

Don't risk your roof with anything that won't stand the test of time !

In the end, the Tyvek® UV and heat resistance makes the difference.

**The superior durability of DuPont™ Tyvek® is proven**

- Watertightness year after year
  - Unique UV and heat resistance which other tested breathable membranes cannot guarantee (\*)
  - Tyvek®, with its unique polyethylene functional layer, is the trouble-free, future-proof solution.
- (\*) Independent laboratory tests conducted



If you would like to know more about the long-lasting qualities of Tyvek®, visit our recently redesigned web site [www.tyvek.co.uk](http://www.tyvek.co.uk)

Make a watertight decision and stay smart with Tyvek®

In Europe and the Middle East, Tyvek® has more than **20 years of experience** in the construction fields, is marketed in more than **35 countries** and installed on **more than 5.5 millions buildings**.

Recommendations as to methods, use of materials and construction details are based on the experience and current knowledge of DuPont and are given in good faith as a general guide to designers, contractors and manufacturers. This information is not intended to substitute for any testings you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in actual end-use conditions, DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a licence to operate under a recommendation to infringe any patent right.

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# Your home deserves a lifetime of protection

## An underlay serves a vital secondary water shedding function

Its functions need to be preserved for the lifetime of structure in which it is installed.

An underlay must :

- Ensure the absolute watertightness of the roof and wall
- Protect the insulation thus promoting energy efficiency
- Manage humidity for a healthy indoor climate for many years

## What are the risks when your underlay fails?



Building structure degradation: mould and mildew.



Indoor water damages



Insulation inefficiency

Whether supplied as a composite or single layer product, it is only the functional layer of a membrane which takes care of windproofing, vapour breathability and **watertightness**.

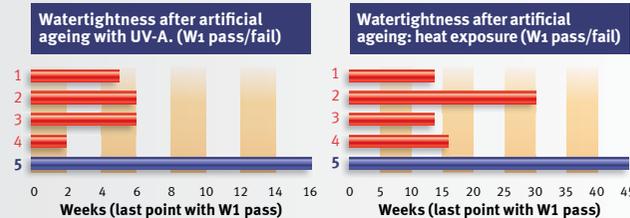
## The superior durability of DuPont™ Tyvek® is proven

The main factors impairing the effectiveness of underlays are exposure to UV radiation during the construction process and the temperature experienced by the membrane over the building lifetime.

### Not all underlays are what they seem to be

Independent product ageing tests for UV and heat resistance have demonstrated the significantly superior durability of DuPont™ Tyvek® compared to the tested multi-layer products.

### Roof breather underlays – Independent tests results (SP reports 2010)



2 weeks artificial ageing period = equivalent to CE marking EN 13859 UV ageing period = 55 MJ/m² UVA = one month free UV exposure in August in Spain

Products placed in oven at 90°C to validate extreme resistance. (CE marking EN 13859 requires W1 after 90 days (3 months) at only 70°C)

- 1: 140g/m² - multi-layer PP
- 2: 122g/m² - multi-layer PP
- 3: 140g/m² - multi-layer Polyolefin
- 4: 145g/m² - multi-layer Polyolefin
- 5: Tyvek® Supro 145g/m² HD-PE & PP

### Where others crack, Tyvek® persists



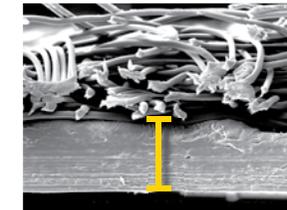
Some tested roof membranes crack quickly after exposure to UV and lose their watertightness. Microscopic pictures — scale 100x

However resistant to tearing or elongation during installation a product may be, it may take only a few weeks for the key functionality of watertightness to be degraded.

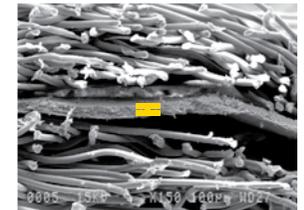
## What makes Tyvek® so special?

### 1. Tyvek® offers a unique thickness and quality of the functional layer

DuPont™ Tyvek® offers a functional layer which is ca. 6 to 8 times thicker than most common multi-layer products. Most common multi-layer underlays are composed of a very thin functional layer (ca. 3 times thinner than a human hair) laminated between external protective layers.



Tyvek® Supro functional layer : 175 microns



Standard multi-layer underlay functional layer: 30 microns

### 2. Tyvek® has a unique structure

Tyvek® is composed of millions of microfibres that create a “maze” which guarantees a proper and homogeneous spread of UV and heat additives to offer superior durability throughout the product thickness.

### 3. Tyvek® has a proven resistance to UV and to heat

Most multi-layer underlays are made of PP (polypropylene) which is naturally more sensitive to UV than PE (polyethylene). The Tyvek® functional layer is made of 100% high UV and heat stabilized PE.

### 4. Tyvek® membranes resist temperatures of up to 100°C

At times, temperatures on top of insulation may exceed 80°C. Temperature highly degrades the functionality of underlays.

### 5. Made by DuPont – a guarantee of quality

The success of Tyvek® results from a unique manufacturing process using flash-spunbond technology – and over 20 years of experience in the underlay market from a company renowned for pioneering innovation and a commitment to quality and ethical practice.