Our argument has no holes

And that means a *real* breathable building wrap

DuPont™ Tyvek® HomeWrap®

10

good reasons to specify or use Tyvek® HomeWrap®

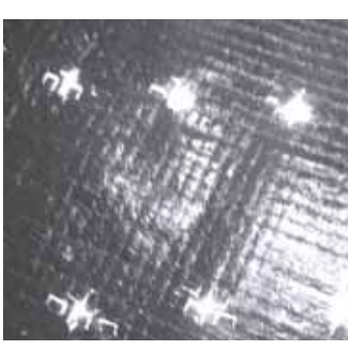
1. Unlike other commonly used building wraps, Tyvek® HomeWrap® is not perforated with holes that can reduce the effectiveness of the wrap.
2. The microfibrous, non-perforated structure of Tyvek® HomeWrap® allows walls to breathe while providing a highly effective water barrier.
3. Tyvek® HomeWrap® improves energy efficiency by protecting other insulation.
4. Tyvek® HomeWrap® is light and easy to handle while exhibiting high strength and durability characteristics.
5. 2743mm (9 foot) and 3048mm (10 foot) wide rolls allow for one pass around a building saving time and effort.
6. Tyvek® HomeWrap® satisfies James Hardie® vapour permeable membrane requirements to be an accepted breathable membrane behind James Hardie® external cladding
7. Tyvek® HomeWrap® is specified as the accepted building membrane in BORAL OutRWALL™ and BORAL FireClad® Wall systems.
8. Tyvek® HomeWrap® is specified by Tillings Timbers as an acceptable building membrane behind their range of Western Red Cedar Timber Cladding.
9. Tyvek® is a respected Global brand used in over 15 million buildings world wide.
10. Fully complies with Australian standards for flexible building membranes.

A building membrane with real breathability

An effective building wrap saves money in the long run and protects what is always a significant financial investment. A building membrane, installed under the outer cladding, should facilitate vapour permeability, allowing moisture to escape to aid in the prevention of mould and mildew. At the same time, it should form a protective skin against wind and rain to prevent costly water damage and provide a dry, comfortable, healthy and energy efficient living space.

TYVEK® HOMEWRAP® – THE HOLE STORY

The difference between Tyvek® HomeWrap® and other commonly used building membranes is the absence of punched holes and perforations which can result in water leakage through the wrap.



PERFORATED FOIL WRAP

PERFORATED FILM WRAP

TYVEK® HOMEWRAP®

The continuous microfibre web in Tyvek® HomeWrap® has microscopic pores, large enough for vapour to pass through, but small enough to resist air and liquid water penetration. Other membranes rely on mechanical perforations and/or film laminations, which means either holes too small to allow moisture to escape or too large, allowing bulk water in.

?

So, why choose Tyvek® HomeWrap®

BECAUSE IT WORKS

DuPont™ created Tyvek® HomeWrap® to provide a balance of properties for superior performance against the elements and optimal protection against the effects of weather and the ingress of moisture.
In simple terms this means letting the vapour out (breathability), resisting air infiltration and preventing water intrusion.

BECAUSE IT PROTECTS YOU

When it comes to the potential for future concerns about the integrity of the building and possible litigation, you can be confident that Tyvek® HomeWrap® provides the very best protection available.

BECAUSE IT IS EASY TO USE

Tyvek® HomeWrap® is lightweight, quick and easy to fix, yet extremely strong and durable. You'll be impressed with how convenient and effective it is to use as a building material and, of course, any time you save in wrapping and cladding is a major business and financial positive.

DuPont™ Tyvek® HomeWrap®

A more technical argument

Not entirely convinced?
The following, more detailed information may help you to make up your mind.

DEFINING THE DIFFERENCE

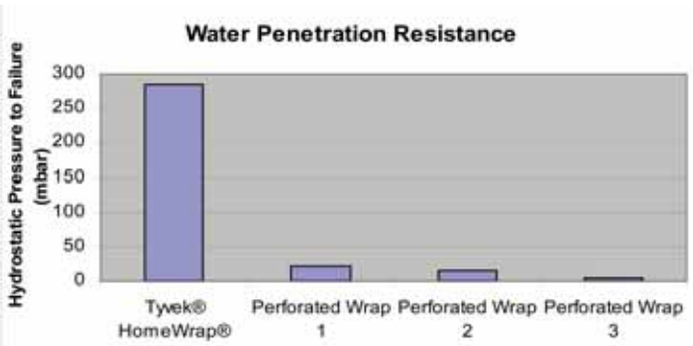
Perforated housewraps, which are marketed under various trade names, consist of two basic structures. Some are made from a coarse woven slit film backing. Because this backing is inherently poor at resisting air and water infiltration, it is coated with a thin fragile film layer. Others consist of a simple cross-laminated film structure with no backing material. The film portion of these products is strictly a vapour barrier, lacking the vapour permeability required in many modern wall systems. To try to meet specification requirements for vapour permeability, these products are “micro-perforated” or poked with thousands of holes. These perforations, or holes allow the product to pass or ‘breathe’ a small amount of moisture vapour, reducing the effectiveness of the housewrap to resist air and water penetration. When it comes to perforated housewraps, there is always a trade off between air resistance, water resistance and moisture vapour permeability.

DISCOVER THE TYVEK® HOMEWRAP® ADVANTAGE

DuPont™ Tyvek® HomeWrap® is a non-woven, non-perforated sheet made by spinning extremely fine continuous high-density polyethylene (HDPE) fibres that are fused together to form a strong uniform web. DuPont™ Tyvek® HomeWrap® is a unique brand and the only product manufactured this way. This tough, durable and unique structure is not susceptible to the compromises of a perforated material. The fibrous structure is engineered to create millions of extremely small pores that resist bulk water and air penetration while allowing moisture vapour to pass through. DuPont™ Tyvek® HomeWrap® achieves the ultimate balance of weather resistance and vapour permeability.

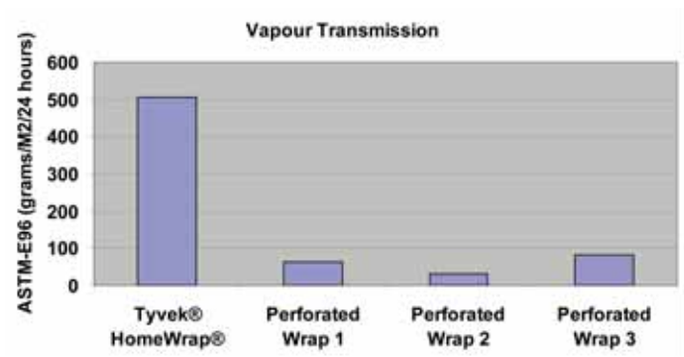
PROTECTING YOUR WORKMANSHIP AND REPUTATION

The building industry can face litigation for moisture related issues from a failure to design and build forgiving wall systems that can manage incidental moisture that enters a wall cavity. High bulk water resistance and high drying potential are key components of creating a well-built and forgiving wall system. DuPont™ Tyvek® HomeWrap® has a much higher resistance to bulk water penetration than perforated housewraps, helping to reduce the damaging effects of moisture build-up and protecting the integrity of your work;



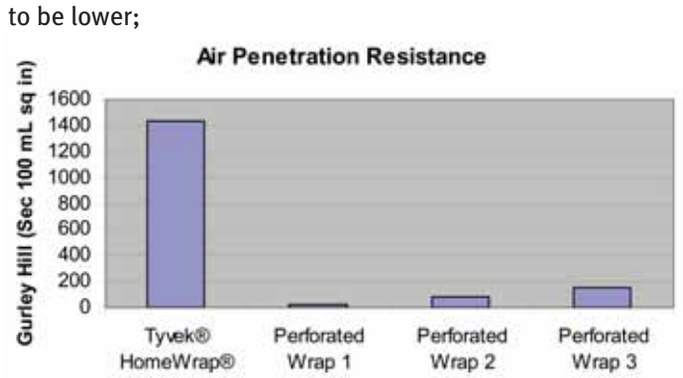
The ability of a housewrap to hold our bulk water is one of the most basic and important requirements of any weather resistant barrier. DuPont Tyvek® HomeWrap® has over 13 x Greater water holdout than perforated housewraps, as tested in accordance with the Hydrostatic Head Test (AATCC-127). Tyvek® HomeWrap® passed the high duty water holdout requirements ASNZ 4201.4

A wall wrap should have a high perm rating, so that the natural ability of a wall system to dry out is not impeded. The Moisture Vapour Transmission Rate (MVTR) of Tyvek® HomeWrap® is approximately 5 x greater than that of perforated housewraps (Figure 2). The punched holes only allow the perforated products to transmit moisture vapour in the locations of the holes while the rest of the surface area remains a vapour barrier. The increase moisture vapour permeability of Tyvek® HomeWrap® helps reduce wall cavity drying times, which decreases the potential for rot and harmful mould growth;



Not only do perforated housewraps allow moisture to pass through, they also slow the drying process, because the product can only breathe at these specific locations. Tyvek® HomeWrap® has a high vapour transmission rate, as measured under ASNZS 4200.1 Tyvek® HomeWrap® has very low vapour barrier properties.

Another basic function of a housewrap is to help insulation maintain its R-Value by keeping air from infiltrating the wall system. The ability of a weather resistant barrier in helping to prevent air infiltration directly relates to the energy costs of heating and cooling a home. Tyvek® HomeWrap® has much better air resistance than perforated housewraps, allowing insulation to maintain its effectiveness and energy costs to be lower;



Tyvek® HomeWrap® has higher air resistance than perforated housewraps.

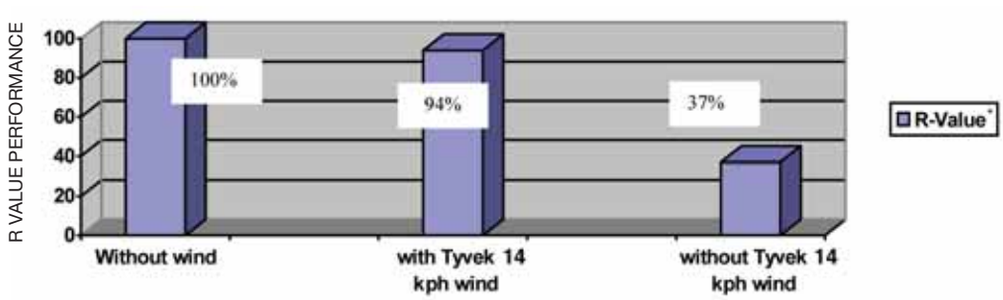
Simply put, it is easy to understand the performance differences between Tyvek® HomeWrap® and perforated housewraps. Tyvek HomeWrap® provides builders with an easy solution to protecting the buildings they construct from the harmful effects of the elements. This is why thousands of builders world wide choose to use Tyvek® HomeWrap® over any other product.

What can DuPont™ Tyvek® HomeWrap® do for you?

INCREASED BUILDING DURABILITY: Installing DuPont™ Tyvek® HomeWrap® at the start of construction helps protect building materials from water penetration by keeping bulk water out and allowing smaller water vapour molecules to pass through. Decreasing exposure to the elements helps prevent the formation of mould and helps protect the structure from corrosion.

BETTER ENERGY PERFORMANCE: Studies have shown that air leakage accounts for between 25% and 40% of the energy used for heating and cooling a typical residence. Many air leaks cannot be properly sealed after drywall is installed. DuPont™ Tyvek® HomeWrap® helps control the air coming into the building to preserve the R-Value of walls. A home wrapped in a DuPont™ Tyvek® HomeWrap® will maintain 94% of its installed R-Value, compared to only 37% for a home without Tyvek® HomeWrap®.

Insulation can lose up to 63% of its installed R-value without using Dupont™ Tyvek® HomeWrap®.



R-VALUES AND TYVEK® HOMEWRAP®

As Tyvek® HomeWrap® is not a thermal insulation material by itself but is used as an adjunct to insulation it complies with the requirements of the BCA by meeting the requirements of AS/NZS 4200.1 for pliable building membranes.

Tyvek® HomeWrap® performs four useful functions in a wall system allowing for a more forgiving wall system.

A) It helps maintain the efficiency of other insulation materials by keeping it dry and in situ

B) It acts as a secondary weather resistant skin

C) It allows any moisture that may ingress through the cladding or primary exterior to breathe out

D) It stops the ingress of air movement through a wall

When Tyvek® HomeWrap® is combined with R1.5 bulk insulation in a standard brick veneer wall, an R-value of 2.3 can be achieved.

When Tyvek® HomeWrap® and R2.0 bulk insulation is installed behind James Hardie external cladding, a total R-Value of over 2.2 can be achieved. For further details visit **www.JamesHardie.com.au** and refer to James Hardie Wall System Thermal Performance Total R-Value “Technical Supplement”.

When Tyvek® HomeWrap®s combined with Wren Industries Concertina Foil Batts™ in a standard brick veneer wall, an R-Value of 2.3 can be achieved.

Tyvek® HomeWrap® should be installed in accordance with AS/NZ4200.2.

DuPont™ Tyvek® HomeWrap®

Roll Length	Roll Width	Area Cover	Weight
30m 30m	2743mm 3048mm	82m² 91.4m²	5kg 5.6kg

PROPERTY DESCRIPTION	TEST METHOD	SPECIFICATION REQUIREMENT	AWTA TEST RESULT
Tensile Strength	AS1301.448	Machine Direction Duty – Heavy 12.5 Medium 9.5 Light 7.5 Extra Light 6.0 Lateral Direction Duty – Heavy 7.5 Medium 6.0 Light 4.5 Extra Light 3.5	4.6 KN/m 5.2 KN/m
Edge Tear Resistance	TAPPI T470	Machine & Lateral Direction Duty – Extra Heavy 90 Heavy 80 Medium 65 Light 45 Extra Light 30	(MD) 225N (LD) 216N
Bursting Strength	AS2001.2.19	Light Duty 200N	225N
Vapour Barrier	ASTM E96	High Duty ‹0.00µg/N.s Medium 0.002 - 0.014µg/N.s Low Duty ›0.1400µg/N.s Unclassified	1.8mg/N.S.
Water Barrier	AS1736 (AS/NZS 4201.4)	High Duty Shall Pass	PASS
Absorbency	AS/NZS 4201.1	High Duty ›100/m²	33g/m²
Dry Delamination	AS/NZS 4201.1	Shall Pass	PASS
Wet Delamination	AS/NZS 4201.2	Shall Pass	PASS
Folding Endurance**	AS1301.423	Machine Direction 72.0 (log 100) Machine Direction 71.7 (log 50)	›2.0 (log 100) ›2.0 (log 100)
Shrinkage	AS1736 (AS/NZS 4201.3)	Not greater than 0.5%	+0.3%
Flammability Index	AS1530.2	Not greater than 5	3
Emittance*	ASTM E408 (AS/NZS 4201.5)	Reflective ‹0.05 Classification value 0.06 - 0.99 Non-reflective 1.00	0.51

* Test conducted by University of WA – Dept of Mech and Materials Engineering ** Test conducted by CSIRO Division of Forestry and Forest Products

TYVEK® HOMEWRAP® – THE REAL BREATHABLE BUILDING MEMBRANE

FOR INFORMATION ON A DISTRIBUTOR IN AUSTRALIA, TELEPHONE DUPONT AUSTRALIA LTD ON (02) 9923 6111
OR IN NEW ZEALAND CALL DUPONT NEW ZEALAND ON (09) 268 5532

Tyvek® HomeWrap® passes AS/NZS 4200 Standard for Pliable Building Membranes. Tyvek® HomeWrap® should not be used under roofs. Due to the lightness of the product wind may cause excessive flapping and noise. Tyvek® is not a vapour barrier. All weather guarantees: DuPont will replace any Tyvek® wall membrane (not labour) that is torn off a wall due to normal weather conditions, provided: Tyvek® has been fixed securely to frame using Teco foil fasteners (or equivalent) every 600mm horizontally and every 800mm vertically, or by using staples and strapping every 600mm. Winds do not exceed 120kph. Tyvek® is enclosed with external cladding within 2 months.
® DuPont registered trademark. ™ DuPont trademark A.C.N. 000716-469. *All testing conducted by independent laboratory on commercially available rolls of DuPont™ Tyvek® HomeWrap® and perforated wraps.

DUPONT®

The miracles of science™