PERMAVENT GRAPHITE

High Performance Vapour Permeable Membrane

TECHNICAL DATA

Permavent Vapour Permeable underlays are suitable for use in all applications as described in BS 5250 and BS 5534.

For use on all types of domestic and commercial roofing and walling applications, including:

- ✓ TRADITIONAL COLD & WARM ROOF
- ✓ HYBRID ROOF
- ✓ SCOTTISH PRACTICE/ BOARDED APPLICATIONS
- ✓ SUITABLE FOR USE WITH ALL TYPES OF SOLAR PANELS

Weight, g/m²	130
Water tightness, class	w1
Water vapour transmission (sd), m	0.02
Maximum tensile force (MD), N/50mm	245
Maximum tensile force (CD), N/50mm	175
Elongation at max. tensile force (MD), %	50
Elongation at max. tensile force (CD), %	60
Resistance to tearing MD (nail shank), N	130
Resistance to tearing CD (nail shank), N	140
UV Stability, months	3

UK Wind Zones

1-5 taped lap

1-3 battened lap

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 22/6112

UK CA CE

For installation guides on all our products, please visit our website

PERMAVENT.CO.UK

A: 11 Cumberland Drive, Granby Industrial Estate, Weymouth, Dorset, DT4 9TB

T: +44 (0) 1305 766 703 **E:** enquiries@permavent.co.uk

5 060747 291562

Permavent breathable membranes must be installed in accordance with BS5534:2014+A2:2018 Code of Practice. The installer must ensure compliance with the relevant building regulations.

Our membranes are designed as a secondary barrier to wind driven rain / snow and should not be considered a primary waterproofing layer. Whilst they can withstand UV exposure for up to 3 months, it is best practice to install the primary waterproofing finish (e.g. slates, tiles etc) as soon as possible.

Permavent membranes must be installed the correct way up, with the Permavent logo printed side uppermost.

For tile and slate roof applications the membrane should be laid horizontally across the rafters starting at the eaves and securing with either batten or membrane tape at the laps.

The minimum horizontal laps for membranes, in accordance to BS5534:2014+A2:2018 Code of Practice, are:

Rafter Pitch	Not Fully Supported	Fully Supported
12.5˚ - 15˚	225mm	150mm
>15˚	150mm	100mm

Permavent GRAPHITE membrane can be installed with 100mm lap with integrated tape.

An eaves carrier tray (EPS) should always be installed to support the underlay at eaves level.

At abutments Permavent membranes should be turned up the abutment by not less than 50 mm under the flashings.

Vent pipes, roof lights and apertures on the roof should be sealed with tape and any nail tears or damage must be repaired.

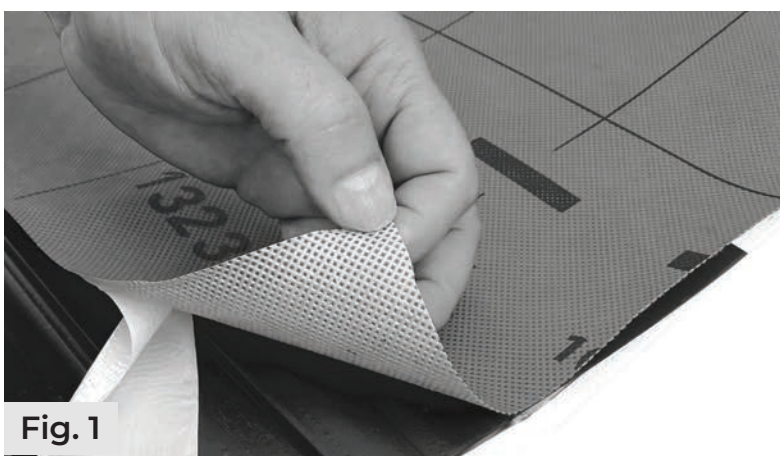


Fig. 1

Cold roof installation

Place an eaves carrier tray over a fascia ensuring that each carrier laps the next one by at least 100mm and sealed together using tape/sealant.

Permavent GRAPHITE should laid over an eaves carrier tray.

Unroll Permavent GRAPHITE along the line of the eaves with the bottom of the roll covering the eaves carrier tray level to the top of the fascia.

When in position, peel back the protective film off the integrated tape of GRAPHITE and secure to the eaves tray (Fig. 1).

When installed over the rafters the membrane should have a drape to maximum of 15mm to allow sufficient drainage beneath the roof batten (Fig. 2).

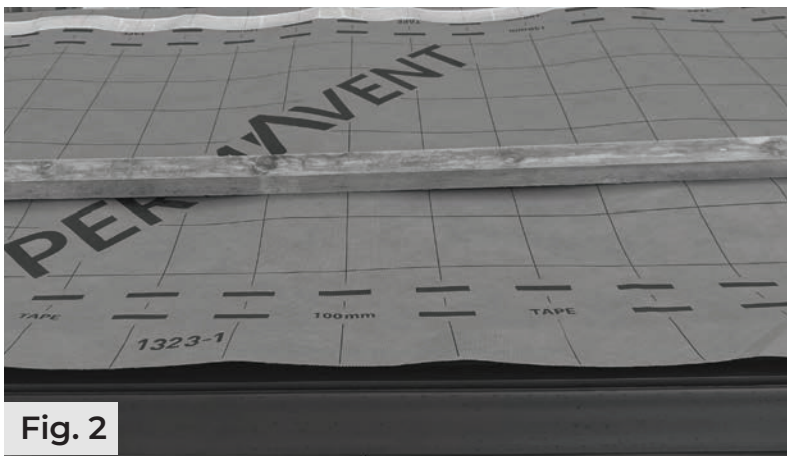


Fig. 2

Clout nail the very top of the membrane and fix the battens at your required spacing.

Lap the next course of the membrane along the printed line (Fig. 3), and securing all horizontal laps with the integrated tape (Fig. 4).

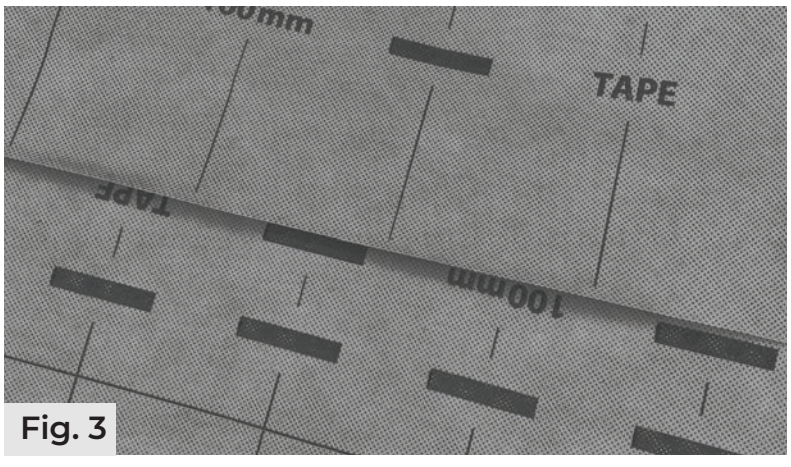


Fig. 3

Repeat the process up the roof as necessary.

Detail installation:

Valley section: a strip of membrane at least 600mm wide should now be installed up any valley section. any valley section.

Ridge section: Permavent GRAPHITE membrane should overlap both sides of the roof ridge by a minimum of 150mm on each side.

In accordance with Building Regulations, the dwelling below the roof space must be ventilated. Extractor fans should be installed in spaces of high humidity, cold water tanks covered when in loft spaces and all pipework lagged. Any penetrations into the loft space must be sealed, alongside sealed loft hatches.

Warm roof installation

Install an eaves carrier tray and Permavent GRAPHITE as you would on a cold roof application.

For insulation between the rafters, the insulation should be 25mm below the line of the top of the rafter to allow for the 15mm maximum drape of the membrane.

If the insulation is flush or on top of the rafter, then a counter batten of no less than 10mm must be installed on top of the rafters. This counter batten will allow a drainage channel so any rain or moisture to run under the normal roofing battens and in to the gutter.

On a warm roof construction it is advisable for an AVCL to be installed on the warm side of the insulation.

If tight fitting primary roof coverings are being used the roof will need 25mm counter battens and the batten cavity will need ventilating in line with BS5250:2021 with 25mm continuous eaves ventilation and countinuous 5mm high level ventilation.

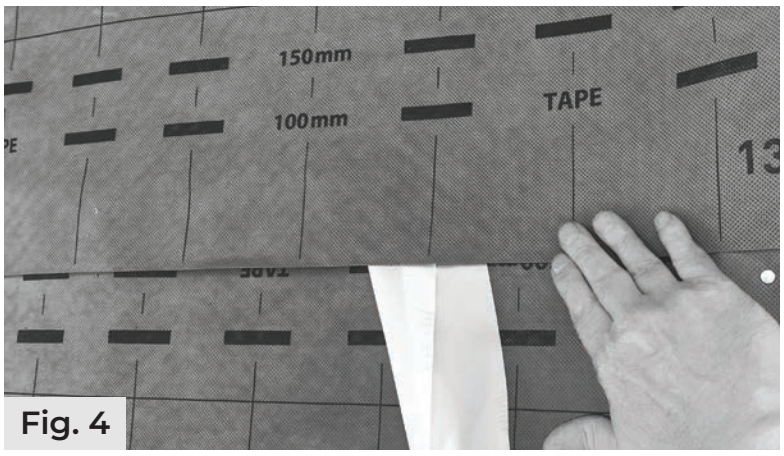
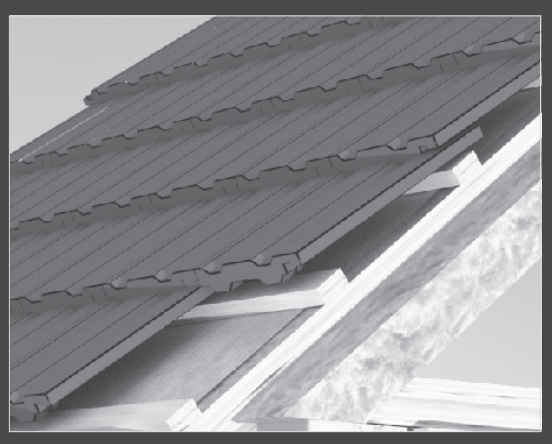


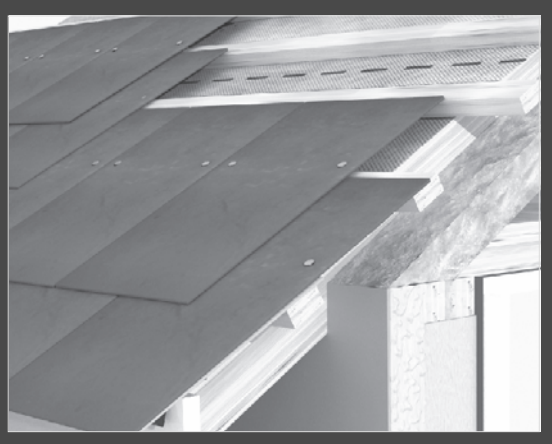
Fig. 4

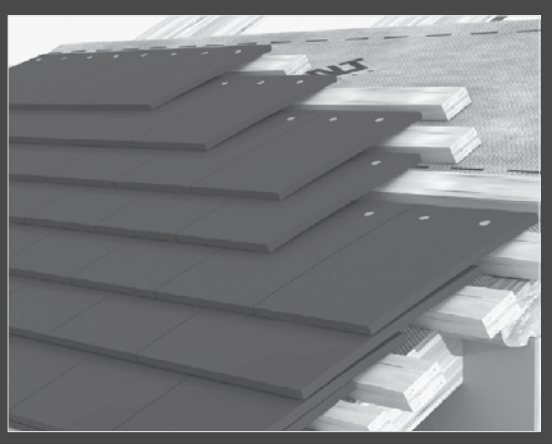
Specification Clause

Vapour Permeable underlay to be Permavent GRAPHITE supplied by Permavent Ltd 11 Cumberland Drive, Granby Industrial Estate, Weymouth, Dorset DT4 9TB. Email: enquiries@permavent.co.uk. Underlay to be of triple ply construction, 130gsm with waterproof and vapour-permeable core laminated and protected between two layers of non-woven spun-bonded polypropylene to achieve a hydrostatic head of water more than >2.0m. Tensile strength to be equal or greater than MD N/50mm: 245, CD N/50mm: 175 Resistance to wind uplift: unrestricted use at 345mm batten gauge zones 1- 5 when taped. Underlay to be laid unsupported or fully supported in accordance with BS5534:2014+A2:2018 and to manufacturer's instructions.


Conventional cold vented roof


Habitable room (hybrid)


Warm deck roof


Conventional non-vented roof