

ULTRAPERM BREATHABLE MEMBRANE

POWERLON®

Intelligent Building Membrane



FEATURES

- Universal breather for roofs & walls.
- British Board of Agreement (BBA) certified (Certificate No. 13/5037)
- CE Approved
- BS 5534: 2014 compliance
- 4 grades with and without integrated tapes
- High water vapour permeability
- Pre-printed marking lines
- Fully illustrated installation instructions
- Customised printing available

OUTSTANDING TECHNICAL PERFORMANCE

	ULTRAPERM MAX	ULTRAPERM PREMIUM	ULTRAPERM STANDARD	ULTRAPERM LITE
Weight	155 gsm	135 gsm	115 gsm	92 gsm
Nail Tear Resistance	MD 170 N XD 250 N	MD 160 N XD 240 N	MD 130 N XD 190 N	MD 80 N XD 120 N
Tensile Strength	MD 320 N/50 mm XD 200 N/50 mm	MD 290 N/50 mm XD 190 N/50 mm	MD 280 N/50 mm XD 170 N/50 mm	MD 210 N/50 mm XD 140 N/50 mm
Flame Retardant	BS EN 13501-1 Class E	BS EN 13501-1 Class E	BS EN 13501-1 Class E	BS EN 13501-1 Class E
Colour	Green	Blue	Grey	Black
Standard Sizes	1.0 x 50 m 1.5 x 50 m	1.0 x 50 m 1.5 x 50 m	1.0 x 50 m 1.5 x 50 m	1.0 x 50 m 1.5 x 50 m



CUSTOMISED PRINTING

Powerlon UltraPerm can be customised and printed for corporate branding, product identification and advertising. Powerlon SP100 (house-wrap) also custom printable.



Powerlon UltraPerm can be customised to include your logo

TECHNICAL STANDARDS

Powerlon UltraPerm is manufactured to internationally recognised European and British Standards.

Quality Assured to ISO 9001 with full batch traceability.

BBA CERTIFIED

BBA Certified for wall and roof applications, warm and cold supported and unsupported, ventilated and unventilated plus timber frame walls. Certificate No 13/5037.

BS 5250

Code of Practice for the control of condensation in buildings.

BS EN 12310-2:2000

Flexible sheets for waterproofing. Determination of resistance to tearing (nail shank).

BS EN 13501-1

Fire classification of construction products and building elements. Classification using test data from reaction to fire tests.

BS EN 13859

Flexible sheets for waterproofing. Definitions and characteristics of underlays. Underlays for discontinuous roofing.

BS EN 1931

Flexible sheets for waterproofing. Bitumen, plastic and rubber sheets for roof waterproofing. Determination of water vapour transmission properties.

IP4/06 Building Research Establishment

Airtightness of ceilings, energy loss & condensation risk.

BS 5534: 2014

Revised code of practice for slating and tiling.

OTHER PRODUCTS

- Powerlon Thermo-Reflective Membranes
- Powerlon Timber Frame Membranes
- Powerlon Vapour Control Layers
- Powerlon UV Façade Membranes
- Powerbase Gas Barrier Membranes
- Powerbase Hydrocarbon Barrier Membrane

FURTHER INFORMATION

Further information is available on our website www.powerlon.com.

Please register to download Installation Instructions and Product Data Sheets.

Technical documentation is also available by contacting us by email or telephone.

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Product Information

www.powerlon.com

ULTRAPERM BREATHABLE MEMBRANE

Universal breathable underlay for all pitched roof designs and wall applications. Fully compliant to BS 5534: 2014

Powerlon UltraPerm is a range of high performance breathable underlays for all pitched roof designs and wall applications (timber frame). It is tough, durable and tear resistant with exceptional water vapour permeability and hydrophobic (water repellent) characteristics.

The BBA certified Powerlon UltraPerm range is fully tested to the latest BS 5534: 2014 zones 1-5.

Each roll also has a fully comprehensive label with detailed installation instructions and a colour coded geographical suitability per wind zone and membrane grade.

UltraPerm is a non-woven composite membrane with and without integrated self-adhesive strips. With pre-printed marking lines for both roof pitch and overlaps for supported and un-supported roofs. Installation is quicker and easier. Within the Powerbond range of accessories there are additional penetration and jointing tapes available.



Powerlon UltraPerm is BBA Certified



Comprehensive installation instructions with each roll



Powerlon UltraPerm is also certified for walls



Powerlon UltraPerm for all roof types

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CERT NO. 2318/00



BUILDING REGULATIONS BS 5534: 2014

(Revised code of practice for slating and tiling)

On 31st August 2014, the British Standard for tiling and roofing (BS 5534) was updated. The new standard will become mandatory at the end of February 2015, and any roof not started by this point must be installed to the new version.

THE MAIN REASONS FOR UPDATING BS 5543

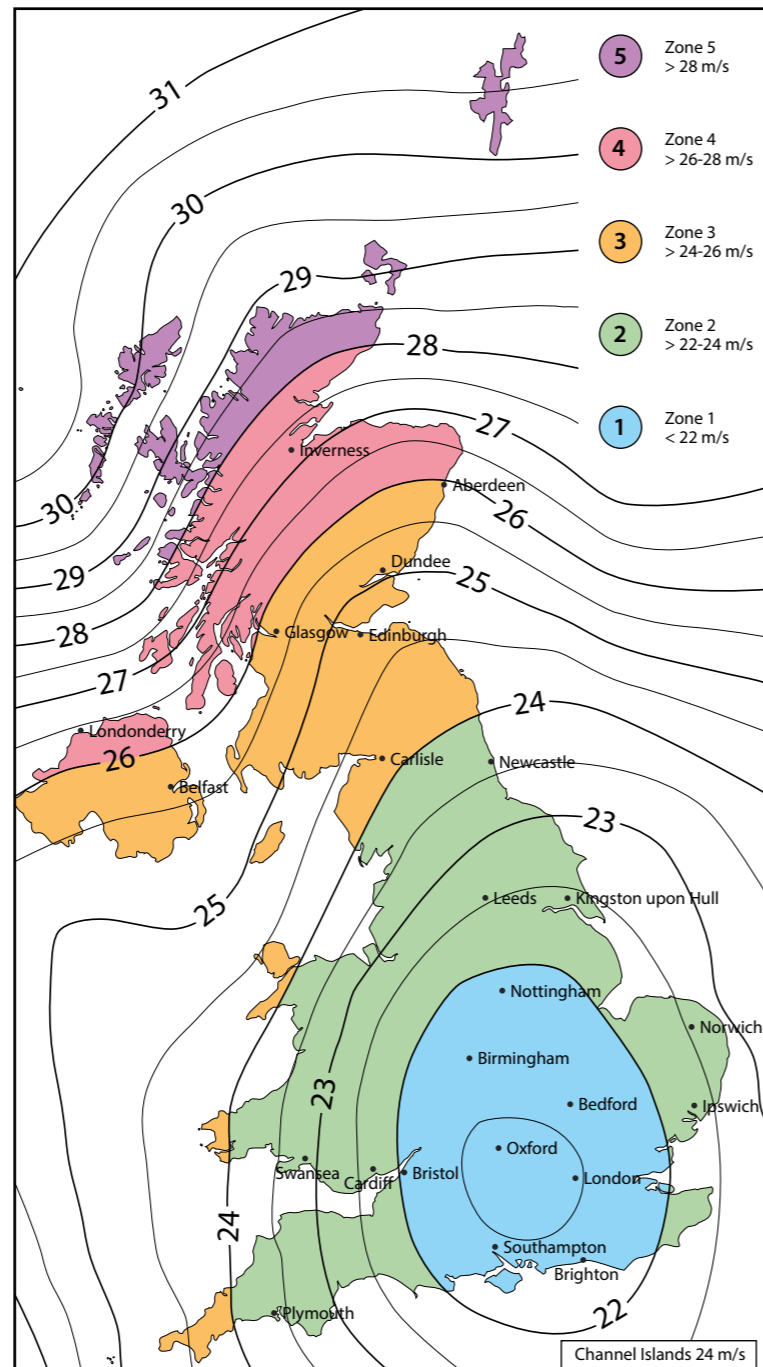
- Increasingly extreme weather events in the UK – gale force winds, flooding, driving rain.
- Harmonising European Standards - There is a push to harmonise standards across the European Union. The BS 5534 update will ensure that the UK is more closely aligned with the equivalent standards and practices outlined in the equivalent Eurocode.

THE CHANGES TO THE BRITISH STANDARD RELATE TO:

- Application of a non-supported roofs.
- Scottish sarking / timber plank type roofs are also subject to the new standard as square edged butt-jointed planks are not considered to be air-tight and are therefore to be treated as un-supported.
- Both cold and warm roofs.
- Securing the membrane to prevent 'ballooning' as this would put pressure on the tiles or slates and can cause dislodgement.
- New minimum performance requirements for wind uplift resistance of breather membranes.
- New test method for calculating the wind pressure and wind uplift of unsupported underlays (i.e. draped over the rafters – most common method of cold roof construction in England).
- Geographical wind zone map with areas 1 to 5.
- Different widths of batten gauges (i.e. centre to centre) up to 345 mm.
- Fully supported roofs (on e.g. plywood, OSB board and insulation) are excluded from the amendments of BS 5534: 2014.

Powerlon UltraPerm breather membranes have undergone further testing from the BBA/BRE and the results have shown that all 4 grades of the range cover Zones 1-5. (See colour coding system).

The below colour coding system shows the usage of membrane per area, the dot colour indicates suitability for each wind zone. Eg. Green Dot = Wind zone 2.



Powerlon	Summary of Wind Zones				
	250mm Batten Gauge Battered Lap	345mm Batten Gauge Battered Lap	250mm Batten Gauge Integral Taped Lap	345mm Batten Gauge Integral Taped Lap	345mm Batten Gauge Single Sided Taped Lap
UltraPerm Max	1 2 3 4 5	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
UltraPerm Premium	1 2 3 4 5	1 2	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
UltraPerm Standard	1 2 3 4 5	1	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
UltraPerm Lite	1 2 3 4	Not Classified	1 2 3 4 5	1 2 3 4	1 2 3 4

BUILDING & SITE CONDITIONS

The new BS 5534: 2014 is based on the conditions below, which must be applied to the building and site concerned.

- Ridge height not greater than 15m
- Roof pitch between 12.5 and 75 degrees
- Site altitude not greater than 100m
- No significant site topography
- Maximum uplift deflection of the underlay no greater than 35mm

Underlays can be used in applications conforming to the above building and site conditions in all wind zones provided that their wind uplift resistance at a batten gauge of 345mm is not less than;

- 1600N/m² when a well-sealed ceiling is present
- 1900N/m² when no ceiling or no well-sealed ceiling is present
- 2350N/m² when no ceiling or no well-sealed ceiling is present and permanent dominant opening is present on an external face of the building.

Underlays used in applications conforming to the building and site conditions given above, including a well-sealed ceiling (see BS 9250), should be classified in accordance with their geographic location and

wind zone, see table figure below. Underlays should be used only in those wind zones for which the design wind pressure is not greater than the declared wind uplift resistance for the underlay, at the batten gauge tested.

CONTROL OF CONDENSATION

The need to ventilate, (or otherwise), roofs with insulation installed above, between or below the rafters differs from roofs with insulation installed above a horizontal ceiling. A well-sealed ceiling and an AVCL should always be provided. See Powerlon AVCL range for more information.

Geographical Wind Zone	Design wind pressure p for underlay (N/m ²)
5	1600
4	1330
3	1150
2	975
1	820

Fig.1

EXAMPLE OF WIND PRESSURE

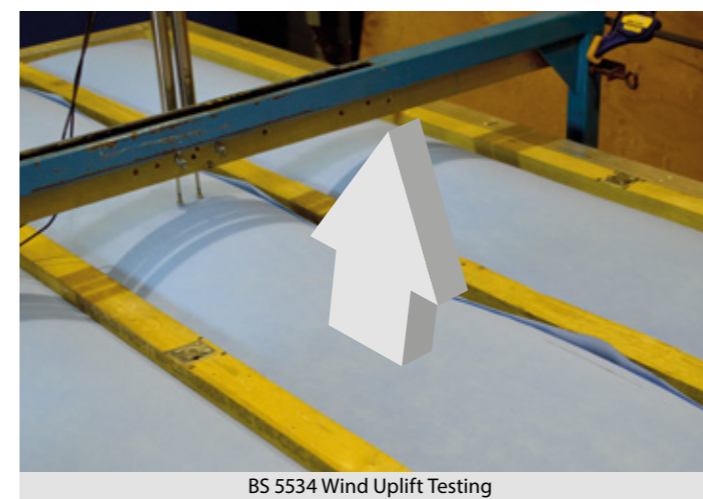
The breather membrane minimum result depends on the building, the site distance to sea, the building height and type of terrain (country or town).

Wind Zone	Building Height (m)	Wind uplift resistance N/m ²					
		Distance to sea in country terrain			Distance to sea in town terrain		
		< 2 km	2 - 20 km	> 20 km	< 2 km	2 - 20 km	> 20 km
1	5	869	783	718	631	555	511
	10	1009	955	872	824	760	696
	15	1094	1062	977	945	897	826
	20	1122	1108	1017	1016	986	908
	25	1166	1166*	1072	1066	1052	966

Maximum wind design pressure of the underlay is 70% of the maximum wind velocity, see example * 1166 x 70% = 816 N/m².
Min pressure/Wind Zone 1 = 820 Pa, see Fig.1

Fig.2

BS 5534 WIND UPLIFT TESTING



INTEGRATED TAPE OPTION

