

FIRE DOOR LISTING PROGRAM

Customer: Wolman Wood and Fire Protection GmbH
 Class: Fire Doors
 Location: Sinzheim, Germany
 Website: <https://www.wolman.biz>

Listing No. F411-1
 Project No. F411-1 Edition 11

Effective Date: October 12, 2012
 Last Revised Date: December 15, 2023

Standards: CAN/ULC S104 UL 10B UL 10C NFPA 252 ASTM E90	<i>Standard Method for Fire Tests of Door Assemblies. Fire Tests of Doors Assemblies. Fire Tests of Doors Assemblies. Standard Methods of Fire Tests of Door Assemblies. Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements</i>
ASTM E1425	<i>Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements</i>

Product: 45-minute Rated Positive Pressure Fire Doors

Markings: See [FD001 - Fire Door Labeling requirements](#)

Models: **45-MINUTE LAMINATED CORE PANEL AND FLUSH DOORS**

MAXIMUM DOOR SIZES:

Minimum 1-3/4" Thickness

Swing Type:	Maximum Dimensions		Panel Type:	Latching:
	Width:	Length:		
Single Swing	3'6" (1067 mm)	10'0" (3048 mm)	Flush, Flat or Raised, Glazed	Single point or 2 point
	4'0" (1219 mm)	8'0" (2438 mm)		
Full Arched Top Single Swing	3'6" (1067 mm)	9'0" (2743 mm)	Flush, Flat or Raised	3 or 4 point
Standard Pairs†	7'0" (2134 mm)	8'0" (2438 mm)	Flush, Flat or Raised, Glazed	
	8'0" (2438 mm)	7'0" (2134 mm)		
Double Egress Pairs	7'0" (2134 mm)	8'0" (2438 mm)	Flush, Flat or Raised	4 point, Concealed or Surface Mounted

†Standard Pairs require a mid-rail

Note: 1 3/4" thick doors can be increased to 2" or 2 1/4" by adding face material thickness

Minimum 2-1/4” Slab Thickness

Swing Type:	Maximum Dimensions		Panel Type:	Latching:
	Width:	Length:		
Single Swing	4'0" (1219 mm)	10'0" (3048 mm)	Flat or Raised	2 point, (surface mounted)
Standard Pairs	8'0" (2438 mm)	10'0" (3048 mm)	Flat or Raised	4 point, (surface mounted)
Double Egress Pairs	7'0" (2134 mm)	8'0" (2438 mm)	Flat or Raised	4 point, Concealed or Surface Mounted

Temperature rise

- @30 min = 250°F MAX where lites do not exceed 100 in²

Single Point Latching – Cylindrical or Mortise latches and deadbolts, or rim type fire exit hardware for single swing doors, or active leaf of pairs when permitted.

Two Point Latching – Surface mount or concealed vertical rod exit devices for single swing doors. Concealed vertical rod exit devices requires special door construction and is acceptable per the manufacturing specifications.

Three Point Latching – Single point latch for active leaf of standard pairs, Surface mounted manual, or Mortise type or manual or automatic flush bolts, or surface mount fire exit hardware for inactive leaf of standard pairs.

Four Point Latching - Surface mount or concealed vertical rod exit devices for both leaves of pairs. Concealed vertical rod exit devices requires special door construction and is acceptable per the manufacturing specifications.

Communicating Doors installed in a Communicating Frame

Two 1 3/8” thick doors shall be installed into the same communicating door frame to achieve 45 min rating.

Swing Type:	Maximum Dimensions		Panel Type:	Latching:
	Width:	Length:		
Single Swing Only	3'0" (914 mm)	7'0" (2134 mm)	Flush only	Single Point

CATEGORY “A” AND “B” DOORS

CATEGORY “A” DOORS CONTAIN INTUMESCENT IN THE DOOR VERTICAL EDGES AND HEADER. THE TOP OF DOOR WILL BE MARKED “CATEGORY A” OR “CATEGORY B”.

CATEGORY “B” DOORS AND DOORS CONFORMING TO CAN/ULC S 104 DO NOT REQUIRE THE DOOR EDGE INTUMESCENT FOR SINGLE SWING DOOR APPLICATIONS, INTUMESCENT IS OPTIONAL. FOR DOORS SWINGING IN PAIRS, INTUMESCENT IS REQUIRED AT THE MEETING EDGES ONLY.



Latch Sets (Listed and labeled for wood and composite doors, 45 minute rated, and UL 10C)

- Cylindrical Latches
 - Maximum 2-1/8" diameter bore
 - Maximum 2-3/4" backset
 - Minimum 1/2" throw

- Mortised Latch
 - Listed cardlock type units
 - Mortise locks and latches shall be Listed for use in wood or composite doors, at least 45 minute fire rated and evaluated to UL10C.

Deadbolts (Listed and labeled for wood and composite doors, 45 minute rated and evaluated to UL 10C)

- Maximum 2-1/8" diameter bore
- Maximum 2-3/4" backset
- Located a minimum of 3-1/2" center-line to center-line above the latch set
 - Interconnected Deadbolts are allowed
- Mortised Deadbolt – see Mortised Latch Set section above

Hinges (Listed and labeled for use in wood and composite doors)

- Hinges as per NFPA 80
- Concealed hinges – Tectus or SOSS hinges

Fire Exit Devices (Listed and labeled for rated opening)

- Surface Mounted Vertical Rod Fire Exit Device
- Concealed Vertical Rod Fire Exit Device
- Rim Type Fire Exit Devices
- Through-bolts are required unless optional reinforcements are noted on the marking top of the door

Door Veneers and Inlays (Optional)

Flush Doors:

- Plastic Laminate (up to 1/16" thick).
- Wood Veneer (up to 1/16" thick).
- Metal Foil (up to 1/16" thick).
- Paper Finish (up to 1/16" thick).
- Fiberglass Reinforced Polymer (FRP) (up to 1/16" thick).
- Vinyl (up to 1/16" thick).
- Lead (up to 1/32" thick).

Recessed Panel Doors:

- Plastic Laminate (up to 1/16" thick).
- Wood Veneer (up to 1/16" thick).
- Metal Foil (up to 1/16" thick).
- Paper Finish (up to 1/16" thick).
- Glass Mirror (up to 1/8 1/4" thick).



Face Grooves

- Permitted for flush doors.

Door Closers (Listed and labeled for rated opening)

- Surface Mounted Door Closers are required to be mounted with through-bolts
- Concealed Door Closers

Surface Mounted Protection Plates

- Permitted

Louvers

- Listed louvers are permitted when installed below the latch elevation

Metal Edges/Astragals – Optional

- Listed and labeled for rated opening
- Metal edges not permitted for positive pressure “Category A” applications
- Surface applied astragals are optional for all applications

Viewers (Listed and labeled for rated opening)

- Maximum size of 1” diameter
- Multiple viewers located a minimum of 12” on center
- Viewers located a minimum 5-1/2” away from edges of doors.
- Viewers shall be installed in 1 3/4” thick door sections

Glass Lights (Listed and labeled for rated opening)

- Glazing material shall be listed and labeled for rated opening, light kit and door type
- Glazing installed in accordance with NFPA 80, and the listed light kit frame installation instructions.

Glazing Options

Steel Lite Kit (45 minute rated door construction, singles or pairs except double egress)

- Maximum 1296 sq. in. area (Max Dimension of 54") with Listed Steel Lite Kit or 'Z' channel using Listed ceramic and wire glazing
- **Wolman Glazing Clip System (60 minutes rated door construction, singles or pairs except double egress)**
 - Maximum 1296 sq. in. area (Max Dimension of 54") using Listed wire glazing.
 - Maximum 2656 sq. in. area (Max Dimension of 83") using Listed 3/16" ceramic glazing .
 - Maximum 9/16" x 9/16" Square wood stops made MDF or solid wood with specific gravity ≥ 0.44 @ 12% MC. (27 PCF density) (Stops can be made of any profile that fits within the 9/16" x 9/16" square dimension).
 - Single layer of PVC encapsulated Palusol 100 (Between the stop and the glass).
 - Applied Grills are permitted with PVC encapsulated Palusol 100 behind the grill.
 - Maximum 2752 sq. in. area (Max Dimension of 86") using Listed 3/16" ceramic glazing.
 - Maximum 9/16" x 9/16" Square wood stops made MDF or solid wood with specific gravity ≥ 0.44 @ 12% MC (27 PCF density). (Stops can be made of any profile that fits within the 9/16" x 9/16" square dimension).
 - Single layer of PVC encapsulated Palusol 100 (Between the stop and the glass and between the stop and the door).
 - Applied Grills are permitted with PVC encapsulated Palusol 100 behind the grill.

Plant-Ons

- MDF or solid wood plant-on moldings may be applied to one or both sides of a door
- Adhesive and/or mechanical fasteners with a maximum penetration of 3/4"
- Moulding may not be applied closer than 3-1/2" to edge of door, edge of light or edge of hardware cutout

Door Bottoms Seals (Listed and labeled for use with 45 minute wood doors)

- Surface Mounted Snap-In in dual durometer vinyl with bulb and fins or with all fins, semi-mortised, or full-mortised bottom seals may be used.
- Cutout dimensions are restricted to 1" wide and 1-3/4" deep x full width of the door.

Electric Raceway

- Permitted

Concealed Vertical Closer

- Permitted



Door Flush Bolts (Listed and labeled for use with 45 minute wood doors)

- Mortise manual flush bolts
- Mortise automatic flush bolts. Cutout dimensions limited to 1" wide x 8-1/2" long x 2" deep.
- Top bolt extension rods are acceptable, with rod channels

Surface Mounted Hardware

- Permitted

Sound Transmission Classification (STC) Ratings for 45-minute Rated Doors

Ratings below are based on testing a 3'0 by 7'0 door installed in a Wolman composite wood frame, using (3) 4 1/2" X 4" hinges and a single point cylindrical latch. Single flat panel recessed panel doors were tested. Ratings will vary for differing sizes and panel design or hardware configurations. The sealed rating is based on the gap around the door sealed with putty, while the operable rating is a fully operational door with seals installed. All the threshold, weatherstrip and seal products were supplied by Legacy Manufacturing, Bronx, NY.

Recessed Single Panel Door, 1 3/4" thick, 5/8" thick panel, 2 X SW 20-1 or SW 45-1 cores

STC Ratings		
Sealed	Operable	Seals/Weatherstrip Components Required
35	32	Threshold – 3665 Series Auto Door Bottom – 7763 (surface applied) Finned gasket installed in door rabbet - 505175 Bk

Notes: *Refer to QAI evaluation report F411-1 and the applicable test reports for test assembly configurations used for fire endurance testing.*

Refer to the [QAI FD002 - Fire Door Guidelines for general guidelines of fire door assemblies](#)

Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction (AHJ).

Product is to be installed in accordance with the manufacturer's published installation instructions by qualified installing personnel.

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI. No warranty is expressed or implied, and no guarantee is provided that any jurisdictional authority will accept the Listing found herein. The appropriate authorities should be contacted regarding the acceptability of any given Listing. Visit the QAI Online Listing Directory located at www.qai.org for the most up to date version of this Listing and to validate that this QAI Listing is active. Questions regarding this listing may be directed to info@qai.org. Please include the listing number in the request.
