

Positive Pressure with Concealed 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 (3)	Hinges	Latching Devices	Closers	Viewers	Fusible Link Louvers (4)	Kickplates	Drop Seals	Transoms(5, 13)	
Single Doors	90-min (B) Mineral Core	DFM-90PP EFM-90PP	4/0 x 10/0 (1219mm x 3048mm)		Veneer banding or decorative laminate		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-60PP EFM-60PP												
	45-min (C) Mineral Core	DFM-45PP EFM-45PP												
	20-min Particle core or Slaved core (11)	DFP-20PP DFS-20PP ESC-20PP EPC-20PP												
	20-min Structural Composite Lumber core (11)	DCL-20PP												
Standard Pair Doors	90-min (B) Mineral Core	DFM-90PP EFM-90PP	See table in lower right hand corner	See Appendix I for Lite Approvals	Veneer banding, decorative laminate or metal edge and astragal	Hinges per NFPA 80; (some pivots allowed on lead-lined doors)		Surface mounted (listed for positive pressure) or 2 spring hinges per NFPA 80					Max combined opening 4/0x 10/0; approved w/ or w/o a transom bar	
	60-min (B) Mineral Core	DFM-60PP EFM-60PP												
	45-min (C) Mineral Core	DFM-45PP EFM-45PP												
	20-min Particle core or Slaved core	DFP-20PP DFS-20PP ESC-20PP EPC-20PP												
	20-min Structural Composite Lumber core	DCL-20PP												
Double Egress Pair Doors	90-min (B) Mineral Core	DFM-90PP EFM-90PP	8/0 x 8/0 (2438mm x 2438mm)		Veneer banding or decorative laminate	Hinges per NFPA 80; (some pivots allowed on lead-lined doors)	Full surface vertical rods only			Not Approved			Not Approved	
	60-min (B) Mineral Core	DFM-60PP EFM-60PP												
	45-min (C) Mineral Core	DFM-45PP EFM-45PP												
	20-min Particle core or Slaved core	DFP-20PP DFS-20PP ESC-20PP EPC-20PP												
	20-min Structural Composite Lumber core	DCL-20PP												
Other Doors	20-min Dutch Door	DFP-20PP DCL-20PP EPC-20PP	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		Cylindrical, mortised or card locks							
	20-min Radiation Shielded	WRP-20PP	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 and mortised exit devices, card locks		Not Approved		Brass, bronze, steel, aluminum or HPL up to 40" (1016mm) from the bottom of the door	Surface, semi or full mortise: max size 1" x 1-3/4"		
	20-min Stile & Rail (Without Hose Stream)	WSR-20PP	Par: 70 x 80 (2134mm x 2438mm) Single: 36 x 80 (1067mm x 2438mm)	Single or multiple lites not less than 6.125" wide x 9.375" tall (57.42 sq in, 370.4 sq mm) or not greater than 26" wide x 40" tall (1040 sq in, 6709.6 sq cm) opening size. Listed wired glass, Firelite® or Firelite® Plus factory installed only.	Veneer banding	Hinges per NFPA 80; Spring or Continuous Hinges	Cylindrical, mortised, deadbolts, surface vertical rods with through bolts, rim and mortised exit devices, card locks, surface mounted manual or mortised automatic flushbolts		*See above		HPL, Polycarbonate or metal; up to 16" (406mm) from bottom of the door	Through bolted, surface mounted only		
	20-min Acoustic	DSR-41PP	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	2 hinges: >60" 3 hinges: >60" 4 hinges: >90"	Cylindrical, mortised, mortised exit, full surface vertical rods, rim exits and card locks	Surface mounted (listed for positive pressure)			Metal, HPL, PVC or acrylic 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 1-3/8" (35mm) Particleboard core			Available with Frame Mounted Intumescent only - See Frame Mounted Intumescent Page					Available with Frame Mounted Intumescent only - See Frame Mounted Intumescent Page					

- (1) 45-90 minute doors approved with veneer clad using 1/4" wired glass or 115 metal vision frame using 1/4" wired glass or approved safety glazing in a metal vision frame.
- (2) 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.

- (3) Edge protection not available on doors with concealed intumescent.
- (4) Louver must be located in the bottom 39" of the door
- (5) Where transoms are installed w/o transom bars the meeting rails will have flat joints (not rabbeted)
- (6) Some hardware combinations may affect maximum allowable door sizes.
- (7) All Metal 115-vision frame required when 3/16" Firelite® NT glass is used.
- (8) 5/16" Firelite® Plus glazing with Fire-Trim moulding required when opening

- (9) exceeds 54" in length or 1296 sq in for DCL-20PP.
- (10) Lite openings void all STC ratings. STC rating is not guaranteed for doors hung in pairs.
- (11) 20-minute Positive Pressure - Concealed Intumescent for Aluminum Frames singles Maximum size is 4/0 x 9/0
- (12) Maximum extension flushbolt length is 12" for 45-90 minute pairs.
- (13) Transoms may not be available on all door types.

Latching Approvals		Maximum Door Size		
		45	60	90
4-Point (2 SVRs)	Without MEA	8 x 8	8 x 8	8 x 8
	With MEA	8 x 9	8 x 9	8 x 9
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	8 x 8	8 x 8	8 x 8
	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
	With MEA	8 x 9	8 x 9	8 x 9



For more information call: 800-869-3667
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