

# Ultimo HS

Product Data Sheet  
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## High Absorbency, High Strength Pitched Roof Underlay

### Features and Benefits

- Highly breathable and water resistant membrane
- Helps to eliminate the problems caused by condensation
- Outstanding tensile strength and nail tear resistance
- Long-lasting, heavy-duty performance
- Multipurpose, lightweight and flexible
- Printed "Easy-Cut" grid marking, to reduce wastage
- BBA certified
- Ideal for use in warm roofs/cold roofs with ventilated or unventilated void

### Description

Ultimo HS is a next generation pitched roof underlay that is able to cope with the demands of today's house building in innovative ways which are not possible with conventional underslating membranes. With the majority of membranes focusing simply on vapour permeability, there can be a danger of moisture overload as newly occupied (and heated) houses dry out quickly. However, Ultimo HS is an intelligent membrane that can deal with high levels of humidity and is able to absorb and release large amounts of moisture vapour in a measured, effective way. Therefore, the risks associated with condensation are virtually eliminated with the use of Ultimo HS.

Ultimo HS allows the escape of water vapour from within the roof structure whilst protecting against wind driven rain, snow and dust, which may penetrate the main roof waterproofing, providing a permanent quality breather underlay, which will last the life of the roof construction. The membrane is designed for use as a fully supported or unsupported breathable underlay for tiled, slated or metal roofing systems.

Ultimo HS is a unique, multi-layer membrane that is comprised as follows:

Lower Layer = Needle punched non woven polypropylene

Upper Layer = Glue bonded, spunbond polypropylene

Inner Core = Microporous polypropylene film.

In addition, strength and stability is provided by two further grid layers of high density polyethylene (HDPE).

The upper surface of the membrane is grey, printed with the trade name and head lap lines. Available in 30m lengths and a choice of either 1.0m or 1.5m widths, Ultimo HS adapts easily to any typical roof configuration or the individual working practices of the installer.

The product has similar vapour permeability properties to IKO's established range of Rubershield breather membranes, but it is capable of absorbing moisture and retaining it until such time as the climatic conditions allow for its release by evaporation. In this way, excess condensation moisture resulting from new build or renovation wet-trades can be 'managed intelligently' instead of resulting in the condensation problems normally associated with these severe conditions.

For added security against wind driven rain, snow and dust, and to improve the overall thermal efficiency of the roof construction by reducing unwanted air movement, all lap joints, pipe penetrations and perimeter details in the Ultimo HS membrane should be sealed using Rubershield Jointing Tape. This is a high performance double-sided self-adhesive tape, protected by a silicon release film on both sides. Rubershield Jointing Tape can make a considerable contribution to a roof complying with Part L of Building Regulations by effectively limiting unwanted air movement and improving thermal performance.

### Notes

1. As with all breather membranes of this type, contact with solvents or wet timber preservatives can cause localised water penetration to occur, prior to the main weatherproofing being installed.
2. In accordance with BS 5534: 2003 - Section 5.5.2.7 (c), where a roof underlay or breather membrane is to be laid over open rafters, a drape of between 10mm to 15mm between the rafters is required to guide any rainwater penetrating the main roof finish away from the rafters to the drainage point. (The membrane must not be pulled tight against the underside of the tiling battens)
3. Ultimo HS when left exposed should never be considered as being proper protection against wind blown rain and high winds.

### Product Information

Roll dimensions	30m x 1.0m	30m x 1.5m
Roll weight kg	8.1	12.15
Weight g/m <sup>2</sup>	270	270
Roll area m <sup>2</sup>	30	45

### Typical Performance Details

Tensile Strength (BS EN 12311-1: 2000)	MD	600 N/50mm
	TD	700 N/50mm
Elongation (BS EN 12311-1: 2000)	MD	45%
	TD	30%
Resistance to Tearing (BS EN 12310-1: 2000)	MD	750N
	TD	650N
Water Vapour Transmission Properties (Sd) EN12572	844g/m <sup>2</sup> /24 hours	
Resistance to Water Penetration EN1928	Class W1	
Dimensional Stability EN1107-2	<2%	
Flexibility at Low Temperature EN1109	-20°C	
Resistance to Penetration of Air EN12114	npd	
Hydrostatic Pressure Test EN20811	>500cm	
Reaction to Fire EN13501	E*	
Resistance to wind loads Moat 69: 4.2.1	Batten Spacing	Value
	350mm	(0.5 kPa)
	330mm	(1.0 kPa)
	300mm	(1.0 kPa)
	250mm	(2.0 kPa)
	200mm	(2.0 kPa)

\* bottomed with insulating compound

### Application

Ultimo HS must be installed in accordance with the relevant sections of BS 5534: 2003 and IKO fixing instructions. As with all underslating materials (breathable and non-breathable), Ultimo HS is designed as a secondary barrier to wind driven rain and snow, it should not be considered a primary waterproofing layer. Whilst the product is UV stable for up to 4 months exposure, good roofing practice dictates that the primary waterproofing finish (e.g. tiles, slates etc.) be applied as soon as practically possible. Furthermore, underslating membranes should not be considered as temporary weatherproof protection for occupied buildings or where internal fitting out is taking place. Additional protection should be afforded in these circumstances.

Ultimo HS should be unrolled across the roof, starting at the eaves and working up the roof. Whilst Ultimo HS has the same level of UV protection on both sides of the material, it is usually laid with the printed side up. Ultimo HS when installed as a fully supported system, is laid over the support and secured with counter-battens, alternatively the membrane can be installed draped 10mm to 15mm into the void between rafters. With normal slates and tiles, it can then be secured with the tiling battens. This will leave sufficient space between the Ultimo HS and the tiles/slates for drainage and ventilation. When using Ultimo HS in a warm roof configuration, no additional ventilation is required within the roof void. When Ultimo HS is installed in a cold roof configuration, over open rafters, the use of counter battens is not required and there is no requirement for ventilation of the void space.

Abutment flashings should be wedged into a mortar joint 25mm deep and at least 150mm above the level of the slates or tiles. The Ultimo HS underlay should be turned up behind the flashing at least 100mm to prevent rain and snow being blown into the roof-space. Lap joints in the membrane should be generally in accordance with the table set out below.

In unventilated roof systems vapour control measures are required below the insulation layer to restrict the flow moist air from within the inhabited building into the roof space. Additionally, the building below should be ventilated in accordance with the Building Regulations with water tanks sealed.

IKO Eaves Protection Strip should be applied under Ultimo HS where it drains into an external half round gutter. This will ensure long-term performance of the membrane in this location, preventing water from running behind the gutter, rotting timber fascias and rafter ends.

## Rubershield Jointing Tape

Rubershield Jointing Tape is a high performance double-sided self adhesive tape. It is use to seal laps and attach the Ultimo HS membrane to other surfaces. It is also deal for sealing around penetrations such as soil pipes.

## Lap Size Table

Roof pitch	Minimum horizontal lap partially supported (mm)	Minimum horizontal lap fully supported (mm)	Minimum vertical lap (mm)
12.5° – 14°	225	150	100
15° – 34°	150	100	100
35°+	100	75	100

Information taken from BS 5534: 2003

Reinforcing strips of 600mm minimum should be fixed at hips, ridges and valleys.

Lap joints, pipe penetrations and perimeter details should be sealed using Rubershield Jointing Tape.

## Other Products

Full product literature, health & safety and technical sheets are available as downloads from our website: [www.ikogroup.co.uk](http://www.ikogroup.co.uk) or on request by email: [marketing@ikogroup.co.uk](mailto:marketing@ikogroup.co.uk)

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