

## FIRE DOOR FRAME LISTING PROGRAM

Customer: BASF SE  
 Class: Fire Door Frames  
 Location: Frankenthal, Germany  
 Website: [www.basf.com](http://www.basf.com)

Listing No. F411-2  
 Project No. F411-2 Edition 8

Effective Date: October 12, 2012  
 Last Revised Date: November 1, 2020

Standards: CAN/ULC S104	<i>Standard Method for Fire Tests of Door Assemblies.</i>
UL 10B	<i>Fire Tests of Doors Assemblies.</i>
UL 10C	<i>Fire Tests of Doors Assemblies.</i>
NFPA 252	<i>Standard Methods of Fire Tests of Door Assemblies.</i>

Product: 45 min Rated Positive Pressure Fire Door Frames

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

Models: **45-MINUTE CATEGORY C FIRE DOOR FRAMES:**

### Maximum Frame Sizes:

MDF with SW2 edge sealing:

Swing Type:		Maximum Dimensions	
		Width:	Height:
Single Swing	Rectangular	3'6" (1067 mm)	7'9" (2362 mm)
	Arched Top	3'6" (1067 mm)	7'9" (2362 mm)
	Mulled Assembly	7'0" (2134 mm)	7'9" (2362 mm)
Pairs		Not Permitted	
Double Egress		Not Permitted	

Two Layers of SW 20-1 Cores or Single Layer of SW 45-1 Core:

Swing Type:	Maximum Dimensions	
	Width:	Height:
Single Swing	3'6" (1067 mm)	9'0" (2743 mm)
Communicating	3'6" (1067 mm)	9'0" (2743 mm)
Pairs	7'0" (2134 mm)	9'0" (2743 mm)
Double Egress	Not Permitted	

Three Layers of SW 20-1 Cores or Single Layer of SW 60-1 Core:

Swing Type:	Maximum Dimensions	
	Width:	Height:
Single Swing	3'6" (1067 mm)	9'0" (2743 mm)
Communicating	3'6" (1067 mm)	9'0" (2743 mm)
Pairs	7'0" (2134 mm)	9'0" (2743 mm)
Double Egress	Not Permitted	

**Limitations:**

- Minimum Frame Width: 4-3/4"
- Maximum Frame Width: Equivalent to wall thickness
- Minimum Frame Thickness: 3/4" (-1/16") [MDF frame]  
5/8" (-1/16") [BASF Palusol frame]
- Minimum Rabbet for Door: 1-3/4"
- Minimum Stop Height: 1/2"
- Minimum Stop Width: 1-3/16"  
1-11/16" [Communicating Door Frame]

**Arched Top Frames:**

**Full Arch, arched top door frame:**

The frame remains the same as the rectangular frame except it features a half-of-door-width radius curve (see Figure 5). Two framed corner supports will be installed in the corners of the rough opening.

**Shallow Arch, arched top door frame:**

The frame remains the same as the rectangular frame except it features a large radius curve where the top hinge remains in the original location.

**Transom and Sidelite / Muller Assemblies:**

**2 full muller frames:**

One frame will contain the active opening and the other a fixed panel or sidelite fastened to the frame.

**Full frame muller between 2 half width frames:**

This assembly is a full frame that is muller together between 2 half width frames.

Transoms can be muller above the active door, effectively reducing the height of the active door opening.

There are three sidelite options, as follows:

1. Fully fastened BASF 45 min rated door panel
2. Fully fastened BASF 45 min rated door containing a lite (meeting the F411-1 Listing)
3. BASF door core panel (limited sizing to the tested exposed core panel area – 34" x 88" or 40" x 76")

### **Casing / Moulding:**

Material: MDF or Solid wood with minimum density of 27 lbs./ft<sup>3</sup> density  
Minimum 3/8" thick x 1-1/2" wide.

Frame moulding to be applied with finishing nails at 12" on center.

Hardwood Facings: Maximum 1/4" Hardwood Facing applied to the face of the frame members.

### **Hinge and Hardware Preparation:**

Hinges and applicable hardware must be fire rated for use in openings at or above the fire rating of the frame system being installed. All hinges must be installed as per NFPA 80.

Preparation of hinges and hardware shall be made in accordance with NFPA 80, and the manufacturer's installation instructions and templates.

### **Concealed Hinges:**

Listed SOSS and TECTUS concealed hinges are permitted but require the frame thickness to be built-up to fully enclose the hinge body.

### **Electric Strikes:**

- 3 Listed electric strikes are permitted but require the frame thickness to be built-up to fully enclose the strike body. Maximum mortise depth 1 1/2", maximum mortise height 1/2".

### **Electric Raceways:**

A 1/4" diameter hole is permitted anywhere below 40" above the floor on the hinge or latch frame leg. Wire can then be routed through the hole for electronically controlled hardware. The hole may be left open or sealed with silicone caulking.

### **Mortised Door Closer:**

Concealed closer allowed in the frame header. Maximum 2-1/6" x 3-5/8" x 12" pocket dimensions lined with Interdens Type 15 on 4 sides.

Header is constructed with layers of Palusol SW cores. Minimum 3/8" frame header thickness above the concealed closer pocket.

**Installation:**

Frame to be installed in accordance with installation. Installation instructions shall be shipped with frames.

Shims need to be installed. Silicone caulking applied between the jamb and rough opening on both sides of the assembly. Each hinge needs to be fastened through the shim into the frame with at least #12 x 2-1/2" screws. The frame can then be fastened at all non-hinge shim locations with 2" finishing nails. Follow NFPA 80 Installation guidelines.

Notes: *Refer to QAI evaluation report F411-2 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 warrantee 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](http://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](mailto:info@qai.org). Please include the listing number in the request.

\*\*\*