

Positive Pressure with Frame Mounted Intumescent

Appendix H

For Gasketing and Smoke Seals, see www.marshfielddoors.com

INTERTEK TESTING SERVICES - WARNOCK HERSEY (ITS-WH) UNDERWRITERS LABORATORIES (UL)							INTERTEK TESTING SERVICES - WARNOCK HERSEY (ITS-WH) UNDERWRITERS LABORATORIES (UL) (CONT.)							
	Door	Code	Maximum Size (6)	Maximum Visible Glass Size (1, 2, 7, 8, 10)	Side Edge Covering	Hinges	Latching Devices	Closers	Viewers	Fusible Link Louvers (3)	Kickplates	Drop Seals	Transoms(5)	
Single Doors	90-min (B) Mineral Core	DFM-90PPFM	4/0 x 10/0 (1219mm x 3048mm)		Veneer banding or decorative laminate(4); full or partial length metal edge protectors		Cylindrical, mortised, card locks, mortised exits, full or top rod only surface vertical rods, rim exits, Adams Rite 3900 concealed vertical rod top rod only						Max combined opening 4/0x 9/0; approved w/ or w/o a transom bar	
	60-min (B) Mineral Core	DFM-60PPFM												
	45-min (C) Mineral Core	DFM-45PPFM												
	20-min Particle core or Staved core	DFP-20PPFM DFS-20PPFM ESC-20PPFM EPC-20PPFM												
	20-min Structural Composite Lumber Core	DCL-20PPFM												Max combined opening 4/0x 10/0; approved w/ or w/o a transom bar
Standard Pair Doors	90-min (B) Mineral Core	DFM-90PPFM	See table in lower right hand corner	See Appendix I for Lite Approvals	Veneer banding or decorative laminate(4); full or partial length metal edge protectors on hinge stile; metal edge and astragal	Hinges per NFPA 80; (some pivots allowed on lead-lined doors)	Cylindrical, mortised, card locks, mortised exits, full or top rod only surface vertical rods, rim exits, Adams Rite 3900 concealed vertical rod top rod only, flushbolts and extension flushbolts (11)						Not Approved	
	60-min (B) Mineral Core	DFM-60PPFM												
	45-min (C) Mineral Core	DFM-45PPFM												
	20-min Particle core or Staved core	DFP-20PPFM DFS-20PPFM ESC-20PPFM EPC-20PPFM												
	20-min Structural Composite Lumber core	DCL-20PPFM												
	8/0 x 9/0 (2438mm x 2743mm)												Approved with a transom bar; Max combined opening 8/0 x 9/0	
Double Egress Pair Doors	90-min (B) Mineral Core	DFM-90PPFM	8/0 x 8/0 (2438mm x 2438mm)		Veneer banding or decorative laminate (4): full or partial length metal edge protectors on hinge stile	Hinges per NFPA 80;	Full surface vertical rods only							
	60-min (B) Mineral Core	DFM-60PPFM												
	45-min (C) Mineral Core	DFM-45PPFM												
	20-min Particle core or Staved core	DFP-20PPFM DFS-20PPFM ESC-20PPFM EPC-20PPFM												
	20-min Structural Composite Lumber core	DCL-20PPFM												
	8/0 x 9/0 (2438mm x 2743mm)													
Other Doors	20-min Dutch Door	DFP-20PPFM DCL-20PPFM EPC-20PPFM	4/0 x 8/0 (1219mm x 2438mm)	Single or multiple lites not to exceed 1296 sq in (8361 sq cm) of visible glass; max continuous dim: 36" (914mm) high, 36" (914mm) wide	Veneer banding or decorative laminate(4); full or partial length metal edge protectors		Cylindrical, mortised or card locks		UL: One 1" (25mm) diameter viewer, or two 9/16" (13mm) diameter viewers 5-1/2" (140mm) from door perimeter and each other				Not Approved	
	20-min 1-3/8" (35mm) Particleboard	DFP-20PPFM	3/0 x 7/0 (914mm x 2134mm) Single Only	Single or multiple lites not to exceed 100 sq in (645 sq cm) of visible glass; max continuous dim: 33" (838mm) high, 12" (305mm) wide - MVF Only	Veneer banding or decorative laminate(4); full or partial length metal edge protectors		Cylindrical locks		Not Approved				Not Approved	
	20-min Radiation Shielded	WXR-20PPFM	Sgl: 4/0 x 8/0 (1219mm x 2438mm) Std Pr: 8/0 x 8/0 (2438mm x 2438mm); DE: N/A	Single or multiple lites not to exceed 100 sq in (645 sq cm) of visible glass; max continuous dim: 33" (838mm) high, 10" (254mm) wide - Listed MVF only set for single glazing	Veneer banding or lead-lined metal edge and astragal		Cylindrical, mortised, deadbolts, surface vertical rods, rim mortised exit devices, card locks				Brass, bronze, steel, aluminum or HPL; max 40" above door bottom		Surface, full or semi-mortise; max size 1" x 1-3/4"	
	20-min Acoustic	DSR41-PPFM	Sgl: 4/0 x 8/0 (1219mm x 2438mm) Std Pr: 8/0 x 8/0 (2438mm x 2438mm); DE: N/A	(9) 1/4" wired glass only; Single or multiple lites not to exceed 300 sq in (1935 sq cm) of visible glass; max continuous dim: 36" (mm) high, 12" (305 mm) wide 5/16" Firelite® Plus glass only: Single or multiple lites not to exceed 300 sq in (1935 sq cm) of visible glass; max continuous dim: 36" (mm) high, 12" (305 mm) wide	Veneer banding or decorative laminate(4); full or partial length metal edge protectors	2 hinges: 60°; 3 hinges: >60°; 4 hinges: >90°	Cylindrical, mortised, mortised exit, full surface vertical rods, rim exits, card locks	Surface mounted (listed for positive pressure)	One 1" (25mm) dia. viewer, or two 9/16" (13mm) dia. viewers 5-1/2" (140mm) from door perimeter and each other		Metal, HPL, PVC, or Acrovyn up to 48" (1219mm) from the bottom of the door		Listed full or semi-mortised drop seals requiring a max cut out of 1-15/16" deep and 15/16" wide	
	20-min Acoustic	DSR44-PPFM DSR45-PPFM DSR46-PPFM DSR47-PPFM	UL Only; Sgl: 4/0 x 8/0 (1219mm x 2438mm)	DSR44-PPFM ONLY: Single or multiple lites not to exceed 100 sq in (1935 sq cm) of visible glass; max continuous dim: 33" (mm) high, 10" (305 mm) wide. Cutouts must be double glazed with frame and spacer assembly provided by Marshfield DoorSystems, Inc. Glazing must be one pane of 1/4" wired glass and one pane of 3/8" laminated glass.	Veneer banding or decorative laminate(4)	2 hinges: 60°; 3 hinges: >60°; 4 hinges: >90°; 0.180 or greater	Cylindrical, mortised, mortised exit, full surface vertical rods, and rim exits		Not Approved		Not Approved			
	45-min Acoustic	DSR44-PPFM DSR45-PPFM DSR46-PPFM DSR47-PPFM												

- 45-90 minute doors approved with veneer clad w/ 1/4" wired glass or metal vision frame w/ 1/4" wired glass or approved safety glazing in a metal vision frame.
- 20 minute lite options include Fire-Trim with 5/16" Firelite® Plus glazing, 1/4" wired glass with wood moulding, 115 metal vision frames with 1/4" wired glass or approved safety glazing. Canada Trim-Lite™ Moulding is available on 20 minute doors requiring hose stream.
- Louver must be located in the bottom 39" of the door.

- Edgebanding is applied prior to intumescent mortising where both are present; The edgebanding does not cover over the intumescent.
- Where transoms are installed w/o transom bars the meeting rails will have flat joints (not rabbetted).
- Some hardware combinations may affect maximum allowable door sizes. See Table at right.
- All Metal 115-I vision frame required when 3/16" Firelite® NT glass is used.

- 5/16" Firelite® Plus glazing with Fire-Trim moulding required when opening exceeds 54" in length or 1296 sq in for DCL-20PPFM.
- Lite openings void all STC ratings. STC rating is not guaranteed for doors hung in pairs.
- 5/16" Firelite® Plus with veneer clad lite bead available with ITS-WH label on 45-90 minute door.
- Maximum extension flushbolt length is 12" for 45-90 minute pairs.

Maximum Door Sizes for Standard DFM Pairs				
Latching Approvals		Maximum Door Size		
		45	60	90
4-Point (2 SVRs)	Without MEA	8 x 9	8 x 9	8 x 9
	With MEA	N/A	N/A	N/A
4-Point (SVR and Corner Flushbolts)	Without MEA	N/A	N/A	N/A
	With MEA	8 x 9	8 x 9	8 x 8
3-Point (Sgl Point and Corner Flushbolts)	Without MEA	N/A	N/A	N/A
	With MEA	8 x 9	8 x 9	8 x 8
2 Rim Exit Devices with Mullion	Without MEA	8 x 9	8 x 9	8 x 9