

# VapR-free<sup>eco plus</sup>

**High Performance Breathable  
Pitched Roof Underlay**



## Quality Assurance

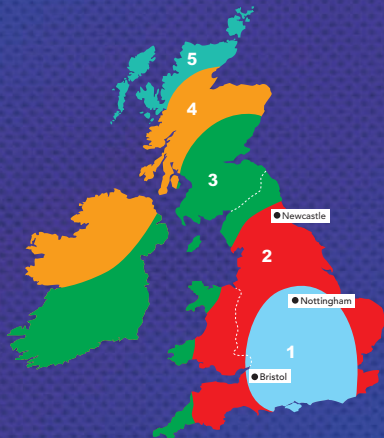
**BS5534: Anex A  
Wind Uplift Resistance**

*VapR-free eco plus has been approved by the BRE for use in:-*

**Zones: 1-3 with Battened lap**

**Zones: 1-5 with Taped lap**

**Zones: 1-5 with Integral Taped Lap**



**VapR-free eco plus** is a multi layer laminate film composite made of polyolefin materials, resulting in a pitched roof underlay that has high vapour permeability but is also highly water resistant.

**VapR-free eco plus** can be installed without the need for roof space ventilation, and is suitable for both Commercial and Domestic buildings, it is the ideal roof underlay for Warm and Cold Pitched Roofs.

Manufactured without the use of CFC's **VapR-free eco plus** is 100% recyclable and is very durable with high tensile and nail tear strength properties. These, coupled with excellent UV and heat stability properties ensure a life-span in excess of 30 years.

**VapR-free eco plus** membrane has received BBA Approval and complies with BS5534: 2014 Code of Practice for slating and tiling for pitched roofs.

Recommendations for the use of vapour permeable membranes in pitched roofs are contained in BS 5250 : 2002 'Code of practice for control of condensation in buildings'.



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## Installation Guide

### Non-Ventilated Cold Pitched Roofs (partially supported)

**VapR-free eco plus** when installed as a partially supported system should be fixed in the traditional method for roof tile underlays laid parallel to the eaves and draped between the rafters to ensure that any moisture reaching the underlay will drain away. It is held in place by the tile battens, fixed using staples or large headed nails. **VapR-free eco plus** can also be installed by pulling taut from gable to gable providing a 25mm counter batten is fixed to each rafter.

### Prevention of Condensation

The complete roof construction, ceiling boards, underlay, insulation and roof tiles should be considered as a total roof system with regard to condensation risk. Insulation at ceiling level should be pressed tightly into the eaves against the underlay and all penetrations into, and out of, the roof space should be sealed. More extensive details of this can be found in our BBA certificate Section 5.

### Non-Ventilated Warm Pitched Roofs (fully supported)

**VapR-free eco plus** when fully supported by the insulation can be laid vertically or parallel to the eaves and held in place using counter battens (minimum height 25mm). These in conjunction with 25 mm tile battens will ensure a minimum 50 mm clear airway above the underlay and will assist natural air movement through the batten space. Battens should be fixed using staples or large headed nails.

### Roof Space Ventilation

The **NHBC** require that for all New Build Homes, ridge or high level ventilation is installed when a vapour permeable membrane such as **VapR-free eco plus** is used. Roof Space Ventilation is not required for other warm or cold pitch roofs but ridge or high level ventilation for tight fitting tiles and slates will assist any moisture vapour to disperse more easily when air temperatures are very low.

**Eaves:** Mercury Building Products strongly recommend the use of VapR-free Underlay Support Trays in both open and closed eave construction.

### General

**VapR-free eco plus** must be installed with the **green printed side**, face-up and overlapped with the minimum dimensions listed. Trimming is achieved with a sharp knife. When partially supported with a horizontal lap between battens an extra batten should be introduced 25mm above the bottom edge. This will restrain the lap from opening under wind uplift.

**VapR-free eco plus** prevents the ingress of wind driven rain and can be used as a temporary roof covering and left exposed to the elements. However it must be installed as recommended in our technical leaflet with regards to overlaps, fixings, draped between rafters or counter-battened and direct contact with uncured treated timber avoided.

**Packaging and Storage:** **VapR-free eco plus** is wrapped in polythene and delivered on a pallet. Individual rolls should be stored on their sides on a clean, dry, flat surface and protected from direct sunlight.

## Technical Data

Property	Units	Value
Weight	g/m <sup>2</sup>	132
Water Vapour Resistance	Sd (M)	c.0.02
	MN/sg	0.18
Water Vapour Transmission	g/m <sup>2</sup> /24 hr	1112
Fire Rating	-	EN13501-1
Exposure Times UV Degradation	-	3 months

## Product Data

Roll Width (linear metres)	1.5	1.0
Roll Length "	50	50
Coverage/roll/m <sup>2</sup>	75	50
Roll weight/kgs	9.9	6.6
Rolls/Pallet	42	56

## Minimum Overlap Detail

Roof Pitch	Horizontal laps		Vertical Laps
	Partially Supported	Fully Supported	Either
12.5° to 14°	225	150	100
15° to 34°	150	100	100
35°	100	75	100

Detail	Minimum Overlap Horizontally and Vertically (mm)	
	Verge	25
Hips	150	
Ridge	150	
Valleys	300	
Eaves	25	

## BS5534: Anex A Wind Uplift resistance

VapR-free Eco Plus tested wind uplift resistance (N/m <sup>2</sup> )	Approved use Geographical Wind Zone
354mm Batten gauge Battened lap Exceeds 1150	1 - 3
250mm Batten gauge Battened lap Exceeds 1600	1 - 5
345mm Batten gauge Taped lap Exceeds 1600	1 - 5
345mm Batten gauge Integral Taped lap Exceeds 1600	1 - 5

These values of uplift resistance are for a roof with a ridge height ≤15m, a maximum batten gauge of 345mm, a pitched roof between 12.5° and 75°, a site altitude ≤100m and where topography is not significant.

Full details of BS5534: Anex A can be found in our BBA certificate and the BS5534:2014 Code of practice for slating and tiling.

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