



MEMBRANE SPECIFICATION

Colour:
Green

Weight:
185 g/m²

Dimensions:
Roll size: 1 m x 50m

How “Breathable” is Roofshield?

While “Breathability” is a commonly used term, it is more technically accurate to refer to a materials “vapour permeability”. As Roofshield is air permeable as well as vapour permeable, it can certainly be argued that it does breathe, as it allows air movement, but this does not hold true for all “breathable” materials. In terms of vapour permeability, Roofshield, with a vapour resistance of 0.065MNs/g (Sd-value 0.013m) is one of the most vapour permeable membranes on the market, as well as benefitting from the additional advantage of air permeability.

What difference does air permeability make?

Roofshield, in addition to having one of the lowest vapour resistance available, is also air permeable. Industry research concluded that air permeability, combined with very low vapour resistance, inhibits the formation of condensation in a pitched roof to the point where it’s virtually impossible for condensation to occur under normal conditions.

Studies conducted by the BRE and Glasgow Caledonian University have concluded that not only does an air permeable roofing underlay outperform conventional airtight underlays, but may provide a higher air change rate than a roof ventilated according to the recommendations in BS5250.

Does Roofshield suffer from “tenting”?

As anyone who’s slept in a cheap tent can tell you, some vapour permeable fabrics can lose their water resistance if anything happens to touch the underside. Developed in Scotland, where the use of underlays fully supported on timber sarking board is standard practice, ensuring Roofshield does not suffer from this

effect was always an important consideration for the A. Proctor Group. In fact while the first generation of VPU’s suffered from this problem, most modern roof underlays are unaffected by this phenomenon.

So vents aren’t required?

Over the course more than a 20-year lifespan, Roofshield has undergone extensive testing to prove that ventilation is not required to the underside of the underlay in both warm and cold roof applications, and is BBA and NSAI certified to that effect. Roof features successfully assessed include duo-pitched, mono-pitched, hipped, mansard, gable-end, valleys, room in the roof, dormers and timber sarking. In more complex roof configurations, the use of Roofshield will provide a far more robust solution than a complex layout of ventilation openings.

The sole remaining situation where ventilation to the roofspace is required is in a cold roof with Plywood or OSB sarking. If in doubt, our team of technical experts can assist specifiers in achieving the most appropriate solution for their specific project.

How about high level vents?

Although non-ventilated roofs have been specified successfully for many years, recently BS5250, the NHBC technical standards and NFRC Technical Bulletin 6 have recommended that ridge only ventilation equivalent to 5mm per metre is used when vapour permeable underlays are specified. In both cases, the exception to this is where the underlay specified is both vapour AND air permeable. As Roofshield meets this requirement, this additional high level ventilation is not required when using Roofshield.

Does Roofshield “chatter” in the wind?

Wind blowing up into the eaves of a roof can cause a ‘chatter’ type noise with some types of underlay. Roofshield is silent in such situations. As Roofshield does not suffer from this problem, the membrane does not have to be pulled taut and does not have any special fixing instructions compared to that of some underlays. Counterbattens can be provided to increase the air movement when used with close-fitting slates or tiles, or to provide drainage below the tile battens when used fully supported, but otherwise Roofshield may simply be draped between the rafters as normal.

Can I use Roofshield with timber treatments?

Timber treatments containing fungicides, insecticides and wood preservatives are extensively used in the building trade to protect rafters, sarking boards and tile battens. As such, a number of tests have been carried out to see if these timber treatments will affect the water hold out properties of Roofshield.

Four timber treatments were investigated - two water based micro-emulsions, a solvent-based treatment, and a CCA. Treatments were applied to the fabric and allowed to dry, then the water resistance of the material was tested. The water resistance of the Roofshield was not affected by these timber treatments.

What is the “drying out period”?

This is the period immediately after the building is completed, during which, there are significantly higher amounts of moisture within the building. These include moisture in damp timber, from wet trades (concrete, plaster etc) and moisture that may have found its way in, prior to the building shell being wind and watertight. Although this moisture will eventually dry out, condensation is more likely to occur as it does so. This will usually be most apparent in the first winter when the building is heated. Roofshield roofs are far less prone to this effect.

Is Roofshield expensive?

In terms of the cost per roll, Roofshield is more expensive than a traditional non-breathable felt, however if we consider the costs associated with ventilation hardware then using Roofshield will save you money. Independent assessments carried out by Hardies Property and Construction Consultants of installed costs have shown that Roofshield can offer savings of between 4% and 6% when compared with either impermeable felt and full ventilation, or a lower specification VPU with high level ventilation only. The full cost report is available for download at www.proctorgroup.com.

What about severe weather conditions?

Although Roofshield is highly water resistant, the BBA, in its Site Practice Bulletin Number 2, states: “An underlay is not a total waterproof barrier and if used as a temporary waterproof covering, some rain penetration may occur. In certain conditions, particularly if there is persistent heavy rainfall combined with subsequent severe freeze/thaw conditions, an underlay should

not be exposed for more than a few days.” If such conditions are expected, the temporary use of a tarpaulin covering is recommended.

Where can Roofshield be used under BS5534:2014 + A2:2018

Roofshield can be used in all zones 1 - 5.

What accessories are required to comply?

Most importantly Roofshield Does Not Require Taping to Comply!

No extra considerations need to be made when using Roofshield in Zones 1-3 – installation is as usual.

If the building is in Zone 4 or 5, with sarking board use, with slates fixed directly through, then install as usual.

If the building is in Zone 4 or 5, and there is an open rafter construction, then a minimum 11mm counter batten fixed over Roofshield is required.

Underlay Overlaps – battened, taped or increased?

There are a number of manufacturers view points and arguments regarding the correct detailing of membrane overlaps. BS5534:2014 states the following.

“Unless counter battens are used, underlay laps should be covered by a batten and, where necessary, the lap of the underlay adjusted to coincide with the nearest slating or tiling batten. Laps may also be restrained using proprietary means in accordance with manufacturers’ instructions (see also 5.9.3.2). Where a proprietary sealant is used, its durability should meet the same recommendations as the underlay.”

It has always been good practice to lay out the membrane so the lap falls below a tile batten. If this is not possible, due to the tile gauge, then either the lap should be increased to ensure it is below a batten or an additional batten should be used between the tile batten gauge spacing.



TECHNICAL ADVICE

The A. Proctor Group has a dedicated Technical Department which can help with installation details, view drawings for approval and give specialist advice on the correct use of the A. Proctor Group products.

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The use of this additional batten, a “fly batten”, is deemed by most roofers to be a trip hazard and as such we have always recommended this is not done and that the lap is increased. This is based on a fundamental health and safety precaution.

What is a fly batten – as referenced by some of our competitors?

As regional slang for building components varies a fly batten may mean a different thing to different people. Some of the possible descriptions include counter batten, batten to membrane overlap or a temporary batten, often used when you need to get the underlay on quickly to protect the insides of the building (also referred to as strap battening). This practice can also come in useful when the roof is going to have counter battens ‘on-top’ of the underlay instead of, or as well as underneath, because you can get all the underlay on and then install full length counter battens, rather than small sections.

There may be other terms for this therefore the use of fly batten as a term could be/is confusing to the market. Our use of an 11mm counter batten, and not an additional batten at the overlap, is clear and transparent.

Do the wind zones cover all eventualities?

NO - the table small print says it is only applicable where there is a well-sealed ceiling, ridge height is not greater than 15m, pitch is between 12.5 and 70 degrees and there is no significant topography present. For areas outwith this you may need a stronger membrane or have to seek professional advice.

Does that mean you will need to install a VCL to ensure you have a well sealed ceiling?

No, BS 9250 (the Code of Practice for Design for the Airtightness of Ceilings in Pitched Roofs) discusses how to achieve a well-sealed ceiling. It does not stipulate that you must use a VCL (although it shows it as an example as it does showing the plasterboard being used as an air tight layer) to achieve a well-sealed ceiling. Indeed it focusses more on detailing and

workmanship. The following are extracts from the relevant British Standards-

BS5250 Defines a well-sealed ceiling as:

3.37 well-sealed ceiling

ceiling incorporating seals which prevent the transfer of warm, moist air into the loft or roof space in accordance with the recommendations of BS9250

BS9250 gives this definition:

3.7 well-sealed ceiling

ceiling that satisfies the following criteria:

- a. The design avoids constructional gaps, especially at the wall/ceiling junction and holes in the ceiling.
- b. No access door or hatch should be located in rooms where large amounts of moisture are produced, including kitchens or bathrooms.
- c. The air leakage rate through an access hatch, including its frame, when tested to BS EN 13141-1:2004 4.3 is less than 1 m³/h at a pressure difference of 2 Pa.
- d. Penetrations, such as those for services and rooflights, are permanently sealed with suitable proprietary products.
- e. The ceiling is sealed to the external walls to limit any leakage through cracks.
- f. The total leakage through all recessed light fittings should not exceed 0.06 m³/h•m² of ceiling at 2 Pa pressure difference across the ceiling.
- g. The head of any cavity in any wall or partition should be sealed to prevent transfer of warm moist air into the loft [Based on BS 5250]

Does the BBA certificate still say no VCL required?

Yes and the existing benefits of Roofshield remain the same.

