

Data Sheet

HEAVY SHIELD 155

Breather Membrane Roll Sizes

- 1m x 50m
- 1.5m x 50m



Features

- Strong, lightweight and easy to install
- Excellent resistance to water penetration
- Superior water vapour transmission
- CE certified
- Suitable for pitched roofs and walls
- Zone 3 suitability at 345mm battened gauge
- 155gm²

Minimum Overlaps

Roof pitch in 0°	Horizontal		Vertical
	Partially Supported	Fully Supported	
12.5 < 15	225mm	150mm	100mm
≥15	150mm	100mm	100mm

Installation Instructions

Heavyshield 155 is designed to be installed coloured side up. Tiling battens and where required counter battens, should be fixed to allow the product to drape between the rafters more than 6mm but less than 25mm to allow any moisture to run off. The membrane should be installed horizontally starting at the eaves. Further rows of membrane should be lapped both vertically and horizontally as below.

- Ensure any penetrations such as roof lights, chimneys and service pipes are dressed to a minimum of 100mm to the up stand and sealed with flashing tape
- Valleys and Hips must be covered with a separate 600mm wide strip of membrane
- Heavyshield 155 should be returned up any abutment by 75mm from below a proprietary lead or alternative flashing
- Heavyshield 155 must be lapped over the outer walling by at least 75mm at verges. Where there is a constructed overhang the product must be fixed to the outer rafter.
- Where a duo roof is to be covered overlap the membrane by 150mm from one elevation to the other. For mono roof ridges the product should be extended over the ridge by 100mm. The membrane should also be extended to protect to the ends of roof timbers.
- Heavyshield 155 Breather Membrane should be supported by RHINOVENT EAVES GUARD at the eaves and draped a minimum of 150mm onto the guard. The eaves guard should be extended beyond the outer fascia board so that moisture may drain into the gutter.
- RHINOVENT EAVES GUARD is obtainable from Principal Building Products.
- Before commencing work at height a risk assessment should be in place and method statement prepared. Edge protection, netting, scaffolding and hoisting equipment are necessary to ensure the safe installation of roofing membranes

Standards and Installation Standards

- The British standard for the installation of underlays in roofs is the British Standard for the control of Condensation in Buildings; BS 5250:2002 This is referenced in relevant sections of the Building Regulations in England and Wales, (Approved Document c), Scotland (standard 3.15) and Northern Ireland (Technical Booklet c). An amended version of BS 5250:2002 was issued in December 2005 and these should now be followed.

UV Resistance

- Although Heavyshield 155 has a high UV resistance it is specifically recommended to cover the membrane as soon as possible with permanent roof tiles.

Warm Roof Applications

- BS 5250:2002 states there must be an adequate flow of air through the batten space when a breather membrane is used in a warm roof application. With most roof tiles and slates these provide enough ventilation but if an airtight tile or slate is used batten space ventilators should be installed. Counter battens will not normally be needed when the membrane is laid unsupported with drapes but counter battens will be required when the membrane is fully supported on insulation.

Cold Roof Applications

- In order to work effectively it is important that breather membranes are laid so that the space between the membrane and roof covering allows for adequate ventilation. Tiling battens should therefore be at least 25mm thick to ensure an adequate airspace between the membrane and final roof covering to allow water vapour to disperse. Counter battens are not normally required in a non ventilated cold roof as there should be adequate airflow between roof tiles or slates. However if an unusually airtight final roof covering is used then batten space ventilators and counter battens should be used. Ref: BS 5250:2002
- The final roof covering manufacturer's advice should be sought on their products air openness when installed. In non ventilated cold roofs consideration must be given to providing a vapour control layer and vapour check plasterboards to maintain a convection tight ceiling. All penetrations will require sealing including any loft hatches. The building below the roof void should be ventilated in accordance with national building regulations and standards. Extractor fans should be used in rooms with above average humidity and all water tanks should be covered and pipes lagged in the roof void. Advice should always be sought from Local Authority Building Control on the design and installation of ventilation systems with particular regard to cold roofs.

Technical Data

Characteristic	Harmonized technical specification	Values
Reaction to fire	EN 13859-1:2010; EN 13859-2:2010	F
Resistance to water penetration	EN 13859-1:2010; EN 13859-2:2010	W1
Tensile strength MD	EN 13859-1:2010; EN 13859-2:2010	≥257 N/50mm (+/- 90 N/50mm)
Tensile strength CD	EN 13859-1:2010; EN 13859-2:2010	≥165 N/50mm (+/- 90 N/50mm)
Elongation MD	EN 13859-1:2010; EN 13859-2:2010	≤80%
Elongation CD	EN 13859-1:2010; EN 13859-2:2010	≤80%
Tearing Resistance MD	EN 13859-1:2010; EN 13859-2:2010	≥180 N (+/-90 N)
Tearing Resistance CD	EN 13859-1:2010; EN 13859-2:2010	≥200 N (+/-90 N)
Flexibility at low temperatures	EN 13859-1:2010; EN 13859-2:2010	at -30°C Conforming
<i>Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat</i>		
Resistance to water penetration	EN 13859-1:2010; EN 13859-2:2010	W1
Tensile strength MD change	EN 13859-1:2010; EN 13859-2:2010	<30%
Tensile strength CD change	EN 13859-1:2010; EN 13859-2:2010	<30%
Elongation MD change	EN 13859-1:2010; EN 13859-2:2010	≤80%
Elongation CD change	EN 13859-1:2010; EN 13859-2:2010	≤80%
Water vapour transmission properties	EN 13859-1:2010; EN 13859-2:2010	sd=0,02 m (+/- 0,019 m)
Hazardous substances	EN 13859-1:2010; EN 13859-2:2010	Does not contain

Wind Loading

Project design wind speeds for the roof in which the products are installed should be determined and wind uplift forces calculated in accordance with BS EN 1991-1-4:2005 and its UK National Annex.

Unsupported

The products are satisfactory for use in unsupported systems in the geographical Wind Zones. Where a well-sealed ceiling as defined in clause 3.7 of BS 9250: 2007 is present and the roof has a rafter height of $\leq 15\text{m}$, a pitch between 12.5° and 75° , and a site altitude of $\leq 100\text{m}$, and where topography is not significant. For all other cases, the required uplift resistance should be determined using BS 5534:2014 and the Certificate holder's declared wind uplift resistances.

Zones of applicability of Heavysield 155 Membrane according to BS 5534: 2014, clause A.8 with battened laps.

Product	≤ 345 mm batten gauge with battened laps	≤ 250 mm batten gauge with battened laps
HEAVYSHIELD 155	Zones 1-3	Zones 1-5

Supported

The products, when fully supported, have adequate resistance to wind uplift forces. The products may be used at a batten gauge in all Wind Zones when laid over nominally airtight timber sheathing, for example OSB, plywood, chipboard and insulation for warm-roof design. They may also be used in applications where slates are nailed directly onto timber sarking.

Timber sarking such as square-edged butt jointed planks, is not considered to be airtight and the underlay is treated as unsupported.

