Bradford™ enviroseal™

PROCTORWRAP™
LET YOUR BUILDING BREATHE

Control condensation for a healthy building

THE BENEFITS OF VAPOUR PERMEABLE MEMBRANES

CSR

Understanding condensation risk

Long perceived to be immune from condensation problems, Australia is seeing an increase in the occurrence and severity of condensation problems due to changes in building design and increases in energy efficiency targets.

ENERGY EFFICIENT CONSTRUCTION INCREASES CONDENSATION RISK

The drive for energy efficient buildings has resulted in higher levels of insulation in the roof space and walls, as well as reduced air leakage due to modern energy conscious building practices. As a result, this has dramatically changed the temperature and moisture balance within buildings, which has increased the risk of condensation formation within the building structure.

The possible consequences of condensation and the subsequent high humidity environment include;

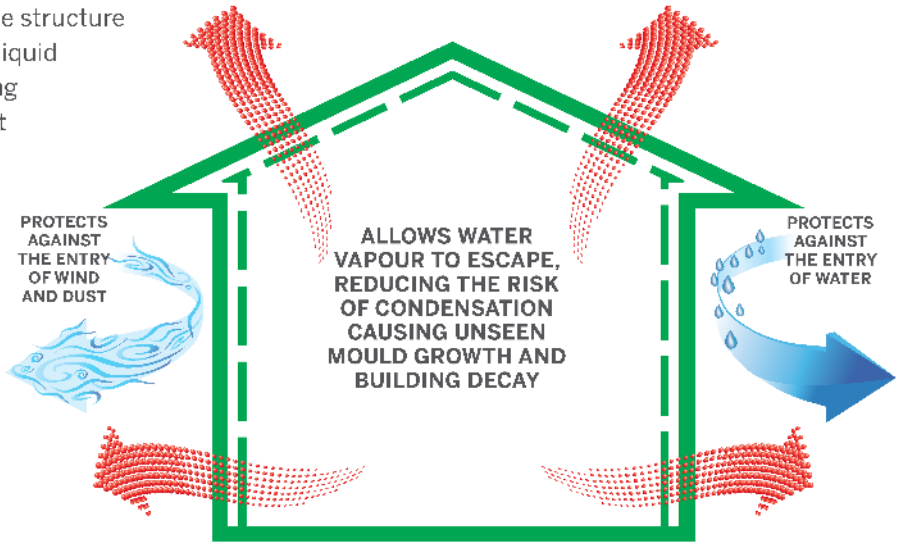
- **Health risks:** Unseen mould growth behind wall linings and external cladding can be a health risk to the occupants, particularly the young or elderly, or those with asthma.
- **Visual deterioration:** Deflection or staining of plasterboard linings as a result of moisture trapped behind the linings can cause ugly stains and swelling.
- **Structural decay:** Moisture trapped within the structure can result in long term corrosion of metal structures, timber rot, loosening of nails as timber swells, and cladding rot or swelling which can result in costly rectification work.
- **Energy efficiency:** A reduction in the buildings energy efficiency can occur due to moisture in the insulation, which can result in loss of thermal performance.

Swollen timber (right) unable to dry.

What's the solution for controlling condensation?

In order to control condensation, sources of water (both liquid and vapour) need to be controlled.

Inclusion of vapour permeable membranes into the building structure allow water vapour to pass through the structure whilst preventing the entry of wind driven rain (liquid water) from the outside environment both during and after construction. When positioned against the outside of the building frame as a wall wrap or roof sarking, these membranes reduce the risk of condensation forming inside the home and building structure.



KEY BENEFITS OF VAPOUR PERMEABLE MEMBRANES

- Reduces the risk of condensation formation by allowing water vapour to escape from inside the home
- Improves air tightness and energy efficiency
- Protects against the entry of wind-driven, rain and dust
- Reduces the risk of unseen mould growth

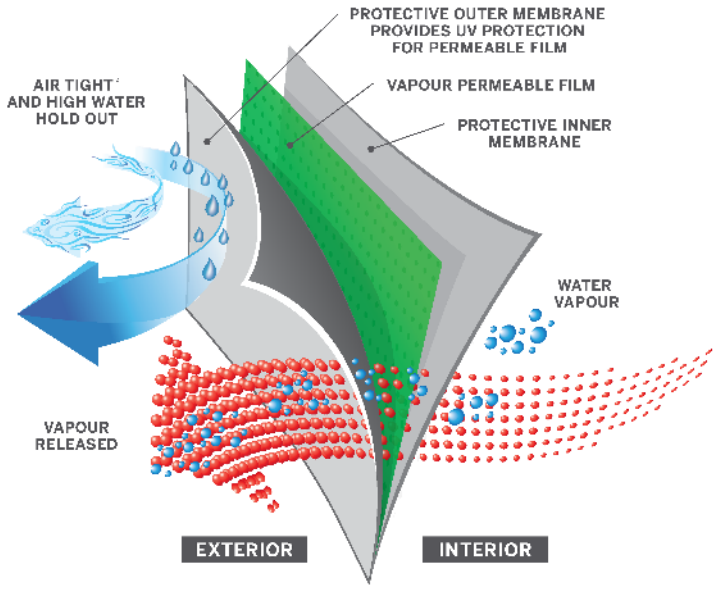
There's only one opportunity to install and that's during construction

Let your building breathe

ENVIROSEAL™ PROCTORWRAP™ VAPOUR PERMEABLE MEMBRANES

Unlike traditional foil or 'breather' products, the high water vapour permeability of the Bradford Enviroseal ProctorWrap range of vapour permeable membranes allow the escape of water vapour from within a building structure whilst preventing the entry of liquid water and dust from the outside environment.

Positioned on the external side of the building frame, with the cladding spaced from the membrane to allow a drying and drainage path for moisture, Enviroseal ProctorWrap membranes allow condensation to safely drain away from the building. These membranes provide superior permeability over perforated traditional 'breather' foils and meet the high water hold-out requirement for lightweight construction materials such as fibre cement sheet.



*In conjunction with sealed joins and penetrations.

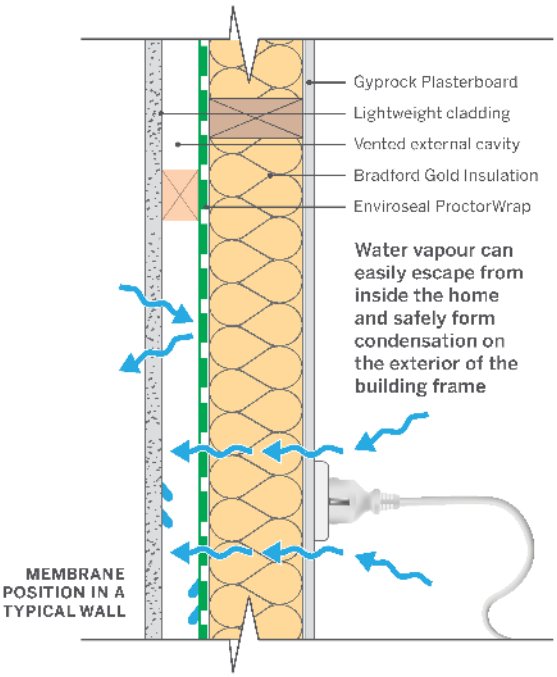
PROTECTION AND PERMEABILITY

Benefits during construction

- Protects the frame and roof structure from water damage and saturation prior to the application of external cladding.
- Wall wrap can improve on-site work flow efficiency by allowing some internal trades to commence work before the external cladding is applied.

Benefits after construction

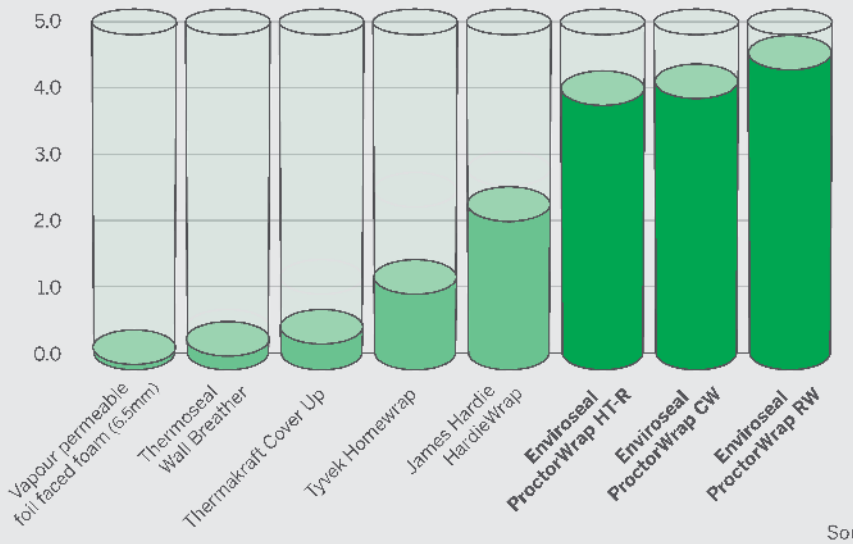
- Reduces the risk of unseen mould and moisture related issues compromising the health of the occupants.
- Improves air tightness which in turn improves energy efficiency, but still allows water vapour to escape without condensing on the inside of the building frame.
- Protects the interior of the building from dampness by allowing it to dry quickly which helps maintain the structural integrity of the home.



Permeability performance comparison

The higher the vapour permeability, the easier it is for moisture to pass through the membrane and escape to outside the home – as shown below the Enviroseal ProctorWrap range of membranes are highly permeable.

VAPOUR PERMEABILITY OF SARKINGS (µg/Ns)#



#In accordance with AS4200.1
Source: Manufacturer's published data sheets

ENVIROSEAL PROCTORWRAP PRODUCT RANGE

PRODUCT	DESCRIPTION	SIZE W(mm) x L(m)	PRODUCT CODE
Residential Wall (RW)	Light duty wall wrap ideal for most residential timber or steel framed wall construction. Available in 1.5m or 2.75m widths.	1500 x 50	118153
		2750 x 30	126365
Commercial Wall (CW)	Heavier weight construction wall wrap suitable for steel and timber framed commercial wall types.	1500 x 50	114175
High Tensile Roof (HTR)	Medium duty reinforced roof sarking suitable for residential or commercial tile or metal roofs.	1500 x 50	11445
Black Label (BL-IT)	High temperature, highly UV stable open joint rain screen facade membrane.	1500 x 50	106703
Plain Tape	Tape for fastening RW and CW overlaps	50 x 25	117685

More detailed application guidance for specific Bradford Enviroseal ProctorWrap products can be found at csrbradford.com.au.

Need to know more

CSR Bradford offer a range of technical services including thermal system analysis and condensation modelling for project or climate specific applications, as well as general product and project technical support.

For more information please contact CSR Bradford on **1300 850 305** or **bradfordenquiries@csr.com.au**

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Bradford™ for smarter environments

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