

FIRE-RATED AND BULLET-RESISTANT-RATED TRANSPARENT WALL PANEL

Pilkington Pyrostop® BR is fire rated for up to 120 minutes and offers up to UL 752 Level 3 bullet resistance ratings. It can be combined with Smartgard® products to achieve up to UL 752 Level 8 bullet resistance rating.



BIM 3D Model



Fire-Rated



Hose Stream Tested



Heat Barrier



Positive Pressure Tested



Impacted Rated



Bullet Resistant



UL Classified & Labeled



NORTH AMERICA'S
MOST SPECIFIED
FIRE-RATED GLASS COMPANY



FIRE RATING
UP TO 120 MINUTES

FEATURES

- Fire-rated for up to 120 minutes with required hose stream test
- Bullet resistance ratings from UL 752 Level 1 to UL 752 Level 8 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

Pilkington Pyrostop sales are a cooperative effort between Technical Glass Products and Pilkington North America.

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	CAN4 S-104	ASTM E119	MEA 241-00-M	NIJ 0108.01
UL 10B	NFPA 252	CAN4 S-106		LARR 25798	
UL 10C	NFPA 257	CAN/ULC-S101			
UL 263					
UL 752					

STORAGE & HANDLING

Pilkington Pyrostop 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 Pilkington Pyrostop 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.

LABELING

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

PRODUCT DATA

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	MAX. HEIGHT OF EXPOSED GLAZING
Level I	60 min.	60-201 (with film**)	Single Glazing	1-1/16" (27 mm)	12.90 lbs/ft ² (63.00 kg/m ²)	.83	86	44	OTHER THAN DOORS DOOR	7,442 in ² (4.80 m ²) 4,222 in ² (2.72 m ²)	96" (2.44 m) 41-7/8" (1.06 m)	OR 118-1/8" (3.00 m) 100-13/16" (2.56 m)
Level II	120 min.	120-201*	I.G. Units	2-7/16" (62 mm)	25.81 lbs/ft ² (126.00 kg/m ²)	.44	76	46	OTHER THAN DOORS	3,724 in ² (2.40 m ²)	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 ² (126.00 kg/m ²)	.44	73	46	OTHER THAN DOORS	3,724 in ² (2.40 m ²)	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 ² (91.00 kg/m ²)	.72	85	46	OTHER THAN DOORS DOOR	3,724 in ² (2.40 m ²) 4,222 in ² (2.72 m ²)	111" (2.81 m) 41-7/8" (1.06 m)	111" (2.81 m) 100-13/16" (2.56 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 PILKINGTON PYROSTOP, VISIT FIREGLASS.COM OR CALL 800.426.0279.

SMARTGARD BULLET RESISTANT (LEVEL I-III)

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

Note: The chart above reflects the UL-approved Pilkington Pyrostop sizing per rating but does not represent the available sizes of SMARTGARD panels laminated to Pilkington Pyrostop. Please contact LTI if your panels exceed 15 square feet, or any dimension exceeds 72" (413.637.5001).

*Tested according to UL 752 standards, registered with UL

**Tested according to UL 752 standard

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 ² (115.7 kg/m ²)	2.31" (59 mm)	25.07 lbs/ft ² (122.39 kg/m ²)	2.31" (59 mm)	25.19 lbs/ft ² (122.97 kg/m ²)	3.17" (80 mm)***	35.27 lbs/ft ² (172.19 kg/m ²)
60 min.	60-101	2.25" (57 mm)	25.33 lbs/ft ² (123.65 kg/m ²)	2.47" (63 mm)	26.71 lbs/ft ² (130.89 kg/m ²)	2.47" (63 mm)	26.83 lbs/ft ² (130.97 kg/m ²)	3.32" (84 mm)	36.91 lbs/ft ² (180.19 kg/m ²)
60 min.	60-201	2.41" (61 mm)	27.37 lbs/ft ² (133.65 kg/m ²)	2.62" (67 mm)	28.75 lbs/ft ² (140.39 kg/m ²)	2.62" (67 mm)	28.87 lbs/ft ² (140.97 kg/m ²)	3.48" (88 mm)	38.95 lbs/ft ² (190.19 kg/m ²)
90 min.	90-102	2.80" (71 mm)	32.08 lbs/ft ² (156.65 kg/m ²)	3.02" (77 mm)	33.46 lbs/ft ² (163.39 kg/m ²)	3.02" (77 mm)	33.58 lbs/ft ² (163.97 kg/m ²)	3.88" (98 mm)	43.66 lbs/ft ² (213.19 kg/m ²)
120 min.	120-104	3.47" (88 mm)	36.18 lbs/ft ² (176.65 kg/m ²)	3.69" (94 mm)	37.56 lbs/ft ² (183.39 kg/m ²)	3.69" (94 mm)	37.68 lbs/ft ² (183.97 kg/m ²)	4.54" (115 mm)	47.76 lbs/ft ² (233.19 kg/m ²)
90 - 120 min.	120-202	2.92" (74 mm)	33.11 lbs/ft ² (161.65 kg/m ²)	3.14" (80 mm)	34.49 lbs/ft ² (168.39 kg/m ²)	3.14" (80 mm)	34.61 lbs/ft ² (168.97 kg/m ²)	3.99" (101 mm)	44.69 lbs/ft ² (218.19 kg/m ²)
90 - 120 min.	120-262	3.71" (94 mm)	36.18 lbs/ft ² (176.65 kg/m ²)	3.92" (100 mm)	37.56 lbs/ft ² (183.39 kg/m ²)	3.92" (100 mm)	37.68 lbs/ft ² (183.97 kg/m ²)	4.78" (121 mm)	47.76 lbs/ft ² (233.19 kg/m ²)

Note: The chart above reflects the UL-approved Pilkington Pyrostop sizing per rating but does not represent the available sizes of SMARTGARD panels laminated to Pilkington Pyrostop. Please contact LTI if your panels exceed 15 square feet, or any dimension exceeds 72" (413.637.5001).

*Tested according to UL 752 standards, registered with UL

**Tested according to UL 752 standard

***Must be used in fire-resistive framing

MAXIMUM ALLOWABLE SIZES

FIRE RATING	PILKINGTON PYROSTOP 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 ² (2.90 m ²) 3,736 in ² (2.41 m ²)	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 ² (3.62 m ²) 4,222 in ² (2.72 m ²)	96" (2.44 m) 41-7/8" (1.06 m)		96" (2.44 m) 100-13/16" (2.56 m)
60 min.	60-201*	Single Glazing	OTHER THAN DOORS DOOR	7,442 in ² (4.80 m ²) 4,222 in ² (2.72 m ²)	96" (2.44 m) 41-7/8" (1.06 m)		118-1/8" (3.00 m) 100-13/16" (2.56 m)
90 min.	90-102*	Single Glazing	OTHER THAN DOORS DOOR	3,724 in ² (2.40 m ²) 4,222 in ² (2.72 m ²)	96" (2.44 m) 41-7/8" (1.06 m)		96" (2.44 m) 100-13/16" (2.56 m)
120 min.	120-104*	I.G. Units	OTHER THAN DOORS	3,730 in ² (2.41 m ²)	111" (2.81 m)		111" (2.81 m)
90 - 120 min.	120-202	Single Glazing	OTHER THAN DOORS DOOR	3,730 in ² (2.41 m ²) 4,222 in ² (2.72 m ²)	111" (2.81 m) 41-7/8" (1.06 m)		111" (2.81 m) 100-13/16" (2.56 m)
90 - 120 min.	120-262	I.G. Units	OTHER THAN DOORS	3,730 in ² (2.41 m ²)	111" (2.81 m)		111" (2.81 m)

+ Available with a translucent interlayer

*Interior use only