FIRE DOOR LISTING PROGRAM

Customer: BASF SE  
Class: Fire Doors  
Location: Frankenthal, Germany  
Website: www.basf.com

Listing No. F411-1  
Project No. F411-1 Edition 7

Effective Date: October 12, 2012  
Last Revised Date: May 28, 2018

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

Product: 45 min Rated Positive Pressure Fire Doors

Markings: See FD001 - Fire Door Labeling requirements

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

Minimum 1-3/4" Thickness

<table>
<thead>
<tr>
<th>Swing Type:</th>
<th>Maximum Dimensions</th>
<th>Panel Type:</th>
<th>Latching:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Swing</td>
<td>Width: 3'6&quot; (1067 mm) Length: 9'0&quot; (2743 mm)</td>
<td>Flat or Raised</td>
<td>Single Point (Mortised or Cylindrical)</td>
</tr>
<tr>
<td>Arch Top Single Swing</td>
<td>Width: 3'6&quot; (1067 mm) Length: 9'0&quot; (2743 mm)</td>
<td>Flat or Raised</td>
<td>3 or 4 point (Active: Mortised or Cylindrical) (Inactive: Mortised (Manual) and Surface Mounted Bolts)</td>
</tr>
<tr>
<td>Pairs</td>
<td>Width: 7'0&quot; (2134 mm) Length: 8'0&quot; (2438 mm)</td>
<td>Flat or Raised</td>
<td>4 point (Concealed or Surface Mounted)</td>
</tr>
<tr>
<td>Double Egress</td>
<td>Width: 7'0&quot; (2134 mm) Length: 8'0&quot; (2438 mm)</td>
<td>Flat or Raised</td>
<td>Not Permitted</td>
</tr>
</tbody>
</table>

Minimum 2-1/4" Thickness

<table>
<thead>
<tr>
<th>Swing Type:</th>
<th>Maximum Dimensions</th>
<th>Panel Type:</th>
<th>Latching:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Swing</td>
<td>Width: 4'0&quot; (1219 mm) Length: 10'0&quot; (3048 mm)</td>
<td>Flat or Raised</td>
<td>2 point (Surface Mounted)</td>
</tr>
<tr>
<td>Pairs</td>
<td>Width: 8'0&quot; (2438 mm) Length: 10'0&quot; (3048 mm)</td>
<td>Flat or Raised</td>
<td>4 point (Surface Mounted)</td>
</tr>
<tr>
<td>Double Egress</td>
<td>Not Permitted</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Temperature rise

- @30 min = 250°F MAX where lites do not exceed 100 in²
Minimum 1-3/8” Thickness

Communicating Door Frame
Two slabs must be installed into the same communicating door frame to achieve 45 min rating

<table>
<thead>
<tr>
<th>Swing Type</th>
<th>Maximum Dimensions</th>
<th>Panel Type</th>
<th>Latching:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Swing</td>
<td>3'0&quot; (914 mm)</td>
<td>Flush only</td>
<td>Single Point</td>
</tr>
<tr>
<td></td>
<td>7'0&quot; (2134 mm)</td>
<td></td>
<td>(Mortised or Cylindrical)</td>
</tr>
<tr>
<td>Pairs</td>
<td>Not Permitted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double Egress</td>
<td>Not Permitted</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All door assemblies are certified for Shallow Arch door construction

Limitations: (Review Machining Report for further detail)

- Surface Mounted Hardware
- Cylindrical Latches (Listed and Labelled)
- Mortise manual or automatic flush bolts
- Mortise Lockset (Listed and Labelled)
  - Assa Abloy Hospitality AS – Vingcard Mortise Hardware
    - "VingCard Alu" or "Trio VingAccess Alu", Series 1050, 1060, 1070, 1080, 1090
    - 1000 Series: Models 1001, -02, -04, -07, -12, -14, -15, -57, -85 with 19.05 mm (3/4 in.) latch bolts; may include suffix letters -K, -KVC, -L or -LVC
    - "3000 DaVinci, Euro DaVinci and Presidio" battery operated units

- Listed Viewers
- Fire Exit Devices
  - Surface mounted vertical rod, RIM and concealed vertical rod exit devices
- Surface Mounted and concealed door closer (Listed and Labelled)
- Light Kit (Listed and Labelled)
  - Listed Steel Lite Kit – max. 1296 sq. in. (max dimension of 54”)
  - BASF Proprietary clip light kit – max. 2656 sq. in. (max. dimension of 83”)
  - BASF Proprietary steel channel light kit – max. 1296 sq. in. (max. dimension of 54”)

- Electric Raceway
- Surface Mounted and concealed door bottom (Listed and Labelled)
  - Max mortise 1-3/4” deep by 1” wide by full width of the door

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 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 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.

***