

**CSR**<sup>™</sup>  
**Bradford  
Insulation**

# COMMERCIAL BUILDING

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Application	Product	Benefits
<b>CSR Bradford Insulation</b>		
Roofing	Bradford Glasswool ANTICON™ Blanket ACOUSTICON™ Blanket	A lightweight cost effective glasswool insulation blanket with Bradford THERMOFOIL™ adhered to one side. ANTICON™ provides excellent thermal and condensation control. ACOUSTICON™ is optimised to reduce rain noise under metal roofing.
	Bradford FIBERTEX™ Rockwool ANTICON™ Blanket ACOUSTICON™ Blanket	An alternative to glasswool insulation blanket where greater acoustic or fire performance is required.
	Bradford Glasswool Building Blanket	A lightweight glasswool insulation blanket which can be used in conjunction with Bradford THERMOFOIL™ where a separate roll out is required. Provides excellent thermal and condensation control.
	Bradford FIBERTEX™ Rockwool Building Blanket	An alternative to glasswool building blanket with excellent sound absorption properties.
Partitions	Bradford Glasswool Partition Insulation	A lightweight product specifically designed for use in commercial partition walls as an acoustic cavity infill to enhance the sound attenuation properties of the wall.
	Bradford FIBERTEX™ Rockwool Partition Insulation	An alternative to glasswool partition insulation having greater rigidity for easier application and can provide superior acoustic performance.
Ceiling Insulation	Bradford Glasswool Ceiling Panels Overlays	Used to control sound transmission through ceiling tiles
Spandrels	Bradford Glasswool SUPERTEL™	A general purpose semi rigid glasswool insulation with excellent thermal and acoustic properties. Suitable for curtain walls.
Pipe Lagging	Bradford Glasswool ACOUSTILAG™	A range of pipe lagging used to suppress noise from pipes. ACOUSTILAG™ can reduce noisy PVC pipes by up to 26dB(A).

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Product	Forms	Typical Facings	Nominal Density kg/m <sup>3</sup>	Nominal Thickness mm	R-value m <sup>2</sup> K/W
<b>CSR Bradford Insulation</b>					
Bradford Glasswool Commercial Grade	Blanket	THERMOFOIL™ LD Plain		50	
R1.5 ANTICON™		THERMOFOIL™ MD Plain/Perf		55	R1.5
R2.0 ANTICON™		THERMOFOIL™ HD Plain/Perf		75	R2.0
R2.5 ANTICON™		THERMOPLAST™ White		95	R2.5
ACOUSTICON™	Blanket	THERMOFOIL™ LD Plain		75	R1.8
Bradford FIBERTEX™ Rockwool	Blanket				
ANTICON™ B32		FLEX-SKIN™	32	38	
ANTICON™ B40		THERMOFOIL™ range	40	50	
ANTICON™ B60			60	75	
ANTICON™ B80			80		
ACOUSTICON™	Blanket			50	
Bradford Glasswool	Blanket				
R1.2 Building Blanket		THERMOFOIL™ range		50	R1.2
R1.5 Building Blanket		BMF		65	R1.5
R1.8 Building Blanket				75	R1.8
R2.0 Building Blanket				83	R2.0
R2.5 Building Blanket				110	R2.5
Bradford FIBERTEX™ Rockwool	Blanket	THERMOFOIL™ range		50	R1.2
R1.2 Building Blanket		BMF		75	R1.8
R1.8 Building Blanket					
Bradford Glasswool Partition Insulation	Pieces		10.8	50 75	
Bradford FIBERTEX™ Rockwool Partition Insulation	Pieces		38	45 70	
Bradford Glasswool Ceiling Panel Overlays	Pieces			50	R1.2
Bradford Glasswool SUPERTEL™	Board Blanket	Nil THERMOFOIL™ HD Plain/Perf BMF Melinex™	32	13 25 50 75 100	R1.55 R2.3 R3.1
Bradford Glasswool ACOUSTILAG™ 20	Blanket	THERMOFOIL™ MD Plain		25	
ACOUSTILAG™ 23		and Loaded Vinyl		50	
ACOUSTILAG™ 26				50	

LD = Light Duty. MD = Medium Duty. HD = Heavy Duty. BMF = Black Matt Glass Tissue. Perf = Perforated

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Product	Nominal Density kg/m <sup>3</sup>	Nominal Thickness mm	R-value m <sup>2</sup> K/W	Thermal Conductivity W/mK			
				20°C	40°C	60°C	100°C
(AS2465 Part 5/6; BS874; ASTM C518, C177, C335) (NB: 1W/mK = 6.9335 Btu.in/ft <sup>2</sup> h°F)							
<b>CSR Bradford Insulation</b>							
Bradford Glasswool							
Commercial Grade		50					0.052
R1.5 ANTICON™		55	R1.5				0.042
R2.0 ANTICON™		75	R2.0				0.042
R2.5 ANTICON™		95	R2.5				0.041
ACOUSTICON™		75	R1.8				0.047
Bradford FIBERTEX™ Rockwool							
ANTICON™ B32	32	38					0.040
ANTICON™ B40	40	50					0.036
ANTICON™ B60	60	75					0.034
ANTICON™ B80	80						0.034
ACOUSTICON™		50					0.036
Bradford Glasswool							
R1.2 Building Blanket		50	R1.2				0.042
R1.5 Building Blanket		65	R1.5				0.043
R1.8 Building Blanket		75	R1.8				0.042
R2.0 Building Blanket		83	R2.0				0.042
R2.5 Building Blanket		110	R2.5				0.044
Bradford FIBERTEX™ Rockwool							
R1.2 Building Blanket		50	R1.2				0.042
R1.8 Building Blanket		75	R1.8				0.042
Bradford Glasswool							
Partition Insulation	10.8	50					0.051
		75					
Bradford FIBERTEX™ Rockwool							
Partition Insulation	38	45					0.042
		70					
Bradford Glasswool							
Ceiling Panel Overlays		50	R1.2				0.042
Bradford Glasswool							
SUPERTEL™	32	13					0.032
		25					0.032
		50	R1.55				0.032
		75	R2.3				0.032
		100	R3.1				0.032
Bradford Glasswool							
ACOUSTILAG™ 20		25					
ACOUSTILAG™ 23		50					
ACOUSTILAG™ 26		50					

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Product	Sound Absorption									
	Facing	Thickness mm	Frequency Hz							NRC
			125	250	500	1000	2000	4000	5000	
(AS1045 - 1988 Reverberation Room Method) (NRC = Arithmetic average of absorption coefficients at frequency 250, 500, 1000 and 2000 Hz)										
<b>CSR Bradford Insulation</b>										
Bradford Glasswool Commercial Grade R1.5 ANTICON™ R2.0 ANTICON™ R2.5 ANTICON™ ACOUSTICON™	THERMOFOIL™ LD Plain	50	0.34	0.86	1.04	0.41	0.20	0.07	0.04	0.65
		75	0.60	1.21	0.90	0.41	0.28	0.10	0.12	0.70
	THERMOFOIL™ LD Plain	75	0.14	1.02	0.82	0.42	0.38	0.29	0.38	0.65
Bradford FIBERTEX™ Rockwool ANTICON™ B32 ANTICON™ B40 ANTICON™ B60 ANTICON™ B80 ACOUSTICON™	FLEX-SKIN™ THERMOFOIL™ range	50	–	0.56	0.90	0.88	0.85	0.88	–	0.8 <sup>①</sup>
	THERMOFOIL™ LD Plain	50								0.7
Bradford Glasswool Building Blanket (R1.2 = 50mm thick) (R1.8 = 75mm thick)	Nil THERMOFOIL™ HD Perf	50 75 50 75	0.25 0.35 0.30 0.35	0.65 0.80 0.65 0.75	0.80 0.85 0.90 1.00	0.90 0.90 1.00 1.10	0.90 0.90 0.90 0.95	1.00 1.10 0.85 0.85	1.05 1.05 0.85 0.85	0.80 0.85 0.95 0.95
	BMF	50 75	0.25 0.35	0.70 0.75	0.80 0.85	0.95 0.85	0.90 0.90	0.95 1.00	1.05 1.05	0.85 0.80
Bradford FIBERTEX™ Rockwool Building Blanket (R1.2 = 50mm thick)	Nil BMF THERMOFOIL™ HD Perf	50 50 50	0.21 0.30 0.20	0.56 0.75 0.80	0.90 0.90 1.00	0.88 0.95 1.00	0.85 0.95 1.00	0.88 1.00 0.95	0.88 1.00 0.85	0.80 0.90 0.95
Bradford Glasswool Partition Insulation	Nil	50	Sound Transmission Loss (dB)							STC
			17	31	40	49	50	46	48	41 <sup>②</sup>
Bradford FIBERTEX™ Rockwool Partition Insulation	Nil	45	Sound Transmission Loss (dB)							STC
			18	39	48	55	51	52	53	42 <sup>③</sup>
Bradford Glasswool Ceiling Panel Overlays	Nil	50	0.34	0.86	1.04	0.41	0.20	0.07	0.04	0.65
Bradford Glasswool SUPERTEL™	Nil	25 50	0.12 0.27	0.41 0.75	0.63 1.12	0.90 1.12	1.01 1.07	0.99 1.04	0.94 1.03	0.74 1.01
	THERMOFOIL™ HD Plain	25 50	0.12 0.46	0.56 1.10	1.18 0.92	0.53 0.46	0.17 0.19	0.10 0.09	0.12 0.06	0.60 0.65
	THERMOFOIL™ HD Perf	50	0.39	0.72	1.14	1.19	1.05	0.95	0.90	1.02
	BMF	50	0.24	0.62	1.00	1.07	1.12	1.15	1.17	0.95
Bradford Glasswool			Sound Insertion Loss (dB) Octave Band Centre Frequency (Hz)							Overall Loss
			125	250	500	1000	2000	4000	8000	(dB)A <sup>④</sup>
ACOUSTILAG™ 20	THERMOFOIL™ MD Plain	25	4	-1	4	14	21	30	29	20
ACOUSTILAG™ 23	and Loaded Vinyl	50	1	-4	8	17	27	42	50	23
ACOUSTILAG™ 26		50	3	-2	10	20	29	43	50	26

① Blanket only.

② Wall system comprising 64mm steel studs, 1 x 13mm CSR Gyprock® CD Plasterboard each side, 50mm CSR Bradford Glasswool Partition Insulation.

③ Wall system comprising 64mm steel studs, 1 x 13mm CSR Gyprock® Fyrchek Plasterboard each side, 45mm CSR Bradford FIBERTEX™ Rockwool Partition Insulation.

④ Overall Insertion Loss is the difference of the sum of the 'A weighted' Sound Power Levels of an unlagged pipe versus a lagged pipe in third octave bands.

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Product	Forms	Facing	Fire Performance Indices				Air Flow Resistivity (mks Rays/m)
			Ignitability Index	Spread Flame	Heat Evolved	Smoke Developed	
(AS1530.3 Part 3 - 1989)							
<b>CSR Bradford Insulation</b>							
Bradford Glasswool	Blanket	THERMOFOIL™ LD Plain	0	0	0	0	
Commercial Grade R1.5 ANTICON™		THERMOFOIL™ MD Plain	0	0	0	0	
R2.0 ANTICON™		THERMOFOIL™ HD Plain	0	0	0	0	
R2.5 ANTICON™	Blanket						
ACOUSTICON™		THERMOFOIL™ LD Plain	0	0	0	0	
Bradford FIBERTEX™ Rockwool	Blanket						
ANTICON™ B32		FLEX-SKIN™	0	0	0	0	
ANTICON™ B40	Blanket						
ANTICON™ B60		THERMOFOIL™ Range	0	0	0	0	
ANTICON™ B80							
ACOUSTICON™	THERMOFOIL™ LD Plain	0	0	0	0		
Bradford Glasswool	Blanket	Nil	0	0	0	0	0.5 x 10 <sup>4</sup>
R1.2 Building Blanket							
R1.5 Building Blanket		THERMOFOIL™ HD Perf	0	0	0	2	
R1.8 Building Blanket							
R2.0 Building Blanket		BMF	0	0	0	4	
R2.5 Building Blanket							
Bradford FIBERTEX™ Rockwool	Blanket	Nil	0	0	0	0	0.5 x 10 <sup>4</sup>
R1.2 Building Blanket		BMF	0	0	0	3	
R1.8 Building Blanket							
Bradford Glasswool	Pieces						
Partition Insulation		Nil	0	0	0	0	1.3 x 10 <sup>4</sup>
Bradford FIBERTEX™ Rockwool	Pieces						
Partition Insulation		Nil	0	0	0	0	1.3 x 10 <sup>4</sup>
Bradford Glasswool	Pieces						
Ceiling Panel Overlays							
Bradford Glasswool	Board Blanket	Nil	0	0	0	0	1.4 x 10 <sup>4</sup>
SUPERTEL™		THERMOFOIL™ HD Perf	0	0	0	3	
		THERMOTUFF™ LD Plain	0	0	0	0	
		BMF	0	0	0	1	
Bradford Glasswool	Blanket						
ACOUSTILAG™ 20		THERMOFOIL™ MD Plain and Loaded Vinyl	0	0	0	0	
ACOUSTILAG™ 23							
ACOUSTILAG™ 26							

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## Insertion Loss

Product	Noise Reduction dB(A)							Noise Reduction Overall dB(A)
	Octave Band Centre Frequency (Hz)							
	125	250	500	1000	2000	4000	8000	
Bradford Glasswool ACOUSTICON™ 75mm	5	12	15	17	19	18	16	18

## Maximum Service Temperatures

Product	Maximum Service Temperature
THERMOFOIL™ and BMF faced products	70°C (faced surface)
FLEX-SKIN™ faced products	120°C (faced surface)
Unfaced products (Glasswool)	350°C

NOTE: Bradford Insulation products in the commercial building range are intended for use at temperatures normally prevailing in building structures.

## Fire Resistance

A special feature of all CSR Bradford mineral fibre insulation products is their superior fire performance. In addition to the early fire hazard indices, CSR Bradford FIBERTEX™ Rockwool insulation is also deemed non-combustible in accordance with AS1530.1.

## Moisture Resistance

Exposure of CSR Bradford Glasswool and FIBERTEX™ Rockwool to an atmosphere of 50°C and 95% relative humidity for four days results in moisture absorption of less than 0.2% by volume. Bradford Glasswool or FIBERTEX™ Rockwool insulation become wet, full thermal efficiency will be restored on drying out.

## Corrosion Resistance

CSR Bradford Glasswool and FIBERTEX™ Rockwool products have a pH which is slightly alkaline and will not corrode mild steel. To maintain this condition, protection must be provided against contamination from external sources. CSR Bradford Glasswool and FIBERTEX™ Rockwool are pH tested in accordance with ASTM C871:1989 and BS3958 part 5:1986.

NOTES: LD = Light Duty. MD = Medium Duty. HD = Heavy Duty. Perf = Perforated. BMF = Black Matt Glass Tissue.

Special density, custom sizes and facings available on request (subject to minimum order quantities).

For further details on product sizes, packaging or stock availability, or for technical information about other CSR Bradford Insulation products, please refer to the CSR Bradford Insulation office in your region.

CSR Bradford Insulation has a policy of continuous product development, therefore new product information will be distributed for inclusion in the CSR Bradford Insulation Technical Manual as and when available.



# Bradford Insulation

CSR Building Solutions Website.

[www.csr.com.au/bradford](http://www.csr.com.au/bradford)

## Manufacturing Facilities.

CSR Bradford Insulation is a leading insulation manufacturer in Australia and Asia with manufacturing facilities located throughout the region.

### AUSTRALIA.

- Glasswool factory, Ingleburn NSW.
- Rockwool factory, Clayton VIC.
- Thermofoil factory, Dandenong VIC.

### ASIA.

- Glasswool factory, Zhuhai, China.
- Rockwool factory, Dongguan, China.
- Rockwool factory, Rayong, Thailand.
- Rockwool factory, Kuala Lumpur, Malaysia.
- Flexible Duct factory, Singapore.

## Sales Offices.

### AUSTRALIA.

State	Phone	Fax
Head Office	61 2 9765 7100	61 2 9765 7029
NSW	(02) 9765 7100	(02) 9765 7052
ACT	(02) 6239 2611	(02) 6239 3305
VIC	(03) 9265 4000	(03) 9265 4011
TAS	(03) 6272 5677	(03) 6272 2387
QLD	(07) 3875 9600	(07) 3875 9699
SA	(08) 8344 0640	(08) 8344 0644
NT	(08) 8984 4070	(08) 8947 0034
WA	(08) 9365 1666	(08) 9365 1656

### INTERNATIONAL.

Country	Phone	Fax
New Zealand	64 9579 9059	64 9571 1017
Hong Kong	852 2754 0877	852 2758 2005
China (Glasswool)	86 756 551 1448	86 756 551 1447
China (Rockwool)	86 769 611 1401	86 769 611 2900
Thailand	66 2736 0924	66 2736 0934
Malaysia	60 3 3341 3444	60 3 3341 5779
Singapore	65 861 4722	65 862 3533

## Health and Safety Information.

Information on any known health risks of our products and how to handle them safely is displayed on the packaging and/or the documentation accompanying them. Additional information is listed in product Material Safety Data Sheets available from your regional CSR Bradford Insulation office or visit our website.

## Warranty.

CSR Limited warrants its Bradford Insulation products to be free of defects in materials and manufacture. If a CSR Bradford Insulation product does not meet our standard, we will, at our option, replace or repair it, supply an equivalent product, or pay for doing one of these. This warranty excludes all other warranties and liability for damage in connection with defects in our products, other than those compulsorily imposed by legislation.

CSR Bradford Insulation is a business of CSR Limited A.B.N. 90 000 001 276.

CSR Limited is the owner of the following trade marks. Acousticlاد™, Acousticon™, Acoustilag™, Anticon™, Bradfix™, Bradford™, Comfort Plus™, Ductel™, Fibermesh™, Fibertex™, Firesal™, Flexitel™, Flex-skin™, Gold Batts™, Multitel™, Quietel™, SoundScreen™, Spansal™, Specitel™, Supertel™, Thermoacclad™, Thermofoil™, Thermodeck™, Thermofoil™, Thermokraft™, Thermoplast™, Thermotuff™, Ultratel™.

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