

Comparative Analysis Document: Pyrovitro Protector® Glass Ceramic

Product	Pyran Platinum	Pyran Platinum F	Pyran Platinum L	FireLite	FireLite NT	FireLite Plus	Keralite Standard R (FR-R)	Keralite Standard F (FR-F)	Keralite Standard L (FR-L)	Pyrovitro Protector®	Pyrovitro Protector® +F	Pyrovitro Protector® +L
Fire Rating	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours	20 min – 3 hours
Glass Make-up	Ceramic	Filmed Ceramic	Laminated Ceramic	Ceramic	Filmed Ceramic	Laminated Ceramic	Ceramic	Filmed Ceramic	Laminated Ceramic	Ceramic	Filmed Ceramic	Laminated Ceramic
Visual Appearance	Neutral.	Neutral.	Neutral.	Amber Tint.	Amber Tint.	Amber Tint.	Amber Tint	Amber Tint	Amber Tint	Amber Tint	Amber Tint	Amber Tint
Light Transmission	Unknown	Unknown	Unknown	Approx. 88%	Approx. 88%	Approx. 85%	Approx. 88%	Approx. 88%	Approx. 82%	Approx. 88%	Approx. 88%	Approx. 82%
ASTM E-119 Heat Barrier	No	No	No	No	No	No	No	No	No	No	No	No
Impact Safety Rating	Not safety rated	CSPC Cat. I & II	CSPC Cat. I & II	Not safety rated	CSPC Cat. I & II	CSPC Cat. I & II	Not safety rated	CSPC Cat. I & II	CSPC Cat. I & II	Not safety rated	CSPC Cat. I & II	CSPC Cat. I & II
Hose Stream	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acoustical Barrier	Approx. STC 35	Approx. STC 35	Approx. STC 36	Approx. STC 35	Approx. STC 35	Approx. STC 38	Approx. STC 35	Approx. STC 35	Approx. STC 37	Approx. STC 35	Approx. STC 35	Approx. STC 36
Thickness/Weight per sq. ft.	3/16" / 2.5 lbs	3/16" / 2.5 lbs	3/8" / 4.0 lbs	3/16" / 2.4 lbs	3/16" / 2.4 lbs	5/16" / 4.0 lbs	3/16" / 2.4lbs	3/16" / 2.4lbs	5/16" / 4.1 lbs	3/16" / 2.5lbs	3/16" / 2.5lbs	5/16" / 4.1 lbs
Max sq. In. 20 min - 90 mins	As per IBC 2012, the maximum fire protective glazed area is 100 square inches, beyond that fire resistive glazing is required (Refer Table on Page 2 of this document)											
	4,933 for Windows, Sidelites & Transoms	4,933 for Windows, Sidelites & Transoms	3,143 for Windows, Sidelites & Transoms	2,627 for Windows, Sidelites & Transoms	2,627 for Windows, Sidelites & Transoms	2,627 for Windows, Sidelites & Transoms	4,515 for Windows, Sidelites & Transoms	4,515 for Windows, Sidelites & Transoms	4,515 for Windows, Sidelites & Transoms	3,330 for Windows, Sidelites & Transoms. 3200 for Doors	3,330 for Windows, Sidelites & Transoms. 3200 for Doors	3,330 for Windows, Sidelites & Transoms. 3200 for Doors
	3,708 for Doors	3,708 for Doors	2,736 for Doors	2,034 for Doors	2,034 for Doors	2,034 for Doors	3,534 for Doors	3,534 for Doors	3,534 for Doors			
Max sq. In. 90 min Temp Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors	100 for Temperature Rise Doors
Max sq. In. 3 hours	As per IBC 2012, no glazing is allowed in 3 hours doors (Refer Table on Page 2 of this document)											
	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)	100 for Doors Only (Temp. Rise)
Warranty	5 Years	5 Years	5 Years	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years	3 years

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Excerpt from IBC 2012 (Table 716.5)

716.5 Fire Door and Shutter Assemblies

Approved *fire door* and fire shutter assemblies shall be constructed of any material or assembly of component materials that conforms to the test requirements of Section 716.5.1, 716.5.2 or 716.5.3 and the *fire protection rating* indicated in Table 716.5. *Fire door* frames with transom lights, sidelights or both shall be permitted in accordance with Section 716.5.6. *Fire door* assemblies and shutters shall be installed in accordance with the provisions of this section and NFPA 80.

Exceptions:

1. Labeled protective assemblies that conform to the requirements of this section or UL 10A, UL 14B and UL 14C for tin-clad *fire door* assemblies.
2. Floor *fire door* assemblies in accordance with Section 711.8.

**TABLE 716.5
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS**

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE	FIRE RATED GLAZING MARKING DOOR VISION PANEL ⁶	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELITE/TRANSOM PANEL		
					Fire protection	Fire resistance	Fire protection	Fire resistance	
Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour	4	3	Not Permitted	Not Permitted	Not Permitted	4	Not Permitted	W-240	
	3	3 ^a	Not Permitted	Not Permitted	Not Permitted	3	Not Permitted	W-180	
	2	1½	100 sq. in. ^c	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120	
	1½	1½	100 sq. in. ^c	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	1½	Not Permitted	W-90	
Shaft, exit enclosures and exit passageway walls	2	1½	100 sq. in. ^{c, d}	≤100 sq.in. = D-H-90 > 100 sq.in.= D-H-T-or D-H-T-W-90	Not Permitted	2	Not Permitted	W-120	
Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways, interior exit ramps and exit passageway walls	1	1	100 sq. in. ^{c, d}	≤100 sq.in. = D-H-60 >100 sq.in.= D-H-T-60 or D-H-T-W-60	Not Permitted	1	Not Permitted	W-60	
					Fire protection				
Other fire barriers	1	¾	Maximum size tested	D-H-NT-45	¾		D-H-NT-45		
Fire partitions: Corridor walls	1	⅓ ^b	Maximum size tested	D-20	¾ ^b		D-H-OH-45		
	0.5	⅓ ^b	Maximum size tested	D-20	⅓		D-H-OH-20		
Other fire partitions	1	¾	Maximum size tested	D-H-45	¾		D-H-45		
	0.5	⅓	Maximum size tested	D-H-20	⅓		D-H-20		
Exterior walls	3	1½	100 sq. in. ^c	≤100 sq.in. = D-H-90 >100 sq.in. = D-H-W-90	Not Permitted	3	Not Permitted	W-180	
	2	1½	100 sq. in. ^c	≤100 sq.in. = D-H-90 >100 sq.in. = D-H-W-90	Not Permitted	2	Not Permitted	W-120	
						Fire Protection			
	1	¾	Maximum size tested	D-H-45	¾		D-H-45		
Smoke barriers						Fire protection			
	1	⅓ ^b	Maximum size tested	D-20	¾		D-H-OH-45		

For SI: 1 square inch = 645.2 mm.

- a. Two doors, each with a fire protection rating of 1½ hours, installed on opposite sides of the same opening in a fire wall, shall be deemed equivalent in fire protection rating to one 3-hour fire door.