

Roofing Underlays

Air & Vapour Permeable LR Underlays

Protect Viking Air LR (air & vapour permeable underlay)

Protect Viking Air is a highly air and vapour permeable roof underlay, produced in the UK. A 'Type LR' underlay, it offers low water vapour resistance to exceed BS 5250 requirements as well as providing additional air permeable qualities. Protect Viking Air is UKCA & CE marked and independently approved by BM TRADA, with a Q Mark certification and is suitable for use in all pitched roofs.

The roof underlay should be of three-ply construction, with a heat stabilised, polymeric composition. This should comprise of a hydrophobic treated vapour and air permeable melt-blown technology core with hydrophobic treated upper spunbond non-woven material laminated together with a lower spunbond nonwoven material. The hydrophobic treated underlay should provide additional water repellent qualities and water penetration resistance. The underlay should be beige on the upper surface and white on the under surface, with a printed grid, appropriate branding and a 150mm overlap guideline printed on the upper surface to aid cutting, identification and fixing on-site (as installed). The membrane should provide a satisfactory underlay in tiled and slated pitched roofs constructed in accordance with BS 5534:2018. It can be installed on new or existing buildings, being flexible at low temperatures with resistance to tearing by nails and to damage from handling on site. The underlay should be used as a secondary weather resistant layer for protection against wind driven rain and dust ingress, along with tile wind-uplift.

The mass of the underlay should be 159g/m² with a thickness of 0.70mm, in roll sizes of 1m x 50m or 1.5m x 50m. Water vapour transmission resistance to be: 0.0426 MNs/g (0.008 Sd) to BS EN ISO 12572 to meet permeability requirements recommended by TRADA and NHBC. Air permeability to be 78.71 @ 50 Pascals (m³ /m² /hr) to BS EN 12114. Resistance to wind uplift: Zones 1-4 in accordance with BS 5534:2018 using a batten gauge of ≤345mm, without the need for additional counter batten or integral tape (the underlay should have a

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resistance to wind pressure of 1569 Pa). At a batten gauge of $\leq 310\text{mm}$ or when installed on sarking board, the underlay should provide unrestricted use across the UK and Ireland (Zones 1-5) in accordance with BS EN 5534:2018 (with a resistance to wind pressure of 2121 Pa).

Underlay to be laid in accordance with BS 5534, BS8000: Part 6 and manufacturer's instructions. The air and vapour permeable underlay can be wrapped over the ridge for ventilation rather than cut short on each side of the ridge. The product's resistance to water penetration to BS EN 1928 with mods should be Pass, Class W1. The underlay should have a hydrostatic head of water resistance of $>1.0\text{m}$. Nail tear strength should be 235 (MD along roll) and 266 (CD across roll) to BS EN 12310-1 with mods and tensile strength should be 270 (MD along roll) and 230 (CD across roll) to BS EN 12311-1 with mods.

In cold roofs, the use of the air and vapour permeable LR underlay can eliminate the need for additional ventilation. The NHBC accepts the use of a water vapour and air permeable underlay such as Protect Viking Air in cold roof construction, without additional roof space ventilation, if the air permeability exceeds the high-level ventilation requirements of $5,000\text{mm}^2/\text{m}$. Viking Air's air permeability of $78.71 @ 50$ Pascals ($\text{m}^3/\text{m}^2/\text{hr}$) exceeds this high level requirement so no additional ventilation is required.

In warm roofs, condensation should be controlled using Type LR underlays with no additional ventilation, in accordance with BS 5250.

If an airtight roof covering is to be installed e.g. fibre cement slates and metal tiles etc., it is necessary to ventilate the batten space. In this case, 25mm counter battens must be used above the underlay and ventilation provided – $25,000\text{mm}^2/\text{m}$ at eaves or low level and $5,000\text{mm}^2/\text{m}$ at ridge or high level. For tile fixing, additional tile/slate clips may be required when using air and vapour permeable underlays in accordance with table H.4 BS 5534:2018. Roof tile manufacturer should be consulted for specification.

Glidevale Protect recommends that where possible, a well-sealed ceiling and a separate air and vapour control layer is considered at design stage for both cold and warm roof construction, to reduce any risk of condensation.

A Type LR air and vapour permeable roofing underlay needs to be independently approved by BM TRADA and carry a Q Mark certification.



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STA Assured Gold accredited company and associate members of the Structural Timber Association (STA) The Modular and Portable Build Association (MPBA), The Irish Timber Frame Manufacturers' Association (ITFMA) and the Offsite Alliance (OA).

Product Reference: Protect Viking Air - Type LR Air & Vapour Permeable Roofing Underlay, with wind uplift use (Zones 1-4) at 345mm batten gauge. Achieves unrestricted use for wind uplift – Zones 1-5 at 310mm batten gauge or when installed on sarking board. No additional ventilation is required to be used with this product for cold or warm roofs, subject to a well-sealed ceiling.

Accessories

Protect Fulmetal UniRoll ventilated dry ridge/hip roll system with unions:

Protect Fulmetal UniRoll is a universal dry fixed ventilated ridge and hip system with unions, produced in the UK. Manufactured from aluminium, the product overcomes the durability and weathering issues associated with fabric based systems. This product should be used with Protect VP200 as part of a cold roof system to provide a ventilation area equivalent to 5,000mm²/m to ensure adequate ventilation to conform to BS 5250.

Protect OFV Eaves Skirt:

The Protect OFV Eaves Skirt replaces both the underlay into the gutter and the traditional tilting fillet. Used to avoid sagging and ponding of the underlay behind the fascia and ensure correct water discharge into the gutter. Manufactured from robust PVC-U construction, this resists impact and UV degradation over time and will not rot in the gutter unlike bitumen derivatives

Glidevale FV100 Over Fascia Vent:

Glidevale FV Fascia Ventilators are an unobtrusive method of providing ventilation in a range of eaves details, including those without a projecting soffit. FV Fascia Ventilators must be used with RV Rafter Ventilators to provide a continuous ventilation path from roof void to outside. FV100 Over Fascia Ventilator installed continuously provides ventilation opening of 10,000mm²/m.

