



YOUR ARMOUR AGAINST THE ELEMENTS





Protection you can trust

Bradford EnviroSeal™ is a range of incredibly tough, reflective wall wrap and roof sarking membranes designed to help protect the building and streamline workflow on your site. They work to protect the house frame and roof trusses during construction and shield the inside of the building from the elements so that trades can work in safety - even before the external cladding is installed.

Once construction is completed, EnviroSeal™ acts as a second skin, helping to protect the home from moisture and dust and reducing the risk of callbacks. It can also help to improve the thermal performance of the walls and roofs/ceilings making the home more energy efficient and comfortable for the homeowner.

CONSTRUCTED FOR TOUGHNESS

EnviroSeal™ products have been designed using the latest available technology to provide you with the optimum performance for each application and to make it easier for you to get the best result, every time.

All products (with the exception of EnviroSeal™ Roof Metal) are constructed from an extremely tough combination of a woven polymer laminated to an aluminium foil facing with a fire retardant adhesive, providing it with the extra strength and stability required for its applications.

ENVIROSEAL™ FOR WALLS

EnviroSeal™ is primarily designed to stop moisture ingress through porous brick walls. If moisture gets inside the wall cavity, it can lead to mould and mildew eventually damaging the wall frame and internal lining. Wrapping the exterior of the frame with an impermeable pliable wall membrane is the ideal way to stop moisture bridging the wall cavity.

EnviroSeal™ Wall Wrap

EnviroSeal™ Wall Wrap is an extremely tough, light duty wall wrap designed for use in **brick veneer walls**. Its exceptional water barrier properties prevent wind driven rain from reaching the timber frame or damaging internal wall linings.

EnviroSeal™ Wall Breather

EnviroSeal™ Wall Breather is a micro-pierced wall wrap membrane recommended for use as a wall wrap in **timber, fibre cement or metal clad homes** where the cladding is directly fixed to the wall framing. With its excellent water vapour transmission rates, EnviroSeal™ Wall Breather can let any trapped water vapour out of the wall cavities thereby reducing condensation forming on the wall linings.

EnviroSeal™ Roof Metal/Wall

EnviroSeal™ Roof Metal/Wall can be used as an economical **wall wrap** offering good protection and thermal insulation benefits. Its light weight makes it easy to handle and transport. For more details on this product refer to the EnviroSeal™ for Roofs section of this brochure.



Features	Benefits
Tough, flexible woven polymer	<ul style="list-style-type: none"> Allows construction work to continue in wet and windy weather, which not only speeds construction time but it also reduces the interval between progress payments
High moisture resistance	<ul style="list-style-type: none"> Prevents moisture affecting the building frame during construction reducing the risk of call backs due to mould or staining
Light weight	<ul style="list-style-type: none"> Ease of handling and transportation, reduces installation time
Reflective foil barrier	<ul style="list-style-type: none"> Provides superior protection to the home against wind driven rain and dust from entering wall cavities through the porous brick walls and mortars reducing rotting of timber frames and mould and mildew growth due to the damp in the walls It not only enhances thermal insulation when installed with a minimum 20mm air gap to the reflective side but one can also avoid stringing of batts if a wall wrap is installed in the wall cavity Improves comfort and energy efficiency
Micro-pierced (EnviroSeal™ Wall Wrap Breather)	<ul style="list-style-type: none"> Allows excellent vapour transmission from the cladding material thereby reducing rotting of timber frames
Excellent fire resistance	<ul style="list-style-type: none"> Low flammability index permitting the application of these products in almost all bush fire attack levels (BALs) in accordance with AS3959: 2009
Green antiglare surface	<ul style="list-style-type: none"> Reduces glare during installation thereby improving safety and provides safe work practices
EnviroSeal Roof Metal/Wall – one product does it all	<ul style="list-style-type: none"> Versatile design allows it to be used as an economical wall wrap as well as under metal deck roofs where temperatures can exceed 80°C
Meets Australian Standards and BCA requirements	<ul style="list-style-type: none"> Your guarantee of quality and performance ensures easy to sign off for council certifiers thereby reducing overall construction time and speeds up progress payments

ENVIROSEAL™ FOR ROOFS

EnviroSeal™ sarking products include heavy duty polymer products designed for use under concrete and terracotta tile roofs and a light duty paper based product designed for use under metal roof where temperatures can exceed 80°C and woven polymer based foil products may fail in such high temperatures. They all act as a second skin against wind driven rain and dust and help to protect the interior of the home against the elements during and after the construction process.

They also protect the home from water ingress in the event of damage to the roof tiles and contribute to the thermal efficiency of the roof structure.

EnviroSeal™ Roof Tile

EnviroSeal™ Roof Tile is an economical heavy duty sarking recommended for use in temperate areas. It is tough, easy to handle and will provide protection to the home during the roof installation.

EnviroSeal™ Roof Tile Plus

EnviroSeal™ Roof Tile Plus is a heavy duty sarking offering superior strength and tear resistance making it suitable for use in coastal and cyclone affected areas. Its extra weight and stiffness mean less tears and taping, allowing for fast and easy installation.

EnviroSeal™ Roof Tile Safety

EnviroSeal™ Roof Tile Safety is an Extra Heavy Duty sarking for the ultimate in protection against extreme weather conditions including hail. It is recognised by some WorkCover Codes of Practice to be a safeguard against the risks of falling through an incomplete or fragile roof, or openings in the roof.

EnviroSeal™ Roof Metal/Wall

EnviroSeal™ Roof Metal/Wall is a traditional paper laminate based product specifically designed to meet the requirements for membranes used under metal roofs. Our studies have indicated temperatures under a metal roof can get over 80°C depending on UV and solar radiation and Bradford polymer based products

i.e. Roof Tile, Roof Tile Plus and Roof Tile Safety are not warranted against shrinkage and delamination at such high temperatures.

EnviroSeal™ Roof Metal can also be used as a wall wrap in houses. It is one product that can be used to sark as well as wrap the entire house. It is constructed using a strong kraft paper, faced on both sides with aluminium foil and reinforced with fibreglass in a tri-directional pattern.



Features	Benefits
Tough, flexible woven polymer	<ul style="list-style-type: none"> • Provides ongoing protection to the roof space from weather & dust; specially if it is used as a storage space • Strong enough to act as a fall arrest barrier without safety mesh, enhancing installer safety and reducing the installation time and cost* • Can act as a second skin in the event of hail damage protecting the interior of the home in severe weather conditions*
Excellent water resistance	<ul style="list-style-type: none"> • Protects against water damage to the ceiling from wind blown rain or in the event of any roof tile damage or leakage; reducing the possibility of future call backs or compensation claims from your customers for leakage through roofs
Reflective foil barrier	<ul style="list-style-type: none"> • Enhances thermal insulation performance of the roof/ceiling whilst helping to meet BCA energy efficiency requirements • Reduces condensation which can, not only rot roof timbers, but also cause staining on the ceiling due to mould and mildew growth • Improves comfort and energy efficiency
Excellent fire resistance	<ul style="list-style-type: none"> • Helps protect the home against wind borne embers • Suitable for use in various bush fire attack levels (BALs) in accordance with AS3959: 2009
EnviroSeal Roof Metal – one product does it all	<ul style="list-style-type: none"> • Versatile design allowing its use as sarking under metal deck roofs where roof void temperatures can exceed 80°C as well as an economical wall wrap
Meets Australian Standards and BCA requirements	<ul style="list-style-type: none"> • Your guarantee of quality and performance ensures easy to sign off for council certifiers thereby reducing overall construction time and speeds up progress payments

*Only applicable for Roof Tile Safety

ENVIROSEAL™ ROOF SARKING READY RECKONER

Application	EnviroSeal™ Roof Metal	EnviroSeal™ Roof Tile	EnviroSeal™ Roof Tile Plus	EnviroSeal™ Roof Tile Safety [#]
Roof Type	Metal	Tiled	Tiled	Tiled
Duty as per AS/NZS 4200.1:1994	Light	Heavy Duty	Heavy Duty	Extra Heavy Duty
Temperate climates	Yes	Yes	Yes	Yes
Coastal areas		Yes	Yes	Yes
Tropical/Cyclone prone areas			Yes	Yes
Hail prone areas				Yes
Bushfire prone areas	Yes	Yes	Yes	Yes
Roof span of 600mm and above	Yes (with safety mesh)	Yes (with safety mesh)	Yes (with safety mesh)	Yes (No mesh required)

SARKING REQUIREMENTS TO MEET THE BUILDING CODE OF AUSTRALIA

Roof Pitch and Rafter Length

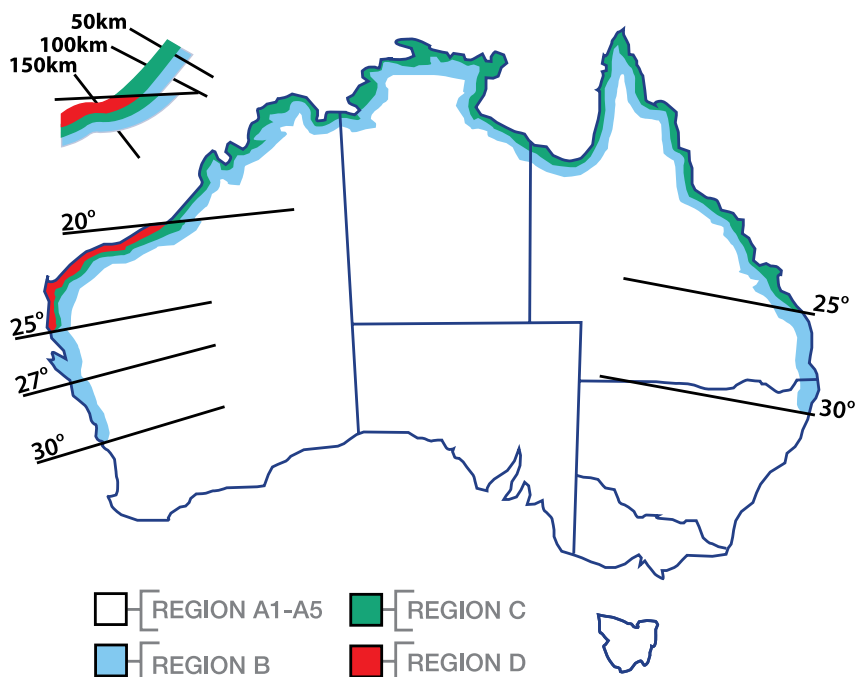
In accordance with the BCA Volume 2, 2009 Sarking must be installed under tiled roofs subject to roof pitch and rafter length.

Roof – degrees of pitch	Maximum rafter length after which sarking must be installed
Between 18° and 20°	4500mm
Between 20° and 22°	5500mm
Greater than 22°	6000mm

Wind Design Classification

In addition Section 3.1.1 of AS 2050-2002, Installation of Roof Tiles, requires sarking to be provided for all roofs where the design wind classification is greater than 32m/s or 115kms/hour (N3) for Regions A&B (non cyclonic) or C1 for regions C&D (cyclonic) – refer to Figure 1 to get a better understanding of Australian regions.

This wind speed is defined by the Bureau of Meteorology's (BOM) Beaufort Wind Scale as 'storm with gale force winds having the strength to uproot trees and can cause considerable structural damage.' These winds can also cause hail storms, potentially damaging roof tiles, and sarking can reduce the impact of inclement weather on the ceiling void.



BUSH FIRE ATTACK LEVELS (BAL) IN ACCORDANCE WITH AS3959: 2009

Bushfire Attack Level (BAL)	Classified vegetation within 100m of the site and heat flux exposure	Description of predicted bushfire attack and levels of exposure	Sarking requirements for Roofs and Walls
BAL – LOW	Refer to clause 2.2.3.2	There is insufficient risk to warrant specific construction requirements	<p>Walls - sarking-type material may be applied over the outer face of the frame prior to fixing any external cladding</p> <p>Tiled Roofs - shall be fully sarked. The sarking shall:</p> <ul style="list-style-type: none"> (a) have a flammability index of not more than 5 when tested to AS1530,2; (b) be located directly below the roof battens; (c) cover the entire roof area including the ridge; and (d) be installed so that there are no gaps that would allow the entry of embers where the sarking meets fascias, gutters, valleys and the like <p>Metal Sheet Roofs -</p> <ul style="list-style-type: none"> (a) be fully sarked in accordance with Sarking of Tiled Roof, except that foil-backed insulation blankets may be installed over the battens; or (b) have any gaps greater than 3 mm, under corrugations or ribs of sheet roofing and between roof components, sealed at the fascia or wall line and at valleys, hips and ridges by: <ul style="list-style-type: none"> (i) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium; or (ii) mineral wool; or (iii) other non-combustible material; or (iv) a combination of any of Items (i), (ii) or (iii) above
BAL – 12.5	< 12.5 kW/m ²	Ember attack	
BAL – 19	> 12.5 kW/m ² < 19 kW/m ²	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	
BAL – 29	> 19 kW/m ² < 29 kW/m ²	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	
BAL – 40	> 29 kW/m ² < 40 kW/m ²	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux with the increased likelihood of exposure to flames	
BAL – FZ	> 40 kW/m ²	Direct exposure to flames from fire front in addition to heat flux and ember attack	<p>Walls - sarking-type material may be applied over the outer face of the frame prior to fixing any external cladding.</p> <p>Roofs – The roof or roofing system shall be one of the following:</p> <ul style="list-style-type: none"> (i) A system complying with AS 1530.8.2 when tested from the outside or (ii) A system with an FRL of 30/30/30 or –/30/30 when tested from the outside or (iii) A combination of Items (i) and (ii) above

INSTALLATION

Bradford EnviroSeal™ Wall Wrap and Roof Sarking products will perform in normal building applications when installed in accordance with AS/NZS 4200.2:1994 Pliable Building Membranes & Underlay's, Part 2 Installation Requirements.

- In roofing applications Bradford Insulation recommends minimum sag of 40mm deep between the rafters, except at eaves
- A minimum airgap of 20mm is required on the reflective surface to ensure thermal performance
- For maximum strength it is recommended to fix EnviroSeal™ Wall Wrap and Wall Wrap Breather using Bradford foil fasteners
- All EnviroSeal™ products should be installed with the antiglare surface facing outwards
- All proper safety measures should be taken during installation of EnviroSeal™, all relevant OHS and statutory regulations must be followed



QUALITY YOU CAN TRUST

All Bradford EnviroSeal™ products are tested in accordance to AS/NZS 4200.1:1994 Pliable building membranes and underlays and are proven to provide thermal insulation in accordance to AS/NZS 4859.1:2002 Materials for the thermal insulation of Buildings, Part 1: General criteria and technical provisions.

All EnviroSeal™ products are warranted to perform when it is installed in accordance to perform in normal building applications when installed in accordance with AS/NZS 4200.2:1994 Pliable Building Membranes & Underlay's, Part 2 Installation Requirements and all work is designed and constructed in compliance with all provisions of the current Building Code of Australia, regulations and relevant standards.

Established 75 years ago, Bradford Insulation is Australia's most experienced domestic insulation company.

This experience combined with our world class manufacturing technology, is your guarantee of quality and performance, all backed by CSR, Australia's leading building materials company.



For further information on the Bradford EnviroSeal™ range call you local Bradford office on **1300 850 305** or visit our website **www.bradfordinsulation.com.au**