



# FOILBOARD<sup>®</sup>

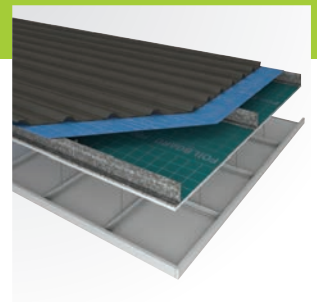
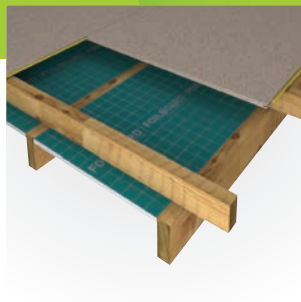
INSULATION SYSTEMS

It's the smarter way to insulate

- ✓ Commercial
- ✓ Industrial
- ✓ Residential

## Foilboard<sup>®</sup> GREEN

Information and Design Guide



RIGID INSULATION PANEL FOR FLOORS, WALLS AND CEILINGS.  
**Standards Australia Certified Product**

**Foilboard® GREEN** rigid insulation panel is proudly available nationwide through a network of insulation providers, hardware & timber merchants, wholesale stockists and distributors.

PERTH

ADELAIDE

BRISBANE

SYDNEY

MELBOURNE





# FOILBOARD®

INSULATION SYSTEMS

It's the rigid insulation panel for under your floors, in your walls, in your roof and even to line your man-caves & sheds.

Manufactured in Australia from a fire retardant expanded polystyrene core (FR-EPS) with pure aluminium foil directly laminated to both sides, creating a SUPERIOR INSULANT, THERMAL BREAK and NON-PERMEABLE MOISTURE BARRIER.

Foilboard® GREEN has been engineered and designed to ensure a quick and easy installation of a non-itchy, fibre free rigid insulation panel that will provide continuous thermal performance for the life of the building.



## It's the smarter way to insulate.

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# The Foilboard® Difference

Foilboard® Australia backs its Foilboard® GREEN with a 25 year performance guarantee.

Fully endorsed by Standards Australia, the Foilboard® GREEN rigid insulation panel is the premium insulation product in its market, both in manufactured quality and product performance and that is why it is backed by a 25 year performance guarantee.

This durable rigid panel is specifically designed to achieve exceptionally high thermal values, making it the ideal product. Unlike traditional bulk insulation and blankets, Foilboard® GREEN rigid panel will not shrink, sag or droop, ensuring that the building performs to its optimal thermal value from day one, to year 25 and beyond.

## Foilboard® GREEN performance Guarantee\*

- ✓ Will maintain the same thermal performance (R value) for the life of panel.
- ✓ Will not sag
- ✓ Will not delaminate



**Did you know** a 4% void in insulated BATTs as a result of sagging, improper installation or stapling can increase heat loss by 15-50%\*\*

\*Foilboard® guarantee is only applicable when product is installed in accordance to manufacturer installation guide

\*\*Information provided is independently sourced from the (ASHRAE) Fundamentals Handbook

# Applications

**Q** Want to find a supplier of Foilboard® products?

[www.foilboard.com.au/storelocator](http://www.foilboard.com.au/storelocator)

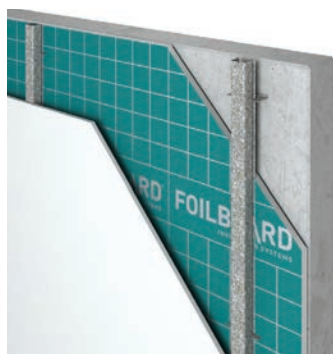
**?** Want to find the right product for your application?

[www.foilboard.com.au/productselector](http://www.foilboard.com.au/productselector)

## Commercial Applications

### Comm 1

#### Brick / Concrete Wall Lining ( Single Reflective Airspace)

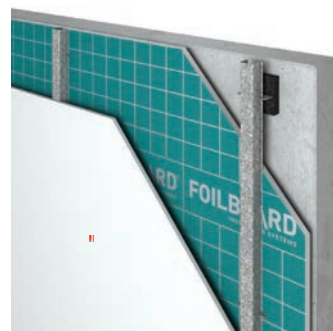


	'R' Values	
	Heat Flow Out	Heat Flow In
Green 40	R2.4 <sub>t</sub>	R2.2 <sub>t</sub>
Green 25	R1.9 <sub>t</sub>	R1.8 <sub>t</sub>
Green 20	R1.8 <sub>t</sub>	R1.6 <sub>t</sub>
Green 15	R1.7 <sub>t</sub>	R1.5 <sub>t</sub>
Green 10	R1.5 <sub>t</sub>	R1.4 <sub>t</sub>

By incorporating Foilboard® GREEN rigid insulation panel into a standard 150mm concrete precast system, you can dramatically increase the thermal performance of the wall from an R0.3<sub>t</sub> to R2.4<sub>t</sub>

### Comm 2

#### Brick / Concrete Wall Lining ( Dual Reflective Airspace)

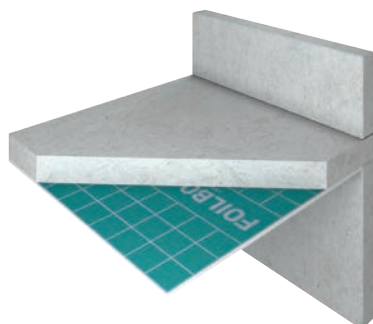


	'R' Values	
	Heat Flow Out	Heat Flow In
Green 40	R2.8 <sub>t</sub>	R2.6 <sub>t</sub>
Green 20	R2.2 <sub>t</sub>	R2.0 <sub>t</sub>
Green 15	R2.1 <sub>t</sub>	R1.9 <sub>t</sub>
Green 10	R2.0 <sub>t</sub>	R1.8 <sub>t</sub>

Foilboard® Insulation Panel will not sag and leave uninsulated pockets that can reduce R Values. Installed correctly, the full 'R' value will last the life of the building. Once fixed in place, it will maintain complete coverage around the building and as it covers the frame, there can be no loss of effectiveness via thermal bridging through the frame.

### Comm 3

#### Suspended Slab Insulation – Direct Fixing (non-trafficable areas)



	'R' Values	
	Heat Flow Out	Heat Flow In
Green 50	R3.4 <sub>t</sub>	R2.7 <sub>t</sub>
Green 40	R3.2 <sub>t</sub>	R2.5 <sub>t</sub>
Green 25	R2.7 <sub>t</sub>	R2.0 <sub>t</sub>
Green 20	R2.6 <sub>t</sub>	R1.9 <sub>t</sub>

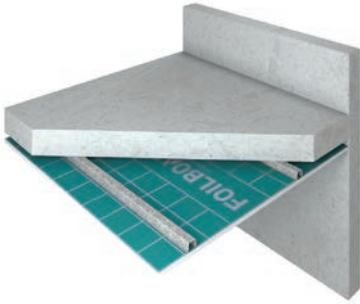
Total R Values include R0.3 m<sup>2</sup>.K/W provided by carpet and underlay

Directly fixing Foilboard® GREEN rigid panel under concrete floors creates a thermal barrier ensuring considerable energy savings and allows for rapid installation of the product.

R<sub>t</sub> - R-values displayed are "total system R-values", as required by the Energy Provisions of the Building Code of Australia. Calculation is based on the use of the Foilboard® GREEN rigid insulation panel only. Under no circumstances can this calculation be used in conjunction with any alternative product, as results will vary.

## Comm 4

## Suspended Slab Insulation – Batten Fixing (non-trafficable areas)



## 'R' Values

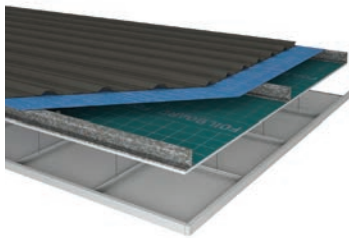
	Heat Flow Out	Heat Flow In
Green 50	R4.1 <sub>t</sub>	R2.9 <sub>t</sub>
Green 40	R3.9 <sub>t</sub>	R2.6 <sub>t</sub>
Green 25	R3.4 <sub>t</sub>	R2.2 <sub>t</sub>
Green 20	R3.3 <sub>t</sub>	R2.1 <sub>t</sub>

Total R Values include R0.3 m<sup>2</sup>.K/W provided by carpet and underlay

Fixing Foilboard® GREEN rigid panel via a batten framework to the underside of a concrete floor aids in additionally boosting the thermal value through the creation and utilisation of the reflective airspace between the Foilboard® GREEN panel and soffit above.

## Comm 5

## Suspended Ceiling Insulation



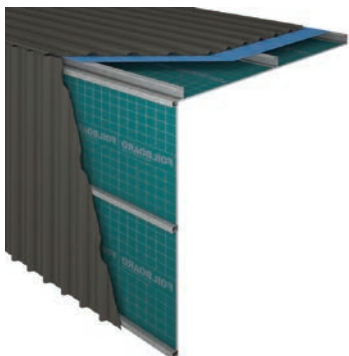
## 'R' Values

	Heat Flow Out	Heat Flow In
Green 25	R2.4 <sub>t</sub>	R5.9 <sub>t</sub>
Green 20	R2.3 <sub>t</sub>	R5.8 <sub>t</sub>
Green 15	R2.2 <sub>t</sub>	R5.6 <sub>t</sub>

Incorporating Foilboard® GREEN into a suspended ceiling increases the thermal performance of the roof structure and with its slimline design, it can fit in almost any cavity size. The versatility of the panel also means that the product can be fixed at varying heights, ensuring maximum effectiveness.

## Comm 6

## Commercial Purlin Fix, Shed &amp; Garages - Vertical and Raked



## 'R' Values

		Heat Flow Out	Heat Flow In
Raked-roofing	Green 25	R1.7 <sub>t</sub>	R3.9 <sub>t</sub>
	Green 20	R1.6 <sub>t</sub>	R3.7 <sub>t</sub>
	Green 15	R1.5 <sub>t</sub>	R3.6 <sub>t</sub>
Vertical-wall	Green 20	R1.9 <sub>t</sub>	R1.9 <sub>t</sub>
	Green 15	R1.8 <sub>t</sub>	R1.8 <sub>t</sub>

Ideally used in the lining of factories, sheds and alike, the Foilboard® panel is quickly and easily installed through the use of Foilboard® fasteners and accessories.

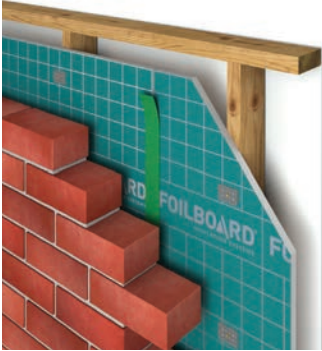
R<sub>t</sub> - R-values displayed are "total system R-values", as required by the Energy Provisions of the Building Code of Australia. Calculation is based on the use of the Foilboard® GREEN rigid insulation panel only. Under no circumstances can this calculation be used in conjunction with any alternative product, as results will vary.



## Residential Applications

### Resi 1

#### Brick Veneer Lining – (timber / steel frame)



'R' Values		
	Heat Flow Out	Heat Flow In
Green 25	R2.7 <sub>t</sub>	R2.4 <sub>t</sub>
Green 20	R2.5 <sub>t</sub>	R2.3 <sub>t</sub>
Green 15	R2.4 <sub>t</sub>	R2.1 <sub>t</sub>
Green 10	R2.3 <sub>t</sub>	R2.0 <sub>t</sub>

By fixing the Foilboard® GREEN rigid panel to the exterior of the studwork, you can ensure a continuity of thermal value, creating an “esky” effect around the home. With the added benefit of achieving “lock-up” stage sooner, allowing for a quicker build time.

### Resi 2

#### External Cladding – (timber / steel frame)

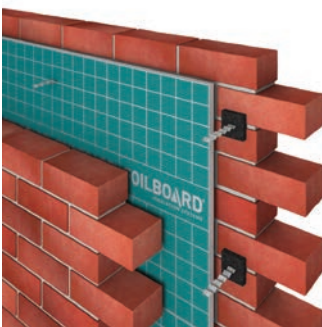


'R' Values		
	Heat Flow Out	Heat Flow In
Green 25	R2.5 <sub>t</sub>	R2.2 <sub>t</sub>
Green 20	R2.3 <sub>t</sub>	R2.1 <sub>t</sub>
Green 15	R2.2 <sub>t</sub>	R2.0 <sub>t</sub>
Green 10	R2.1 <sub>t</sub>	R1.8 <sub>t</sub>

By fixing the Foilboard® GREEN rigid panel to the exterior of the studwork, you can ensure a continuity of thermal value, creating an “esky” effect around the home. With the added benefit of achieving “lock-up” stage sooner, allowing for a quicker build time.

### Resi 3

#### Double Brick Cavity Insulation



'R' Values		
	Heat Flow Out	Heat Flow In
Green 20	R2.0 <sub>t</sub>	R1.9 <sub>t</sub>
Green 15	R1.9 <sub>t</sub>	R1.8 <sub>t</sub>
Green 10	R1.8 <sub>t</sub>	R1.6 <sub>t</sub>

Designed to fit within the standard space of the double brick cavity, Foilboard® GREEN rigid panel optimises the airspace within the structure without the need to re-engineer or redesign the cavity wall system.

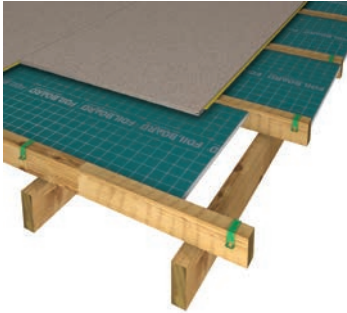
**Superior Thermal Performance**



R<sub>t</sub> - R-values displayed are “total system R-values”, as required by the Energy Provisions of the Building Code of Australia. Calculation is based on the use of the Foilboard® GREEN rigid insulation panel only. Under no circumstances can this calculation be used in conjunction with any alternative product, as results will vary.

## Resi 4

## Underfloor Insulation – New Build



## 'R' Values

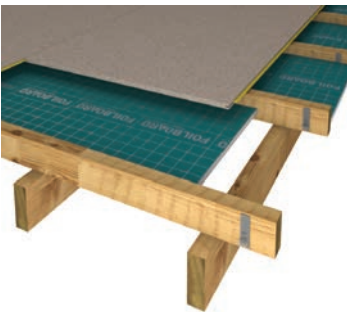
	Heat Flow Out	Heat Flow In
Green 15	R3.3 <sub>t</sub>	R2.0 <sub>t</sub>
Green 10	R3.1 <sub>t</sub>	R1.9 <sub>t</sub>

Total R Values include R0.3 m<sup>2</sup>.K/W provided by carpet and underlay

Through the utilisation of the Foilboard® Floor Saddles, Foilboard® GREEN rigid panel can be installed quickly and easily into the sub-floor before laying timber / particle board flooring.

## Resi 5

## Underfloor Insulation – Flexifit



## 'R' Values

	Heat Flow Out	Heat Flow In
Green 20	R3.7 <sub>t</sub>	R2.1 <sub>t</sub>
Green 15	R3.6 <sub>t</sub>	R2.0 <sub>t</sub>
Green 10	R3.4 <sub>t</sub>	R1.8 <sub>t</sub>

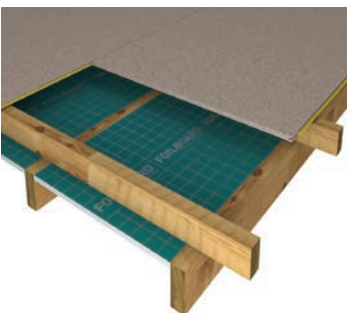
Total R Values include R0.3 m<sup>2</sup>.K/W provided by carpet and underlay

With the use of the Foilboard® Flexi-fast fastener, Foilboard® GREEN rigid panel is perfect for retrofitting to existing flooring systems.

Foilboard® GREEN is light weight, easy to cut and manoeuvre into place, making it the perfect underfloor insulation.

## Resi 6

## Underfloor Insulation – Retrofit



## 'R' Values

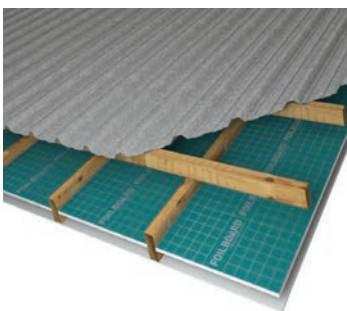
	Heat Flow Out	Heat Flow In
Green 25	R4.3 <sub>t</sub>	R2.2 <sub>t</sub>
Green 20	R4.1 <sub>t</sub>	R2.1 <sub>t</sub>
Green 15	R4.0 <sub>t</sub>	R2.0 <sub>t</sub>
Green 10	R3.9 <sub>t</sub>	R1.9 <sub>t</sub>

Total R Values include R0.3 m<sup>2</sup>.K/W provided by carpet and underlay

For larger sub-floor areas, the Foilboard® GREEN rigid panel can be fixed directly to the underside of the joist, giving the maximum thermal benefit.

## Resi 7

## Skillion / Cathedral Roof Insulation



## 'R' Values

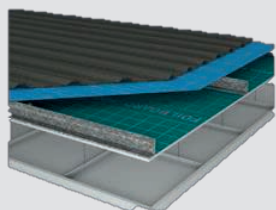
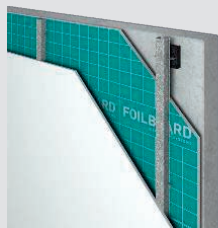
	Heat Flow Out	Heat Flow In
Green 25	R2.4 <sub>t</sub>	R3.3 <sub>t</sub>
Green 20	R2.2 <sub>t</sub>	R3.1 <sub>t</sub>

Where space is of a premium, Foilboard® GREEN rigid panel works perfectly within skillion and cathedral roof spaces.

R<sub>t</sub> - R-values displayed are "total system R-values", as required by the Energy Provisions of the Building Code of Australia. Calculation is based on the use of the Foilboard® GREEN rigid insulation panel only. Under no circumstances can this calculation be used in conjunction with any alternative product, as results will vary.

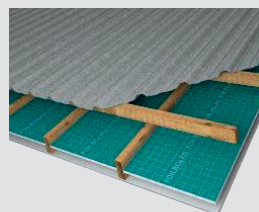
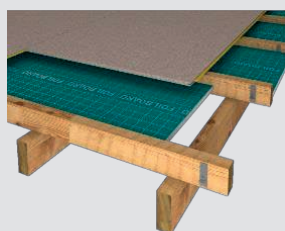


PRECAST CONCRETE WALLS



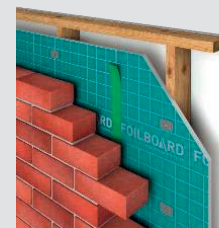
SUSPENDED CEILING SYSTEM

UNDERFLOOR INSULATION

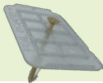
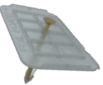
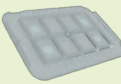




ROOFING INSULATION

WALL INSULATION



## Perfect for slimline applications behind plaster board

Product Code	Description	Image	Qty	Coverage	Recommended Use
FB041	Standard Fasteners		250	1 box covers 15 sheets	Use to fix Foilboard GREEN 10 & 15 to timber wall frames and underfloor
FB042	Ultra Fasteners		250	1 box covers 15 sheets	Use to fix Foilboard GREEN 20 & 25 to timber wall frames and underfloor
FB043	Blank Plates		250	1 box covers 15 sheets	Use to fix Foilboard GREEN non standard screws & nails to wall frames and underfloor
FB044	Metal Fasteners		250	1 box covers 15 sheets	Use to fix Foilboard GREEN 10 & 15 to steel wall frames, underfloor and purlins
FB045	Metal Ultra Fasteners		250	1 box covers 15 sheets	Use to fix Foilboard GREEN 20 & 25 to steel wall frames, underfloor and purlins
FB051	Floor Saddles		200	1 box covers 45m <sup>2</sup>	Sits atop of joists to hold Foilboard GREEN panel in place before laying flooring down -for new builds
FB054	Flexifast		400	45 -50 m <sup>2</sup>	Used to fix Foilboard GREEN between framework / joist / purlins for retrofit joist / purlins for retrofit underfloor
FB061	Green Tape		1	15 sheets per roll	Used to cover butt joints of Foilboard GREEN panel on the green anti-glare face
FB062	Silver Tape		1	15 sheets per roll	Used to cover butt joints of Foilboard GREEN panel on the silver face
FB071	Spacer Blocks		100	15 -25m <sup>2</sup>	Used to space Foilboard GREEN rigid panel in double brick cavity and commercial (concrete) walls brick cavity and commercial (concrete) walls

Rt - R-values displayed are "total system R-values", as required by the Energy Provisions of the Building Code of Australia. Calculation is based on the use of the Foilboard® GREEN rigid insulation panel only. Under no circumstances can this calculation be used in conjunction with any alternative product, as results will vary.

# Technical Data

## Product Specifications

Foilboard® Insulation Panel is manufactured from fire retardant expanded polystyrene with pure aluminium foil laminated to both sides, an anti-glare link applied to one side that is designed to not impede with the reflectiveness of the foil. Where volume is sufficient Foilboard® can be manufactured in thicknesses of up to 100mm. Foilboard® Insulation Panel is manufactured in Australia from all Australian materials.

	Green 10	Green 15	Green 20	Green 25	Green 30	Green 40	Green 50
Emittance							
Reflective Face	E0.03						
Anti glare Face	E0.05						
Sheet thickness (mm)	10	15	20	25	30	40	50
Sheet size (mm)	2400 x 1200 2700 x 1200	2400 x 1200 2700 x 1200	2400 x 1200	2400 x 1200	2400 x 1200	2400 x 1200	2400 x 1200
Weight (g)	767 848	995 1100	1233	1467	1622	2170	2500
Density (kg/m <sup>3</sup> )	13.5						
Core	Fire retardant SL grade EPS						
Surface	100% pure reflective aluminium						
Anti glare	Metal etching UV stabilized green ink						
Adhesive	Contact adhesive proprietary formula						
<b>Ozone depleting substances</b>							
Content	0						
Manufacture	0						
<b>VOC (volatile organic compounds)</b>							
Content	0						
Manufacture (g/L)	< 0.8						
Rate of vapour transmission (max) (ug/m <sup>2</sup> s)	Nil						

## Product Testing

Thermal performance	AS/NZS 4859.1
Surface corrosion resistance	AS/NZS 4859.1 Appendix D & E
Thermal resistance	ASTM-C 518
Emittance	ASTM-E 408-71
Ignitability	AS 1530.3
Flame spread	AS 1530.3
Heat evolved	AS 1530.3
Smoke developed	AS 1530.3
Rigid cellular polystyrene - moulded	AS 1366.3
Nominal density	AS 1366.3
Vapour transmission	AS 2498.5
Dry delamination	AS/NZS 4201.1
Wet delamination	AS/NZ 4201.2
Shrinkage	AS/NZS 4201.3
Water barrier	AS/NZS 4201.4

### Comparative testing of some materials to AS 1530.3 – Early Fire Hazard Test

	Ignitability index (0-20)	Spread of flame index (0-10)	Heat evolved index (0-10)	Smoke developed index (0-10)
Foilboard®	0	0	0	0-1
EPS	12	0	3	5
Australian Softboard	16	9	7	3
Oregon	13	6	5	3

Source: EBS Notes on the Science of Building NSB66. Foilboard® Australia Pty Ltd is the owner of:  
Registered trademark no: 674507 | Registered design no: 142133



# Foilboard® and the Environment

Designed with sustainability in mind, Foilboard® Insulation Panel will last the life of the building. It is one of very few products on the market that creates a true thermal break, meaning the long term benefits of Foilboard® Insulation Panel far outweigh any other insulation material. The material's ability to create a more consistent ambient temperature means you are not reliant on inefficient artificial heating and cooling. This reduces energy use and the production of greenhouse gases creating a more sustainable future for all and saves you money.

There are no Volatile Organic Compounds (VOC's), nor are any CFC's used in the manufacture of the Expanded Polystyrene (EPS). The pure aluminium that is directly laminated to both sides of the Foilboard® Insulation Panel is also 100% recyclable.

Foilboard® GREEN rigid insulation panel ensures optimum performance by creating a thermal barrier around your building or home – reducing your energy consumption costs and carbon footprint making for a healthier, greener environment.

Designed, tested and manufactured in Australia for over 25 years, Foilboard® GREEN rigid insulation panel was the first panel of its kind in the Australian market.



- ✓ **BCA Compliant**
- ✓ **Environmentally Safe**
- ✓ **No harmful “itchy” fibres**
- ✓ **Fire Retardant Rigid Panel**
- ✓ **Excellent acoustic properties**
- ✓ **Lightweight & durable**



# FOILBOARD®

INSULATION SYSTEMS

It's the smarter way to insulate

[www.foilboard.com.au](http://www.foilboard.com.au)

For all enquiries, please call 1800 354 717

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Pakenham Victoria 3810  
Phone: 03 5943 7000  
Email: [foilboard@foilboard.com.au](mailto:foilboard@foilboard.com.au)

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[foilboard.com.au/storelocator](http://foilboard.com.au/storelocator)

 **Product Selector:**

[foilboard.com.au/productselector](http://foilboard.com.au/productselector)

## FOILBOARD® STATE BRANCHES:

### QUEENSLAND

21 Blunder Road  
Oxley, QLD 4075  
Phone: 0417 398 991

### NEW SOUTH WALES

Level 2, 215-219 George Street  
Liverpool, Sydney  
NSW 2170  
Phone: 02 9316 5111

### SOUTH AUSTRALIA

Green Energy Insulation  
49 Cavan Road,  
Gepps Cross, SA 5094  
Phone: 08 8368 4222

### WESTERN AUSTRALIA

14 Coney Drive,  
Kewdale, WA 6105,  
Phone: 08 9309 4955