

**HIGH-PERFORMANCE ROOFING UNDERLAYS
AND TIMBER FRAME MEMBRANES**



HIGH-PERFORMANCE ROOFING UNDERLAYS



Roof underlays are required in virtually all modern tile and slate pitched roof constructions for various reasons:

- As a secondary line of defence against wind driven rain and snow
- To reduce wind uplift
- As a temporary roof covering

When detailing roof construction it is important that the roof is properly designed and built to last the life of the building and can accommodate changes of use and occupancy levels during that time. It is always necessary to follow the recommendations of BS 5250 2002: Control of condensation. It allows for different roof constructions to combat the risk of condensation in the roof space.

Wind Uplift

Many pitched roof underlays have batten gauge restrictions when fixed in exposed locations and this information is contained within independent certification such as BRE or BBA approvals. Certified products generally have their resistance to wind uplift performance quoted in terms of an acceptable uplift for a specified batten gauge. For typical concrete interlocking tiles the batten gauge would range between 320-345mm, while for double lap plain tiles it would typically be 90-100mm. An independent report on wind load calculations shows that a resistance of at least 2.5kPa is required at maximum batten gauge to ensure that an underlay can be safely used at more than 95% of all locations in the UK. Protect A1 and Protect VP400 both have a wind uplift performance of 2.5kPa at 343mm batten spacing enabling unrestricted use in all exposure conditions in the UK and Ireland. BS5534: 2003 code of practice for slating and tiling clearly states in clause 4.10.1; *Roofing underlay should provide a barrier to minimise the wind uplift load acting on the slates or tiles*. In clause 5.5.2.7 it also states; *With stretching of the underlay and reverse drape under wind load, the underlay should not be able to touch the underside of the tiles and slates. Measures should be taken to ensure that the design load carried by the underlay is not transferred to the slates and tiles and their fixings.*

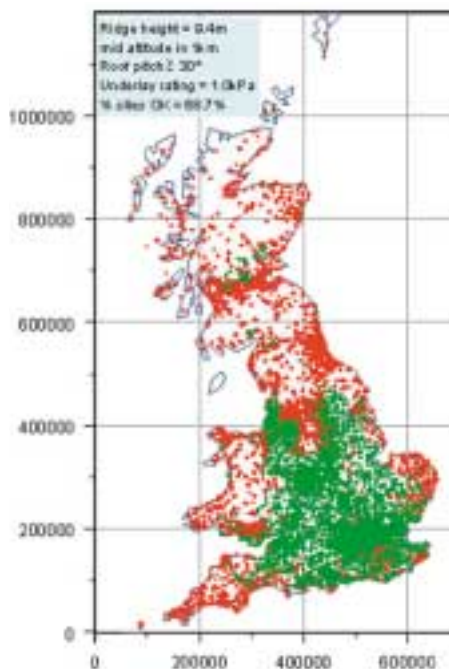


Fig. 1
Ridge height 9.4m
Mid altitude
Roof pitch 30°
Underlay rating 1.0kPa

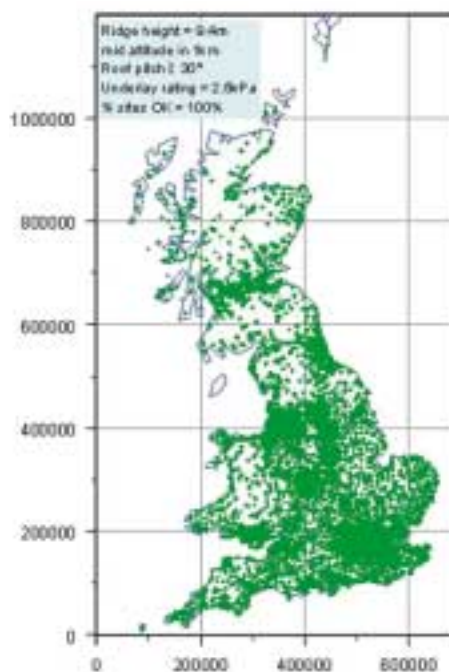


Fig. 2
Ridge height 9.4m
Mid altitude
Roof pitch 30°
Underlay rating 2.5kPa

- restricted use
- unrestricted use

Maps selected from Anemos Associates report 'Wind Uplift on Roofing Underlays'. Full copy of report available on request.

PROTECT VP400

Vapour Permeable Roof Underlay

Protect VP400 is a high performance vapour permeable roofing underlay for use in warm or cold pitched roof constructions. It can be used in unventilated cold loft spaces on any roof shape and building type.

Appearance

Embossed dark grey upper surface, royal blue lower surface, printed with product branding for ease of identification. Triple-ply construction, with a waterproof and vapour permeable core laminated and protected between two layers of non-woven spun-bonded polypropylene.

Benefits

- Now even tougher offering enhanced performance
- Independently certified for use in both warm and cold roof constructions, including unventilated cold loft spaces, on any roof shape and building type
- Highly vapour permeable, but entirely watertight
- Helps to avoid condensation risk in the roofspace in accordance with BS 5250:2002
- Easy to cut and lightweight to handle
- Unrestricted use for wind uplift in all exposure conditions in the UK and Ireland

Roll Sizes and Weights

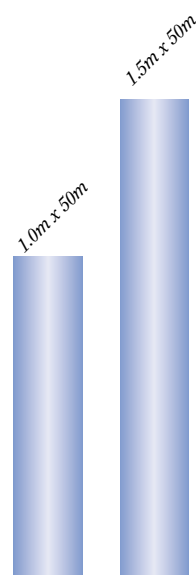
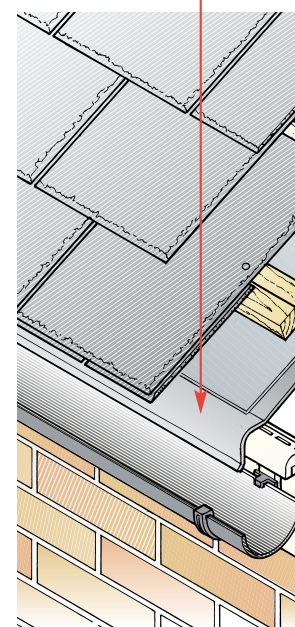
1.5m x 50m (75m²) 12.4kg

1.0m x 50m (50m²) 8.3kg



Certificate No. 080/01

At gutter detail always use a proprietary underlay protector such as the Glidevale Eaves Skirt.



PROTECT A1



Non-Permeable Roofing Underlay

Protect A1 is a 'third-generation' roofing underlay developed specifically to overcome the disadvantages of traditional 1F felts and second-generation plastic sheet materials. It can be used for all pitched roof constructions (tiled and slated), whether insulation is at ceiling joist level or rafter level.

Appearance

Dark grey upper surface reduces glare and takes a chalk line marking. Surface printed with product branding for ease of identification. Twin-ply construction of polypropylene non-woven spunbond layer with UV stable PP film.

Benefits

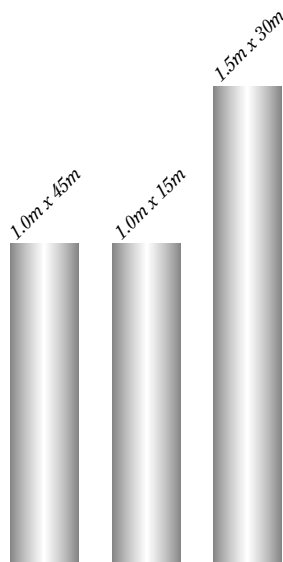
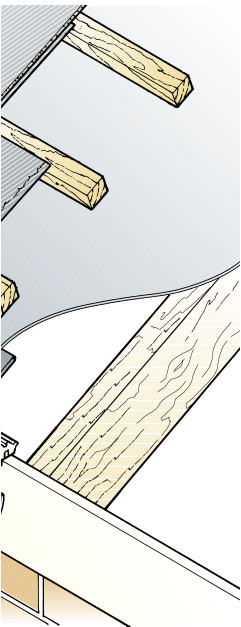
- Now even tougher offering enhanced performance
- Completely waterproof
- Can be used as a temporary roof covering for up to three months before the roof covering is laid.
- Excellent nail tear and tensile strength
- Easy to cut, clean and light to handle
- Unaffected by temperature changes
- Proven time saving over 1F Felt
- Unrestricted use for wind uplift in all exposure conditions in the UK and Ireland

Roll Sizes and Weights

1.5m x 30m (45m²) 7.0kg
1.0m x 45m (45m²) 7.0kg
1.0m x 15m (15m²) 2.5kg



Certificate No. 072/00



PROTECT TF200

Vapour permeable membrane for timber construction

Protect TF200 is a high-performance membrane with high wet strength, water resistance and vapour permeability. It is used in timber framed panel construction to provide a second line of protection against rainwater penetration during the life of the building and allows water vapour to escape from the structure.

Appearance

Range of colours with non-reflective embossed and textured surface to minimise surface glare.

Benefits

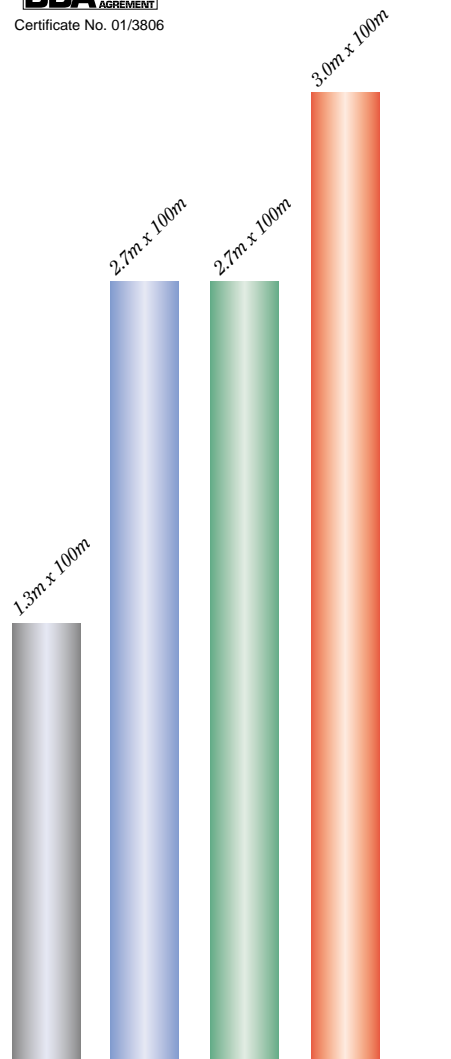
- Resists the passage of water, wind-blown snow and dust into the interior of the building
- Good water penetration resistance
- More than four times the vapour permeability recommended by BRE and TRADA for a vapour permeable membrane in timber frame construction
- Good nail tear resistance
- High burst strength and can withstand loads associated with installation in timber frame
- On-site or factory applied

Roll Sizes and Weights

1.3m x 100m (130m²) 13.0kg
 2.7m x 100m (270m²) 27.0kg
 3.0m x 100m (300m²) 30.0kg

Colours

Anthracite, Blue, Green, Red



FURTHER INFORMATION

References

Roofing design

BS 5250: 2002 *Control of condensation in buildings*

BRE 262: 2002 *Thermal insulation - avoiding risks*

BRE GBG 51: 2002 *Ventilated and unventilated cold pitched roofs*

BRE GBG 37: 2001 *Insulating roofs at rafter level: sarking insulation*

DEFRA/DTLR *Limiting thermal bridging and air leakage: Robust construction details for dwellings 2002*

BS 5534: 2003 *Code of practice for slating and tiling. Design*

Building Regulations Approved Document C4 'Resistance to weather and ground moisture' 1992

BS 5628: 'Code of practice for use of masonry' Part 3: 1985 'Materials and components, design and workmanship' TRADA TBL 64

Other products

Glidevale also market a wide range of other building products including:

Roof ventilation and roofing products

Metro modular rooflights

Sunscoop tubular rooflights

Loft access traps

Underfloor and cavity wall vents

GLIDEVALE LIMITED

2 Brooklands Road, Sale, Cheshire M33 3SS Tel: 0161-962 7113 Fax: 0161-905 2085
Email: info@glidevale.com Web: www.glidevale.com

Glidevale Limited maintains a policy of continuous development and reserves the right to amend product specifications without notice.

BPD

A member of the Building Product Design Group

