

## Fire-Rated and Bullet-Resistant-Rated Transparent Wall Panel Fire-Rating: Up to 120 Minutes

Fireglass® BR is fire rated for up to 120 minutes and offers UL 752 Level III bullet resistance ratings. It can be combined with Smartgard® products to achieve up to UL 752 Level 8 bullet resistance rating.

### FEATURES

- Fire-rated for up to 120 minutes with required hose stream test
- Bullet resistance ratings from UL 752 Level I to UL 752 Level VIII available in different make-ups
- Protection against radiant and conductive heat transfer
- Impact safety-rated—meets ANSI Z97.1 and CPSC 16 CFR1201 (Cat. I and II)
- May be lightly sandblasted or etched on one side without affecting fire rating
- Withstands thermal shock
- For use in interior and exterior applications
- 5-year limited warranty
- Large sizes available
- Available in insulated units with other glass products, including (but not limited to): Tinted; One-Way Mirror; Low-E; Reflective; Art Glass; Translucent Interlayer (for added obscurity and privacy)
- Fits in Fireframes® Heat Barrier Series windows. Contact TGP for allowable ballistic ratings
- Available for use in compliant frames by others (see frame manufacturer for details)
- Multi-laminate, not a sensitive polymer unit
- Comprised of Pilkington Optiwhite™ nearly colorless, wireless, low-iron float glass and clear intumescent interlayers

### LISTINGS/STANDARDS

Classified and labeled by Underwriters Laboratories, Inc.® and Underwriters Laboratories of Canada. File number for labeled fire-rated assemblies is R13377 (45 minutes) and R38725 (60-120 minutes). Tests performed in accordance with:

UL 9	NFPA 80	CAN/ULC-S101	ASTM E119	NIJ 0108.01
UL 10B	NFPA 251	CAN/ULC-S104		
UL 10C	NFPA 252	CAN/ULC-S106		
UL 263	NFPA 257			
UL 752				

### LABELING

Each piece of Fireglass BR shall be permanently labeled with the Fireglass BR logo, UL logo and fire rating.

### STORAGE & HANDLING

Fireglass must be handled with care during transportation, storage, inspection and installation. It should be stored in dry conditions, stocked vertically and fully supported in a manner which prevents the glass from sagging. During storage and transportation, the temperature of Fireglass should not exceed 122°F (50°C). Do not expose the “non-PVB” side of the glass to UV light. Do not remove the protective edge tape. See manufacturer’s installation and warranty information for further details.



BIM 3D Model Available



UL Classified & Labeled



Fire-Rated



Hose Stream Tested



Impact-Rated



Heat Barrier



Positive Pressure Tested



Bullet Resistant

UL-752 BULLET RESISTANCE RATING	FIRE RATING	MANUFACTURER'S DESIGNATION	SUPPLY FORM	NOMINAL THICKNESS	WEIGHT APPROX.	U-VALUE	DAYLIGHT TRANS. APPROX. (dB)	STC RATING APPROX. (dB)	ASSEMBLY	MAX. EXPOSED AREA	MAX. WIDTH OF EXPOSED GLAZING	OR	MAX. HEIGHT OF EXPOSED GLAZING
Level I	60 min.	60-201 (with film**)	Single Glazing	1-1/16" (27 mm)	12.90 lbs/ft <sup>2</sup> (63.00 kg/m <sup>2</sup> )	.83	86	44	OTHER THAN DOORS DOOR	7,442 in <sup>2</sup> (4.80 m <sup>2</sup> ) 3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	96" (2.44 m) 41-5/8" (1.06 m)		118-1/8" (3.00 m) 89-3/4" (2.28 m)
Level II	120 min.	120-201*	I.G. Units	2-7/16" (62 mm)	25.81 lbs/ft <sup>2</sup> (126.00 kg/m <sup>2</sup> )	.44	76	46	OTHER THAN DOORS	3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	111" (2.81 m)		111" (2.81 m)
Level III	120 min.	120-201 (with film**)	I.G. Units	2-7/16" (62 mm)	25.81 lbs/ft <sup>2</sup> (126.00 kg/m <sup>2</sup> )	.44	73	46	OTHER THAN DOORS	3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	111" (2.81 m)		111" (2.81 m)
Level II	120 min.	120-202 (with film*)	Single Glazing	1-9/16" (41 mm)	18.64 lbs/ft <sup>2</sup> (91.00 kg/m <sup>2</sup> )	.72	85	46	OTHER THAN DOORS DOOR	3,724 in <sup>2</sup> (2.40 m <sup>2</sup> ) 3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	111" (2.81 m) 41-5/8" (1.06 m)		111" (2.81 m) 89-3/4" (2.28 m)

\*For filmed products, two dimensions of the glass cannot exceed 60" (1.52 m)

+ Available with a translucent interlayer

FOR APPROVED FRAMING SYSTEMS FOR USE WITH FIREGLASS, VISIT [FIREGLASS.COM](http://FIREGLASS.COM) OR CALL 800.426.0279

### SMARTGARD BULLET RESISTANT (LEVEL I-III)

		SMARTGARD BR1 LEVEL I		SMARTGARD BR2 LEVEL II		SMARTGARD BR3 LEVEL III		SMARTGARD BR3TH LEVEL III	
FIRE RATING	FIREGLASS DESIGNATION	NOMINAL THICKNESS	WEIGHT APPROX.	NOMINAL THICKNESS	WEIGHT APPROX.	NOMINAL THICKNESS	WEIGHT APPROX.	NOMINAL THICKNESS	WEIGHT APPROX.
45 min.	45-200	1.60" (41 mm)	16.82 lbs/ft <sup>2</sup> (82.11 kg/m <sup>2</sup> )	1.72" (44 mm)	19.42 lbs/ft <sup>2</sup> (94.80 kg/m <sup>2</sup> )	2.07" (52 mm)	23.39 lbs/ft <sup>2</sup> (114.8 kg/m <sup>2</sup> )	1.73" (44 mm)	19.42 lbs/ft <sup>2</sup> (94.80 kg/m <sup>2</sup> )
60 min.	60-101	1.75" (45 mm)	18.46 lbs/ft <sup>2</sup> (90.11 kg/m <sup>2</sup> )	1.88" (48 mm)	21.06 lbs/ft <sup>2</sup> (102.80 kg/m <sup>2</sup> )	2.22" (56 mm)	25.03 lbs/ft <sup>2</sup> (122.18 kg/m <sup>2</sup> )	1.89" (48 mm)	21.06 lbs/ft <sup>2</sup> (102.80 kg/m <sup>2</sup> )
60 min.	60-201	1.91" (49 mm)	20.50 lbs/ft <sup>2</sup> (100.11 kg/m <sup>2</sup> )	2.04" (52 mm)	23.10 lbs/ft <sup>2</sup> (112.80 kg/m <sup>2</sup> )	2.38" (60 mm)	27.07 lbs/ft <sup>2</sup> (132.18 kg/m <sup>2</sup> )	2.04" (52 mm)	23.10 lbs/ft <sup>2</sup> (112.80 kg/m <sup>2</sup> )
90 min.	90-102	2.30" (59 mm)	25.21 lbs/ft <sup>2</sup> (123.11 kg/m <sup>2</sup> )	2.43" (62 mm)	27.81 lbs/ft <sup>2</sup> (135.80 kg/m <sup>2</sup> )	2.77" (70 mm)	31.78 lbs/ft <sup>2</sup> (155.18 kg/m <sup>2</sup> )	2.44" (62 mm)	27.81 lbs/ft <sup>2</sup> (135.80 kg/m <sup>2</sup> )
120 min.	120-104	2.97" (76 mm)	29.31 lbs/ft <sup>2</sup> (143.11 kg/m <sup>2</sup> )	3.10" (79 mm)	31.91 lbs/ft <sup>2</sup> (155.80 kg/m <sup>2</sup> )	3.44" (87 mm)	35.88 lbs/ft <sup>2</sup> (175.18 kg/m <sup>2</sup> )	3.11" (79 mm)	31.91 lbs/ft <sup>2</sup> (155.80 kg/m <sup>2</sup> )
90 - 120 min.	120-202	2.42" (62 mm)	26.24 lbs/ft <sup>2</sup> (128.11 kg/m <sup>2</sup> )	2.55" (65 mm)	28.84 lbs/ft <sup>2</sup> (140.80 kg/m <sup>2</sup> )	2.89" (73 mm)	32.18 lbs/ft <sup>2</sup> (160.18 kg/m <sup>2</sup> )	2.55" (65 mm)	28.84 lbs/ft <sup>2</sup> (140.80 kg/m <sup>2</sup> )
90 - 120 min.	120-262	3.21" (82 mm)	29.31 lbs/ft <sup>2</sup> (143.11 kg/m <sup>2</sup> )	3.34" (85 mm)	31.91 lbs/ft <sup>2</sup> (155.80 kg/m <sup>2</sup> )	3.68" (93 mm)	35.88 lbs/ft <sup>2</sup> (175.18 kg/m <sup>2</sup> )	3.34" (85 mm)	31.91 lbs/ft <sup>2</sup> (155.80 kg/m <sup>2</sup> )

## SMARTGARD BULLET RESISTANT (LEVEL IV-VIII)

		SMARTGARD BR4 LEVEL IV		SMARTGARD BR5 LEVEL V		SMARTGARD BR7 LEVEL VII		SMARTGARD BR8 LEVEL VIII	
FIRE RATING	PILKINGTON PYROSTOP DESIGNATION	NOMINAL THICKNESS	WEIGHT APPROX.	NOMINAL THICKNESS	WEIGHT APPROX.	NOMINAL THICKNESS	WEIGHT APPROX.	NOMINAL THICKNESS	WEIGHT APPROX.
45 min.	45-200	2.09" (53 mm)	23.69 lbs/ft <sup>2</sup> (115.7 kg/m <sup>2</sup> )	2.31" (59 mm)	25.07 lbs/ft <sup>2</sup> (122.39 kg/m <sup>2</sup> )	2.31" (59 mm)	25.19 lbs/ft <sup>2</sup> (122.97 kg/m <sup>2</sup> )	3.13" (79 mm)	35.44 lbs/ft <sup>2</sup> (173.02 kg/m <sup>2</sup> )
60 min.	60-101	2.25" (57 mm)	25.33 lbs/ft <sup>2</sup> (123.65 kg/m <sup>2</sup> )	2.47" (63 mm)	26.71 lbs/ft <sup>2</sup> (130.89 kg/m <sup>2</sup> )	2.47" (63 mm)	26.83 lbs/ft <sup>2</sup> (130.97 kg/m <sup>2</sup> )	3.29" (83 mm)	37.08 lbs/ft <sup>2</sup> (181.02 kg/m <sup>2</sup> )
60 min.	60-201	2.41" (61 mm)	27.37 lbs/ft <sup>2</sup> (133.65 kg/m <sup>2</sup> )	2.62" (67 mm)	28.75 lbs/ft <sup>2</sup> (140.39 kg/m <sup>2</sup> )	2.62" (67 mm)	28.87 lbs/ft <sup>2</sup> (140.97 kg/m <sup>2</sup> )	3.44" (87 mm)	39.12 lbs/ft <sup>2</sup> (191.02 kg/m <sup>2</sup> )
90 min.	90-102	2.80" (71 mm)	32.08 lbs/ft <sup>2</sup> (156.65 kg/m <sup>2</sup> )	3.02" (77 mm)	33.46 lbs/ft <sup>2</sup> (163.39 kg/m <sup>2</sup> )	3.02" (77 mm)	33.58 lbs/ft <sup>2</sup> (163.97 kg/m <sup>2</sup> )	3.84" (97 mm)	43.83 lbs/ft <sup>2</sup> (214.02 kg/m <sup>2</sup> )
120 min.	120-104	3.47" (88 mm)	36.18 lbs/ft <sup>2</sup> (176.65 kg/m <sup>2</sup> )	3.69" (94 mm)	37.56 lbs/ft <sup>2</sup> (183.39 kg/m <sup>2</sup> )	3.69" (94 mm)	37.68 lbs/ft <sup>2</sup> (183.97 kg/m <sup>2</sup> )	4.51" (114 mm)	47.93 lbs/ft <sup>2</sup> (234.02 kg/m <sup>2</sup> )
90 - 120 min.	120-202	2.92" (74 mm)	33.11 lbs/ft <sup>2</sup> (161.65 kg/m <sup>2</sup> )	3.14" (80 mm)	34.49 lbs/ft <sup>2</sup> (168.39 kg/m <sup>2</sup> )	3.14" (80 mm)	34.61 lbs/ft <sup>2</sup> (168.97 kg/m <sup>2</sup> )	3.95" (100 mm)	44.86 lbs/ft <sup>2</sup> (219.02 kg/m <sup>2</sup> )
90 - 120 min.	120-262	3.71" (94 mm)	36.18 lbs/ft <sup>2</sup> (176.65 kg/m <sup>2</sup> )	3.92" (100 mm)	37.56 lbs/ft <sup>2</sup> (183.39 kg/m <sup>2</sup> )	3.92" (100 mm)	37.68 lbs/ft <sup>2</sup> (183.97 kg/m <sup>2</sup> )	4.51" (114 mm)	47.93 lbs/ft <sup>2</sup> (234.02 kg/m <sup>2</sup> )

## MAXIMUM ALLOWABLE SIZES

FIRE RATING	FIREGLASS DESIGNATION	SUPPLY FORM	ASSEMBLY	MAX. EXPOSED AREA	MAX. WIDTH OF EXPOSED GLAZING	OR	MAX. HEIGHT OF EXPOSED GLAZING
45 min.	45-200	Single Glazing	OTHER THAN DOORS DOOR	4,500 in <sup>2</sup> (2.90 m <sup>2</sup> ) 3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	95-1/4" (2.42 m) 41-5/8" (1.06 m)		95-1/4" (2.42 m) 89-3/4" (2.28 m)
60 min.	60-101*	Single Glazing	OTHER THAN DOORS DOOR	5,616 in <sup>2</sup> (3.62 m <sup>2</sup> ) 3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	96" (2.44 m) 41-5/8" (1.06 m)		96" (2.44 m) 89-3/4" (2.28 m)
60 min.	60-201*	Single Glazing	OTHER THAN DOORS DOOR	7,442 in <sup>2</sup> (4.80 m <sup>2</sup> ) 3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	96" (2.44 m) 41-5/8" (1.06 m)		118-1/8" (3.00 m) 89-3/4" (2.28 m)
90 min.	90-102*	Single Glazing	OTHER THAN DOORS DOOR	3,724 in <sup>2</sup> (2.40 m <sup>2</sup> ) 3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	96" (2.44 m) 41-5/8" (1.06 m)		96" (2.44 m) 89-3/4" (2.28 m)
120 min.	120-104*	I.G. Units	OTHER THAN DOORS	3,730 in <sup>2</sup> (2.41 m <sup>2</sup> )	111" (2.81 m)		111" (2.81 m)
90 - 120 min.	120-202	Single Glazing	OTHER THAN DOORS DOOR	3,730 in <sup>2</sup> (2.41 m <sup>2</sup> ) 3,724 in <sup>2</sup> (2.40 m <sup>2</sup> )	111" (2.81 m) 41-5/8" (1.06 m)		111" (2.81 m) 89-3/4" (2.28 m)
90 - 120 min.	120-262	I.G. Units	OTHER THAN DOORS	3,730 in <sup>2</sup> (2.41 m <sup>2</sup> )	111" (2.81 m)		111" (2.81 m)

+ Available with a translucent interlayer

\*Interior use only