

# Milgard Ultra™ Series Fiberglass Patio Doors - 3-Part Specification

**3000**  
SERIES  
FIBERGLASS

GENERAL NOTES TO SPECIFIER:

THIS SPECIFICATION SECTION HAS BEEN PREPARED TO ASSIST DESIGN PROFESSIONALS IN THE PREPARATION OF PROJECT OR OFFICE MASTER SPECIFICATIONS. IT FOLLOWS GUIDELINES ESTABLISHED BY THE CONSTRUCTION SPECIFICATIONS INSTITUTE, AND THEREFORE MAY BE USED WITH MOST MASTER SPECIFICATION SYSTEMS WITH MINOR EDITING.

EDIT CAREFULLY TO SUIT PROJECT REQUIREMENTS. MODIFY AS NECESSARY AND DELETE ITEMS THAT ARE NOT APPLICABLE. VERIFY THAT REFERENCED SECTION NUMBERS AND TITLES ARE CORRECT. (NUMBERS AND TITLES REFERENCED ARE BASED ON *MASTERFORMAT*, 2004 EDITION).

THIS SECTION ASSUMES THE PROJECT MANUAL WILL CONTAIN COMPLETE DIVISION 1 DOCUMENTS INCLUDING 01 25 13 – PRODUCT SUBSTITUTION PROCEDURES, SECTIONS 01 33 00 – SUBMITTAL PROCEDURES, 01 62 00 – PRODUCT OPTIONS, 01 66 00 – PRODUCT STORAGE AND HANDLING REQUIREMENTS, 01 74 00 – CLEANING AND WASTE MANAGEMENT, 01 77 00 – CLOSEOUT PROCEDURES, AND 01 78 00 – CLOSEOUT SUBMITTALS. CLOSE COORDINATION WITH DIVISION 1 SECTIONS IS REQUIRED. IF THE PROJECT MANUAL DOES NOT CONTAIN THESE SECTIONS, ADDITIONAL INFORMATION SHOULD BE INCLUDED UNDER THE APPROPRIATE ARTICLES.

THIS IS AN OPEN PROPRIETARY SPECIFICATION ALLOWING USERS THE OPTION OF APPROVING OTHER MANUFACTURERS THAT COMPLY WITH THE CRITERIA SPECIFIED HEREIN.

NOTES TO THE SPECIFIER ARE CONTAINED IN BOXES AND SHOULD BE DELETED FROM FINAL COPY.

OPTIONAL ITEMS REQUIRING SELECTION BY THE SPECIFIER ARE ENCLOSED WITHIN BRACKETS, E.G. [35] [40] [45]. MAKE APPROPRIATE SELECTIONS AND DELETE OTHERS.

ITEMS REQUIRING ADDITIONAL INFORMATION ARE UNDERLINED BLANK SPACES, E.G. \_\_\_\_\_ .

OPTIONAL PARAGRAPHS REQUIRING SELECTION OF ONE OF THE OPTIONS ARE SEPARATED BY “OR” WITHIN A BOX, E.G.

OR

**BOLD FACE** TYPE IDENTIFIES OPTIONAL PARAGRAPHS AND FEATURES THAT MAY BE INCLUDED OR DELETED DEPENDING ON PROJECT REQUIREMENTS. CONVERT THE BOLD FACE TYPE TO REGULAR TYPE WHEN INCLUDING THESE PARAGRAPHS OR FEATURES.

REVISE FOOTER TO SUIT PROJECT/OFFICE REQUIREMENTS.

ELECTRONIC VERSIONS OF THIS SPECIFICATION UTILIZE AUTOMATIC PARAGRAPH NUMBERING.

WHEN EDITING IS COMPLETE, DELETE ALL TEXT ON THIS PAGE, THEN REMOVE THE SECTION BREAK AT THE TOP OF THE NEXT PAGE TO REMOVE THIS PAGE FROM THE DOCUMENT.

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Section 08 16 13 AND 08 16 73

## FIBERGLASS DOORS (SWING) & SLIDING COMPOSITE DOORS

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. Section Includes: Fiberglass framed glass doors with painted exterior and interior finish:
  - 1. **French [inswing] [and] [outswing] doors.**
  - 2. **Sliding doors.**
- B. Related Sections:

INSERT APPROPRIATE SECTION NUMBERS AND TITLES BELOW FOR DOOR FLASHING, INSTALLATION SEALANT AND FINISHING OF INTERIOR DIVIDED LITE GRIDS IF SPECIFIED.

- 1. \_\_\_\_\_ - \_\_\_\_\_.
- 2. \_\_\_\_\_ - \_\_\_\_\_.
- 3. **08 54 13 - Fiberglass Windows.**
- 4. \_\_\_\_\_ - \_\_\_\_\_ . **Finishing of interior divided lite grids.**

INCLUDE APPROPRIATE LANGUAGE BELOW IF PRODUCTS SPECIFIED IN THIS SECTION ARE TO BE BID AS ALTERNATES. OTHERWISE DELETE FOLLOWING PARAGRAPH.

- C. Alternates:
  - 1. Reference Section 01 23 00 – Alternates.

#### 1.02 SUBMITTALS

- A. Reference Section 01 33 00 – Submittal Procedures; submit following items:
  - 1. Product Data.
  - 2. Shop Drawings: Include door schedule, door elevations, sections and details, and multiple unit assembly details.
  - 3. Samples:
    - a. Color Samples: Minimum 1x4 inch (25x100 mm) paint color chips on fiberglass substrate.
    - b. **Glass, showing specified tint color.**
  - 4. Quality Assurance/Control Submittals:
    - a. Qualifications: Proof of manufacturer's qualifications.
    - b. **U-Factor and structural rating charts required for AAMA and NFRC labeling requirements.**
    - c. Manufacturer's Installation Instructions.
- B. Closeout Submittals: Reference Section 01 78 00 – Closeout Submittals; submit following items:
  - 1. Temporary labels marked to identify doors that labels were applied to.
  - 2. Maintenance instructions.
  - 3. Special Warranties.

#### 1.03 QUALITY ASSURANCE

- A. Overall Standards: Comply with ANSI/AAMA/101/I.S.2, except as otherwise noted herein.
- B. Qualifications:
  - 1. Manufacturer Qualifications:
    - a. Minimum five years experience in producing fiberglass doors.
    - b. Member AAMA, NFRC.

INSERT LOCAL REGULATORY REQUIREMENTS BELOW.

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C. Regulatory Requirements:

**D. Certifications for insulated glass doors:**

1. AAMA: Doors shall be Silver Label certified with label attached to frame per AAMA requirements.
2. NFRC: Doors shall be NFRC certified with temporary U-factor label applied to glass and an NFRC tab added to permanent AAMA frame label.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Reference Section 01 66 00 – Product Storage and Handling Requirements.
- B. Follow manufacturer's instructions on label applied to doors.

1.05 WARRANTY

SELECT "RESIDENTIAL" WARRANTY BELOW FOR OWNER OCCUPIED SINGLE FAMILY RESIDENTIAL AND OWNER OCCUPIED CONDOMINIUM PROJECTS. SELECT "COMMERCIAL" WARRANTY FOR NON-OWNER OCCUPIED CONDOMINIUMS, COMMERCIAL, AND MULTI-FAMILY PROJECTS.

A. Residential Special Warranty:

1. Full Lifetime Warranty including glass breakage to original homeowner.
2. Transferability:
  - a. Permit unlimited transfer of ownership in first ten years.
  - b. Upon first transfer of ownership, warranty period shall become ten years from date of original purchase.
3. Guarantee windows against defects in materials and workmanship including costs for parts and labor. Wood veneer surfaces are required to be finish coated per manufacturer's instructions.

OR

A. Commercial Special Warranty:

1. 10 year warranty.
2. Guarantee windows against defects in materials and workmanship including costs for parts and labor. Wood veneer surfaces are required to be finish coated per manufacturer's instructions.

**PART 2 - PRODUCTS**

2.01 MANUFACTURER

- |   |  |
|---|--|
| A. Milgard Manufacturing, Inc.<br>1010 54th Avenue East<br>Tacoma, WA 98424 | Tel: (800) MILGARD (645-4273)<br>Fax: (253) 926-0848<br>Website: <a href="http://www.milgard.com/">http://www.milgard.com/</a> |
|---|--|

INSERT NAME, ADDRESS AND PHONE NUMBERS OF MANUFACTURER'S REPRESENTATIVE BELOW.

1. Manufacturer's Representative:

_____	Tel:	_____
_____	Fax:	_____
_____	E-mail:	_____

B. Door Series: Milgard Ultra™.

C. Substitutions: Reference Section 01 25 13 – Product Substitution Procedures.

2.02 MATERIALS

A. Fiberglass: AAMA 305 glass fiber reinforced thermoset profile.

VERIFY THAT DOOR FLASHING MATERIAL AND INSTALLATION SEALANT IS SPECIFIED IN APPROPRIATE SECTIONS.

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## 2.03 GENERAL PERFORMANCE REQUIREMENTS

- A. Thermal Performance: Comply with NFRC 100.
- B. Air Leakage, Water Resistance, Structural Test: Comply with ANSI/AAMA/101/I.S.2.
- C. Forced-Entry Resistance: Comply with ASTM F 842-04.

## 2.04 DOOR TYPES

SELECT FOLLOWING DOOR TYPES BASED ON PROJECT REQUIREMENTS. DELETE DOOR TYPES NOT USED. VERIFY THAT DRAWINGS SHOW PANEL ARRANGEMENT AND OPERATING PANELS FOR EACH OPENING.

- A. French Door - Inswing 3642 and 3662 Series, with [nail fin] [Z-Bar flush fin retrofit trim]:
  - 1. Frame: [4-9/16 inch (116 mm)] [6-9/16 inch (167 mm)] deep, multi-chambered fiberglass pultrusion with optional snap in nail fin setbacks of 1-3/8 inch (35 mm) and 1 inch (25 mm).
  - 2. Panel Frame:
    - a. Top Rail: Minimum 1-3/4 by 4-3/16 inch (44 by 106 mm) multi-chambered fiberglass pultrusion.
    - b. Bottom Rail: Minimum 1-3/4 by 8-5/8 inch (44 by 219 mm) multi-chambered fiberglass pultrusion.
    - c. Stiles: Minimum 1-3/4 by 4-3/16 inch (44 by 106 mm) multi-chambered fiberglass pultrusion.
  - 3. Sill: [4-9/16 inch (116 mm) deep frame: 5-15/16 by 1-5/8 inch high (151 by 41 mm high)] [6-9/16 inch (167 mm) deep frame: 7-15/16 by 1-5/8 inch high (202 by 41 mm high)] multi-chambered fiberglass pultrusion.
  - 4. Sight lines: Equal for doors and fixed panels.
  - 5. Structural Class: SGD-C45 (2 panel only).
  - 6. Hardware:
    - a. Lock: Inside and outside lever operated latch and One Motion 3 point locking system, with 2 tapered hooks and interior thumb turn deadbolt.
    - b. **Keyed exterior cylinder lock, Schlage compatible.**
    - c. Hinges: 2-way adjustable lift-off hinges; finish to match handle set.
  - 7. Weatherstripping: Foam filled bulb seal.
    - a. Sill Sweep: Rubber dual-fin sweep.
- B. French Door - Outswing 3623 Series, with [nail fin] [Z-Bar flush fin retrofit trim]:
  - 1. Frame: [4-9/16 inch (116 mm)] [6-9/16 inch (167 mm)] deep, multi-chambered fiberglass pultrusion with optional snap in nail fin setbacks of 1-3/8 inch (35 mm) and 1 inch (25 mm).
  - 2. Panel Frame:
    - a. Top Rail: Minimum 1-3/4 by 4-3/16 inch (44 by 106 mm) multi-chambered fiberglass pultrusion.
    - b. Bottom Rail: Minimum 1-3/4 by 8-5/8 inch (44 by 219 mm) multi-chambered fiberglass pultrusion.
    - c. Stiles: Minimum 1-3/4 by 4-3/16 inch (44 by 106 mm) multi-chambered fiberglass pultrusion.
    - e. Reinforcement: Extruded aluminum profiles at corners and lock. Corner reinforcement shall engage rails minimum 4 inches (100 mm) and stiles minimum 10 inches (255 mm).
  - 3. Sill: [4-9/16 inch (116 mm) deep frame: 5-15/16 by 1-13/16 inch high (151 by 46 mm high)] [6-9/16 inch (167 mm) deep frame: 7-15/16 by 1-13/16 inch high (202 by 46 mm high)] multi-chambered fiberglass pultrusion.
  - 4. Sight lines: Equal for doors and fixed panels.
  - 5. Structural Class: SGD-C30 (2 panel only).
  - 6. Hardware:
    - a. Lock: Inside and outside lever operated latch and 2 point locking rod to head and sill, with interior thumb turn dead bolt.
    - b. **Keyed exterior cylinder lock, Schlage compatible**
    - c. Hinges: 2-way adjustable; finish to match lock.
  - 7. Weatherstripping: Foam filled bulb seal.
    - a. Sill Sweep: Rubber dual-fin sweep.

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- C. Sliding Door - 3626 Series, with [nail fin] [Z-Bar flush fin retrofit trim]:
1. Frame: [4-9/16 inch (116 mm)] deep, multi-chambered fiberglass pultrusion with optional snap in nail fin setbacks of 1-3/8 inch (35 mm) and 1 inch (25 mm).
  2. Panel Frame:
    - a. Top Rail: Minimum 1-3/4 by 4-3/16 inch (44 by 106 mm) multi-chambered fiberglass pultrusion.
    - b. Bottom Rail: Minimum 1-3/4 by 8-5/8 inch (44 by 219 mm) multi-chambered fiberglass pultrusion.
    - c. Stiles: Minimum 1-3/4 by 4-3/16 inch (44 by 106 mm) multi-chambered fiberglass pultrusion.
    - d. Reinforcement: Extruded aluminum profiles at corners and lock. Corner reinforcement shall engage rails minimum 4 inches (100 mm) and stiles minimum 10 inches (255 mm).
  3. Sill: [4-9/16 inch (116 mm) deep frame: 5-15/16 by 1-13/16 inch high (151 by 46 mm high)] multi-chambered fiberglass pultrusion.
  4. Sightlines: Equal for operating and fixed panels.
  5. Structural Class: SGD-C30 (2 panel only).
  6. Hardware:
    - a. Handle and Lock: Inside and outside pull with lever operated 2 point jamb lock.
    - b. **Keyed exterior cylinder lock, Schlage compatible.**
    - c. Rollers: two sets of dual composite nylon, 1-1/2 inch (38 mm) diameter, rollers on raised monorail aluminum track.
  7. Weatherstripping: Fin seal polypropylene pile.

## 2.05 GLAZING

- A. Insulated Glass Units: ASTM E 774, Class A, minimum 7/8 inch (22 mm) thick overall:
1. Glazing Type: [Clear/Clear] [Clear/SunCoat® Low-E] [Clear/SunCoat® Low-E, argon gas filled] [Clear/SunCoatMAX® Low-E] [Clear/SunCoatMAX® Low-E, argon gas filled] [Clear/Hardcoat Low-E] [Clear/Hardcoat Low-E, argon gas filled].
  2. Spacer Type: EdgeGardMAX™ High performance foam based warm edge spacer system.

MOST COMMON TYPES OF INSULATED UNITS ARE INCLUDED ABOVE, BUT SEVERAL OTHER TYPES INCLUDING TINTED, REFLECTIVE, OBSCURE, WIRE, AND LAMINATED ARE AVAILABLE FOR SPECIAL APPLICATIONS. SELECT DESIRED TYPES FROM MILGARD WEBSITE AND SPECIFY IN LIEU OF, OR IN ADDITION, TO THE ABOVE WITH ALL NECESSARY CRITERIA SUCH AS TINT COLORS AND OBSCURE PATTERNS. IF MORE THAN ONE TYPE OF GLAZING IS REQUIRED FOR THE PROJECT, BE CERTAIN THAT TYPE FOR EACH DOOR IS CLEARLY NOTED ON DRAWINGS OR IN DOOR SCHEDULE.

## 2.06 SIMULATED DIVIDED LITE GRIDS :

SELECT DESIRED GRID TYPE, IF ANY, FROM THE FOLLOWING LIST AND DELETE THOSE NOT USED. STANDARD HORIZONTAL/VERTICAL GRID PATTERN WILL BE PROVIDED UNLESS OTHER GRID PATTERNS ARE SHOWN ON THE DRAWINGS. CERTAIN GRID PATTERNS MAY NOT BE AVAILABLE WITH ONE OR THE OTHER BAR TYPES IN THE FOLLOWING PARAGRAPHS - CONSULT MILGARD FOR DESIGN OTHER THAN STANDARD PATTERNS.

- A. Grid Types:
1. Flat Internal Grid: 5/8 inch (16 mm) wide aluminum bar internal (between the glass) grid.
  2. Sculptured Internal Grid: 1-1/16 inch (27 mm) wide sculptured aluminum bar internal grid.
  3. SDL Vintage Grid: 1-1/8 inch (29 mm) wide profiled painted wood strips applied to interior glass, 7/8 inch (22 mm) wide aluminum box spacer internal grid, and 1-1/8 inch (29 mm) wide trapezoidal fiberglass bar applied to exterior glass.
  4. SDL Vintage Grid: 3/4 inch (19 mm) wide profiled painted wood strips applied to interior glass, 5/8 inch (16 mm) wide aluminum box spacer internal grid, and 3/4 inch (19 mm) wide trapezoidal fiberglass bar applied to exterior glass.
  5. SDL Craftsman Grid: 1-1/8 inch (29 mm) wide profiled painted wood strips applied to interior glass, 1-1/16 inch (27 mm) wide sculptured aluminum bar internal grid.
  6. SDL Legacy Grid: 1-1/16 inch (27 mm) wide sculptured aluminum bar internal grid, and 1-1/8 inch (29 mm) wide trapezoidal fiberglass bar applied to exterior glass.

## 2.07 INSECT SCREENS:

- A. Retractable Door Screen:
1. **Single canister side-coiling counter balanced screen system.**
  2. **Extruded aluminum track.**
  3. **Weatherstripping: Polypropylene pile, non-fin.**

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4. **Extruded aluminum housing.**
  5. **Screen Cloth: Charcoal colored fiberglass mesh.**
- B. Sliding Door Screen (not available for out-swing door):**
1. **Frame: Extruded aluminum, 2 by 13/16 inches (51 by 21 mm).**
  2. **Hardware:**
    - a. **Lock: Lever action type.**
    - b. **Rollers: 2 adjustable nylon rollers at top, and 2 adjustable nylon rollers at bottom.**
  3. **Screen Cloth: [Charcoal colored fiberglass mesh] [Optional PureView™ Low-visibility fiberglass mesh].**

## 2.08 FABRICATION

- A. Fabricate frames and panels with milled and butted joints and mechanically joined corners. Trim and finish corners to match adjacent surfaces.
- B. Factory exterior glaze with snap-on fiberglass glazing stops matching frame finish. Units shall be reglazeable without dismantling panel framing.

## 2.09 FINISH

- A. **Frame and Panel Color:**
1. **Exterior: [Cranberry] [Matte Black] [Hunter Green] [Silver Pearl] [Brownstone] [Tan] [White] [Sand] baked on enamel.**
  2. **Interior: Painted finish.**
- B. Simulated Divided Lite Grids:**
1. **Interior Wood Strips: Unfinished.**
  2. **Internal Bars: Mill finished aluminum.**
  3. **Exterior Fiberglass Bars: Baked on enamel; match frame and panel exterior color.**
- C. **Hardware:**
1. **French Door: [Polished Brass] [Polished Chrome] [Antique Brass] [Satin Chrome] [Bronze] [Oil Rubbed Bronze] [White].**
  2. **Sliding Door Interior: [Polished Brass] [Polished Chrome] [Antique Brass] [Satin Chrome] [Bronze] [Oil Rubbed Bronze] [White].**
  3. **Sliding Door Exterior: [White] [Sand] [Tan] [Hunter Green] [Brownstone].**
- D. **Retractable Screen:**
1. **Inswing Door: Match exterior frame and panel color. Not available in Cranberry or Silver Pearl.**
  2. **Outswing Door: [White] [Brownstone] [Tan] [Matte Black].**
  3. **Sliding Door: Match exterior frame and panel color. Not available in Cranberry or Silver Pearl.**
- E. **Sliding Screen:**
1. **Inswing Door: Match exterior frame and panel color.**
  2. **Sliding Door: Match exterior frame and panel color.**

## 2.10 SOURCE QUALITY CONTROL

- A. Inspect doors in accordance with manufacturer's Quality Control Program as required by AAMA Silver Label certification.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine openings in which doors will be installed.
1. **Verify that fasteners in framed walls are fully driven and will not interfere with door installation.**
  2. **Verify that sill is flat and level.**

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- B. Coordinate with responsible entity to correct unsatisfactory conditions.
- C. Commencement of work by installer is acceptance of substrate conditions.

## 3.02 INSTALLATION

INSTALLATION INSTRUCTIONS ARE ADEQUATE FOR NORMAL INSTALLATION CONDITIONS IN FRAMED CONSTRUCTION. MASONRY WALLS AND UNUSUAL CONDITIONS MAY REQUIRE ADDITIONAL INFORMATION IN THIS ARTICLE.

- A. Install doors in framed walls in accordance with manufacturer's installation instructions.
  - 1. Flash head and jambs in accordance with AAMA 2400.
- B. Do not remove temporary labels.
- C. Install insect screens on operable panels.**

## 3.03 ADJUSTING

- A. Adjust operating panels and hardware for smooth operation and tight fit with weatherstripping.

## 3.04 CLEANING

- A. Reference Section 01 74 00 – Cleaning and Waste Management.
- B. Remove temporary labels and retain for Closeout Submittals.
- C. Clean soiled surfaces and glass using a mild detergent and warm water solution with soft, clean cloths.

END OF SECTION

Issue Date: February 16, 2009

Specification subject to change. For the most up to date information visit [milgard.com](http://milgard.com).