAS 202; Criteria for testing Impact and Non-Impact Resistant Building Envelope Components using Uniform Static Air Pressure.
  3. TAS 203; Criteria for testing Products Subject to Cyclic Wind Pressure Loading.

### 1.3 DESIGN REQUIREMENTS

- A. Patio doors shall be in compliance with requirements indicated, based on manufacturer's testing of patio doors that are representative of those specified and meet the test size requirements of ANSI/AAMA/NWDA 101 I.S.2/NAFS.

**Specifier Note:** *Include patio door design pressure (DP) ratings as part of the structural requirements. Required DP will vary dependent on project location, door size, and applicable building code requirements. DP ratings and related patio door size and style are available at [www.neumadoors.com](http://www.neumadoors.com) or by contacting an authorized Neuma Doors representative.*

- B. Structural Requirements – Provide patio doors capable of complying with requirements indicated:

1. Design pressure: [Insert value as indicated on drawings.]

**Specifier Note:** *DELETE Impact Resistance requirement if products will not be used in a High Velocity Hurricane Zone or will be used in conjunction with another type of Approved Hurricane Protection Device.*

- C. Impact (Windborne-Debris) Resistance.

1. Patio doors capable of resisting impact from windborne debris, when tested in accordance with ASTM E1886, ASTM E1996, and AAMA 506.

**Specifier Note:** Notice of Authorization (NOA) from Miami-Dade Code Officials is door type and size specific. Information is available at [www.neumadoors.com](http://www.neumadoors.com) or by contacting an authorized Neuma Doors representative.

2. Provide patio doors that have been tested in accordance with TAS 201, TAS 202, and TAS 203 and have received NOA from Miami-Dade Code Officials.

**Specifier Note:** Include NFRC ratings as part of the performance requirements. NFRC ratings, Energy Star program information and related Neuma Door patio door size and styles are available at [www.neumadoors.com](http://www.neumadoors.com) or by contacting an authorized representative.

- D. NFRC Requirements – Provide patio doors capable of complying with the following total patio door ratings:

1. U-Factor: [Insert value] in accordance with NFRC 100.
2. Solar Heat Gain Coefficient (SHGC): [Insert value] in accordance with NFRC 200.
3. Visible Transmittance (VT): [Insert value] in accordance with NFRC 200.

#### 1.4 SUBMITTALS

- A. Refer to Section 01 33 00 Submittal Procedures.
- B. Product Data: Submit patio door manufacturer current product literature, including installation instruction.
- C. Samples: Provide finish samples for all products.
- D. Quality Assurance Submittals.
  1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
  2. Manufacturer Instructions: Provide manufacturer's written installation instructions.

#### 1.5 QUALITY ASSURANCE

- A. Qualifications.

**Specifier Note:** Neuma Doors recommends that installers be experienced and competent in the installation of Neuma Door Systems. DELETE if installer training is not desired.

1. Installer shall have received manufacturer's training.

B. Mock-ups.

1. Patio door mock-up shall incorporate surrounding construction, including wall assembly fasteners, flashing, and other related accessories installed in accordance with patio door manufacturer's approved installation methods.
  - a. Mock-up size: [Insert size] [As indicated on drawings.]
  - b. Mock-up may [not] remain as part of the work.

C. Pre-installation Meeting.

1. Refer to Section [01 31 19 Project Meetings] [Insert section number and title].

1.6 DELIVERY, STORAGE AND HANDLING

- A. Refer to Section 01 60 00 Product Requirements.
- B. Deliver and store patio door systems and components in manufacturer's original, unopened, undamaged containers with identification labels intact until ready for installation.
- C. Store patio doors as recommended by manufacturer in a clean and dry environment.
- D. Handle doors with care.

1.7 WARRANTY

- A. Refer to Section 01 78 36 Warranties.

**Specifier Note:** *DELETE warranty information not specific to project. Manufacturer standard warranty does not include installation.*

- B. Manufacturer standard warranty indicating that the patio door will be free from material and workmanship defects from the date of substantial completion for the time periods indicated, when installed as outlined in the official warranty:

C.

1. Door frames
  - a. Commercial: 10 years from date of installation.
  - b. Single Family Residential: Lifetime for original purchaser as long as purchaser owns home.
2. Mullions
  - a. Commercial: 10 years from date of installation.
  - b. Single Family Residential: Lifetime for original purchaser as long as purchaser owns home.

3. Astragals
  - a. Commercial: 10 years from date of installation.
  - b. Single Family Residential: Lifetime for original purchaser as long as purchaser owns home.
4. Door Panels
  - a. Commercial: 10 years from date of installation.
  - b. Single Family Residential: Lifetime for original purchaser as long as purchaser owns home.
5. Transom Frames
  - a. Commercial: 10 years from date of installation.
  - b. Single Family Residential: 10 years for original purchaser as long as purchaser owns home.
6. Locking Mechanism
  - a. Commercial: 10 years form date of installation, excludes trim finish.
  - b. Single Family Residential: 10 years for original purchaser as long as purchaser owns home.

**Specifier Note:** *SELECT warranty associated with the glazing types specified.*

7. Glazing:
  - a. Non-Impact Glass
    - i. Commercial: 5 year pro-rated limited warranty against seal failure.
    - ii. Single Family Residential: 20 year pro-rated limited warranty against seal failure.
  - b. Impact Glass
    - i. Commercial: 5 year pro-rated limited warranty against seal failure.
    - ii. Single Family Residential: 10 year pro-rated limited warranty against seal failure
  - c. Glass with Mini Blinds
    - i. Commercial: 5 year pro-rated limited warranty against seal failure only.
    - ii. Single Family Residential: 5 year pro-rated warranty against seal failure only and 1 year warranty on magnetic components
  - d. Decorative Glass
    - i. Commercial: 1 year pro-rated limited warranty against seal failure.
    - ii. Single Family Residential: 1 year limited warranty against seal failure.

## PART 2 - PRODUCTS

**Specifier Note:** Product Information is proprietary to Neuma Doors. If additional products are required for competitive procurement, contact an authorized representative for assistance.

### 2.1 MANUFACTURER

- A. Nan Ya Plastics USA, D.B.A. Neuma Doors; 8989 North Loop East; Houston, TX 77029, USA; Phone 716.674.7822, Toll free 866.366.7715; Fax 713.554.5581; website www.neumadoors.com

### 2.2 MATERIALS

#### A. Frame.

- 1. Full Composite frame.
- 2. Jamb Width: [4-9/16 inch (116 mm) or 6-9/16" (167mm)].

#### B. Panels.

**Specifier Note:** Number of panels per patio door unit varies by door size. INCLUDE number of panels under "Size" in Part 3 Schedule Article.

- 1. Extruded Composite panel with CFC free polyurethane foam core and fiberglass skin.
- 2. Thickness: 1 3/4inch (44mm).

**Specifier Note:** The dimensions of the top rail, bottom rail and stiles vary per door type and size. INSERT the dimensions specific to the project.

- 3. Layout: [ ] inch ([ ]mm) top rail and stiles, [ ] inch ([ ]mm) inch bottom rail.

#### C. Weatherstripping: Continuous Q-Ion seal compressed between exterior of panel and top and sides of frame. Door bottom sill has co-extruded pvc bulb seal. Manufacturer's standard dual astragal on double door units.

#### D. Hardware.

**Specifier Note:** Neuma Doors come with factory installed hardware.

- 1. Hinge Material: Stainless Steel.
- 2. Hinge Finish: [White or Dark Brown or Gold Brass or Satin Nickel].

#### E. Glazing.

**Specifier Note:** Various types of glass are available. Glass type requirements will vary dependent on project location and applicable building code requirements. Information is

available at [www.neumadoors.com](http://www.neumadoors.com) or by contacting an authorized Neuma Doors representative.

**Specifier Note:** DELETE glass section(s) that are not relevant to the project.

1. Strength: [Standard Insulated Glass or Optional Laminated Glass]
2. Insulated Glass.
  - a. Two panes of tempered glass utilizing a continuous extruded aluminum spacer, Argon gas fill and dual seal sealant.
  - b. Overall Nominal Thickness: [5/8 inch (16mm) (full light panel) or 3/4 inch (19mm) (3/4 lite panel)].
  - c. Type: [Standard LowE or Decorative].

**Specifier Note:** Low E is standard on all patio doors but may be deleted at the design professional's option. DELETE Coatings if not desired.)

- d. Coatings: Low E on surface 2.
3. Laminated Glass:
  - a. Laminated glass contains DuPont 0.90 interlayer to provide added security against impact.
  - b. Overall Nominal Thickness: [1 inch (25.4mm)].
  - c. Type: Standard LowE.

## 2.3 PATIO DOOR ACCESSORIES

**Specifier Note:** SDL & GBG Grilles are not available for decorative glass. Internal GBG grilles are not available with blinds between glass option. SELECT grilles, and pattern based on the desired aesthetic appearance of the patio door. DELETE grilles not project specific.

### A. Grilles Between Glass (GBG).

1. Material: Extruded aluminum suspended within the air cavity.
2. Pattern: As selected by design professional.
3. Width: ¾ inch (19mm).

**Specifier Note:** SDL option does not include interior GBG which is a separate option selection.

### B. Simulated Divided Lights (SDL).

1. Material: Made of composite materials and permanently adhered to the exterior of the glass.
2. Pattern: As selected by design professional.

3. Size: 7/8 inch (22mm).

## 2.4 CONSTRUCTION ACCESSORIES

**Specifier Note:** Construction Accessories compatible with patio doors and required installation may be specified in this section or in related sections. COORDINATE with related sections to not duplicate information.

- A. Sealants: Use silicone sealant according to manufacturer instructions to maintain watertight installation.

## 2.5 FABRICATION

1. Door panel and frames are constructed from CFC free extruded composite materials.
2. Glass: Mounted with co-extruded glazing bead.

## 2.6 FINISH

**Specifier Note:** Smooth texture is paintable and woodgrain texture is stainable. DELETE texture options not project specific.

- A. Texture.
  1. Interior: [Smooth or Woodgrain].
  2. Exterior: [Smooth or Woodgrain].

- B. Color Options:

**Specifier Note:** White and unstained color options are pigmented but are not pre-finished and need to be site finished. The following pre-finished stain color options are available: Dark Mahogany, Golden Oak, Medium Oak. DELETE color options not project specific.

1. Interior: [White, Unstained, Dark Mahogany, Golden Oak, Medium Oak].
2. Exterior: [White, Unstained, Dark Mahogany, Golden Oak, Medium Oak].

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Install patio doors in accordance with manufacturer's installation guidelines and recommendations.



### 3.2 EXAMINATION

- A. Inspect patio door prior to installation.
- B. Verify that all substrates have been properly prepared.
- C. Inspect rough opening for compliance with patio door manufacturer recommendations and verify that rough opening conditions are within recommended tolerances.

### 3.3 INSTALLATION

- A. Install doors in accordance with manufacturers written directions and local building code requirements.

### 3.4 ADJUSTING AND CLEANING

- A. Adjust locksets and hardware as necessary to ensure smooth operation.
- B. Clean the exterior surface and glass with mild soap and water.
- C. Remove all packaging materials and recycle if appropriate.

### 3.5 PROTECTION

- A. Protect installed patio doors from damage.

### 3.6 SCHEDULES

**Specifier Note:** Below are sample schedules that require editing for specific project. When a single type of patio door is utilized on a project, Specifier may elect to delete the schedule in its entirety. When Schedules are included on the drawings, schedule should be deleted from the specification.

#### A. Patio Door Type.

- 1. Style: Fiberglass Patio Door
- 2. Operation: [Inswing, Outswing or Gliding]
- 3. Size: [Number of Panels and Unit Size]
- 4. Exterior Texture: [Smooth or Woodgrain]
- 5. Exterior Color: [White, Unstained, Dark Mahogany, Golden Oak or Medium Oak]

6. Interior Texture: [Smooth or Woodgrain]
7. Interior Color: [White, Unstained, Dark Mahogany, Golden Oak or Medium Oak]
8. Frame width: [4-9/16 inch (116 mm) or 6-9/16" (167mm)]
9. Hardware Finish: [Gold Brass, Satin Nickel, Dark Brown, White, Chrome]
10. Glazing: [Standard Insulated LowE Glass, Insulated Decorative Glass, Impact Glass]
11. Grilles: [SDL and/or GBG]

END OF SECTION