

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

# FIRE PROTECTION

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Applications	Product	Benefits
<b>Curtain Wall</b>		
	Bradford FIBERTEX™ Rockwool SPANSEAL™ Boards	SPANSEAL™ boards are a premium fire rated insulation specifically for curtain wall facade panels. Up to 2 hour fire ratings are possible.
	Bradford FIBERTEX™ Rockwool Curtain Wall Batts	To ensure complete fire protection curtain wall batts are necessary with the SPANSEAL™ system. Up to 2 hour fire ratings are possible.
<b>Fire Protection</b>		
	Bradford FIBERTEX™ Rockwool Party Wall Batts FIRESEAL™ Loose FIRESEAL™ Fire Damper Strip	These products can provide up to 4 hour fire ratings to various applications.
<b>Marine</b>		
	Bradford FIBERTEX™ 820 Rockwool	A-60 fire ratings are possible in the design of aluminium bulkheads and decks. This product is non-combustible and can be used in A, B and C Class divisions.
	Bradford FIBERMESH™ 820 Rockwool	FIBERMESH™ 820 is designed for maximum flexibility due to its stitched wire facing.
	Bradford Glasswool Marine Thermal Grade	Non-combustible and certified for use in A, B and C Class divisions.

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Product	Description	Forms	Typical Facings	Nom. Density kg/m <sup>3</sup>	Nom. Thick mm	R-value m <sup>2</sup> K/W
<b>CSR Bradford Rockwool Insulation</b>						
Bradford FIBERTEX™ Rockwool SPANSEAL™	A medium density semi-rigid rockwool suitable for a range of building applications, particularly curtain walls.	Boards	THERMOFOIL™	60	50	1.5
SPANSEAL™ 80			BMF	80	50	1.5
SPANSEAL™ 100			FLEX SKIN™	100	50	1.5
SPANSEAL™ PREMIUM				128	50	1.5
SPANSEAL™ DARK				110	50	1.5
Bradford FIRESEAL™ Rockwool Curtain Wall Batts	Complements SPANSEAL™ boards as a fire rated system	Batts	THERMOFOIL™ range	64	135 165	
Bradford FIBERTEX™ Rockwool Party Wall Batts	Medium weight semi-rigid products suitable for a range of fire protection applications. The batts shall be compressed to less than or equal to 85% of their original height when installed to ensure complete sealing.	Batts		60	100	
Fire Damper Strip				60	13	
FIRESEAL™ Loose			Loose	150*		
Bradford FIBERTEX™ 820 Rockwool	A high performance multi purpose product utilising the same specialty fibres as FIBERTEX™ Rockwool FIRESEAL™ products. Certified for marine fire protection applications.	Boards Blankets	Aluminium Foil	110	50	1.5
Bradford FIBERMESH™ 820 Rockwool	A robust high density product suitable for high temperature applications. The product is stitched with wire mesh for maximum flexibility.	Blanket	Galvanised Steel Mesh Stainless Steel Mesh THERMOFOIL™ HD Plain	110	25/38 50/63 75/88 100	
<b>CSR Bradford Glasswool Insulation</b>						
Bradford Glasswool Marine Thermal Grade	A low density glasswool product suitable for marine applications.	Blanket	Aluminium Foil	24 32	25 38 50	

NOTES: LD = Light Duty. MD = Medium Duty. HD = Heavy Duty. Perf = Perforated. BMF = Black Matt Glass Tissue. \*Compacted by tamping into cavities.

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Product	Nominal Thickness mm	R-value m <sup>2</sup> K/W	Thermal Conductivity W/mK				
			20°C	40°C	60°C	100°C	200°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 Rockwool Insulation</b>							
Bradford FIBERTEX™ Rockwool							
SPANSEAL™	50	1.5	0.034	0.037	0.039	0.047	0.072
SPANSEAL™ 80	50	1.5	0.034	0.037	0.039	0.045	0.065
SPANSEAL™ 100	50	1.5	0.034	0.037	0.038	0.044	0.064
SPANSEAL™ PREMIUM	50	1.5	0.033	0.037	0.038	0.043	0.060
SPANSEAL™ DARK	50	1.5	0.034	0.037	0.038	0.044	0.059
Bradford FIRESEAL™ Rockwool							
Curtain Wall Batts	135		0.037	0.039	0.047	0.072	
	165		0.037	0.039	0.047	0.072	
Bradford FIBERTEX™ Rockwool							
Party Wall Batts	100		0.034	0.037	0.039	0.047	0.072
Fire Damper Strip	13		0.034	0.037	0.039	0.047	0.072
FIRESEAL™ Loose			0.034	0.037	0.039	0.047	0.072
Bradford FIBERTEX™ 820 Rockwool							
	50	1.5	0.034	0.037	0.038	0.044	0.059
Bradford FIBERMESH™ 820 Rockwool							
	25/38		0.034	0.037	0.039	0.047	0.072
	50/63						
	75/88						
	100						
<b>CSR Bradford Glasswool Insulation</b>							
Bradford Glasswool	25		0.033	0.037	0.042	0.052	–
Marine Thermal Grade	38		0.032	0.035	0.039	0.049	–
	50						

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Product	Maximum Service Temperature (°C)	Facing	Fire Performance Indices			
			Ignitability Index (0 - 20)	Spread Flame (0 - 10)	Heat Evolved (0 - 10)	Smoke Developed (0 - 10)
<b>CSR Bradford Rockwool Insulation</b>						
Bradford FIBERTEX™ Rockwool						
SPANSEAL™	350	Nil	0	0	0	0
SPANSEAL™ 80	450	THERMOFOIL™ 750 Plain	0	0	0	0
SPANSEAL™ 100	650	BMF	0	0	0	0
SPANSEAL™ PREMIUM	820					
SPANSEAL™ DARK	820					
Bradford FIRESEAL™ Rockwool						
Curtain Wall Batts	350	Nil	0	0	0	0
Bradford FIBERTEX™ Rockwool						
Party Wall Batts	350	Nil	0	0	0	0
Fire Damper Strip	350	Nil	0	0	0	0
FIRESEAL™ Loose	350	Nil	0	0	0	0
Bradford FIBERTEX™ 820 Rockwool						
	820	Nil	0	0	0	0
		Aluminium Foil	0	0	0	0
Bradford FIBERMESH™ 820 Rockwool						
	820	Galvanised Steel Mesh	0	0	0	0
		Stainless Steel Mesh	0	0	0	0
		THERMOFOIL™ HD Plain	0	0	0	0
<b>CSR Bradford Glasswool Insulation</b>						
Bradford Glasswool	350	Nil	0	0	0	0
Marine Thermal Grade		Aluminium Foil	0	0	0	0

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Product	Facing	Fire Resistance Level (FRL) Adequacy/Integrity/Insulation (minutes)	Combustibility NC = Non-combustible (AS1530.1)
<b>CSR Bradford Rockwool Insulation</b>			
Bradford FIBERTEX™ Rockwool SPANSEAL™	Nil	-/120/120	Pass/NC
SPANSEAL™ 80	THERMOFOIL™ 750 Plain	-/120/120	Pass/NC
SPANSEAL™ 100	BMF	-/120/120	Pass/NC
SPANSEAL™ PREMIUM SPANSEAL™ DARK			
Bradford FIRESEAL™ Rockwool Curtain Wall Batts	Nil	-/120/120	Pass/NC
Bradford FIBERTEX™ Rockwool Party Wall Batts	Nil	-/240/240	Pass/NC
Fire Damper Strip	Nil	-240/240	Pass/NC
FIRESEAL™ Loose	Nil	-240/240	Pass/NC
Bradford FIBERTEX™ 820 Rockwool	Nil Aluminium Foil	-/60/60 -/60/60	Pass/NC Pass/NC
Bradford FIBERMESH™ 820 Rockwool	Galvanised Steel Mesh Stainless Steel Mesh THERMOFOIL™ HD Plain	– – –	Pass/NC Pass/NC Pass/NC
<b>CSR Bradford Glasswool Insulation</b>			
Bradford Glasswool Marine Thermal Grade	Nil Aluminium Foil	– –	Pass/NC Pass/NC

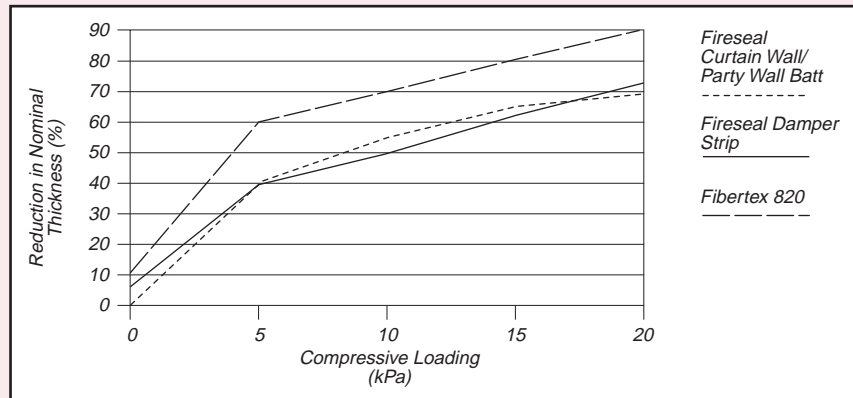
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## Maximum Service Temperatures

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

## Compression Resistance

CSR Bradford Glasswool and FIBERTEX™ Rockwool are resilient insulation materials which readily recover to their nominal thickness after the removal of a normal compressive load. When tested in accordance with ASTM 165:1992 Procedure B, CSR Bradford products perform as shown in the accompanying graph.



Note: Bradford Rockwool

FIBERTEX 820 and FIRESEAL products must be compressed to at less than or equal to 85% of their original height when installed.

## 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, 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. Should Bradford Glasswool or FIBERTEX™ Rockwool insulation become wet, full thermal efficiency will be restored on drying out.

## Corrosion Resistance

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. 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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