



MultiTX[®] Plus Barrier Underlay

MultiTX[®] Plus can be used in warm & cold, supported & unsupported ventilated pitched roof systems below tiles and slates. In mainland UK and the Republic of Ireland the underlay should be installed in accordance with the relevant Agreement certification as identified on the roll insert. For general information please see details below.



Cold Pitched Roofs

Where MultiTX[®] Plus roofing underlay is used, roof spaces or enclosed cavities should be ventilated above the thermal insulation layer. Ventilation openings should be provided on the longer sides of a typical rectangular roof, to allow good through ventilation thereby avoiding stagnant air pockets. The openings should be equivalent in area to a continuous opening of not less than:

- a) 25 mm length at eaves for pitches of 15° or less;
- b) 10 mm length at eaves for pitches of more than 15°;

Care should be taken to ensure that insulation covers the ceiling completely but does not block the ventilation pathway in the eaves, especially in lower pitched roofs. Proprietary ducts are available that can be fixed between rafters, and allow insulation to be pushed into the eaves with a free opening above.

Additional ventilation openings, equivalent in area to a continuous opening of 5mm, should be provided at high level in:

- roofs pitched at 35° and above:
- roofs of any pitch with a span greater than 10m:
- lean-to and mono-pitch roofs.

Care should be taken to minimise the risk of water vapour coming into contact with cold parts of the roof construction. Factors to be considered and minimised include moisture diffusion through the ceiling, infiltration through unsealed openings / penetrations in the ceiling and services evaporating or venting moisture into cold spaces. Further guidance can be found in BS 5250, BS 5534 and BRE report (BR 262) Thermal insulation: avoiding risks.

Gaps in the ceiling should be avoided as far as possible to minimise the flow of warm moist air from the house into the loft. Loft hatches should be airtight and kept closed and service penetrations sealed. When a new house is drying out, it should be ventilated to the outside and care taken to minimise water vapour entering the roof.



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Warm Pitched Roofs

When MultiTX®Plus is used in a warm roof, the ceiling should be well sealed and a ventilation gap of at least 25mm, between the insulation and underlay, should be allowed. An air and vapour control layer should be specified on the underside of the insulation. Further guidance can be found in BS5250, BS5534 and BRE report (BR262) Thermal insulation: avoiding risks.

General Installation Information

The main function of an underlay is to provide a secondary barrier, preventing the ingress of wind driven rain, snow and dust. The period of exposure should be kept to a minimum. Consequently the primary waterproofing should be installed as soon as practically possible.

BBA has issued guidance relating to good site practice when using vapour permeable underlays. This highlights:

An underlay is not a totally waterproof barrier and, if used as a temporary cover, some rain penetration may occur.

An exposed underlay will be subject to UV light which may cause deterioration and can lead to premature failure. The exposure period should therefore be kept to a minimum.

In certain conditions, particularly if there is persistent heavy rain combined with subsequent freeze/ thaw conditions, an underlay should not be exposed for more than a few days.

A copy of BBA Information Bulletin No. 2- Permeable Roof Tile Underlay Guide to Good Site Practice is available at www.donlow.co.uk

Where softwood boarding or timber sheeting is used below the underlay, counter battens are typically required to provide effective drainage below the battens. Where timber counter battens are positioned above the underlay, there is no need to tape overlaps to resist wind uplift.

Don & Low offer three installation options for their product range, as follows:

1. Un-taped Overlaps: unroll the underlay exactly as indicated in Figure 1, such that the inner surface of the roll is facing uppermost. Tiling battens, and where appropriate counter battens, should be fixed over the membrane ensuring, where the membrane is unsupported, that there is sufficient drape to allow moisture and air movement. Where the membrane is required to be draped this should be more than 6mm and less than 25mm. MultiTX®Plus is unrolled horizontally across the roof starting at the eaves. Subsequent rows of membrane should be lapped over the underlying row to shed water out and down the slope. Sufficient vertical overlap should also be allowed - see table below and Figure 3.

2. MultiTX®Plus ConSeal integral tape overlaps. Unroll the underlay exactly as indicated in Figure 2, such that the inner surface of the roll is facing uppermost and the adhesive tape strip (indicted by a red line on figure 2) is towards the ridge. Where the underlay is unsupported, ensure there is sufficient drape to

Figure 1

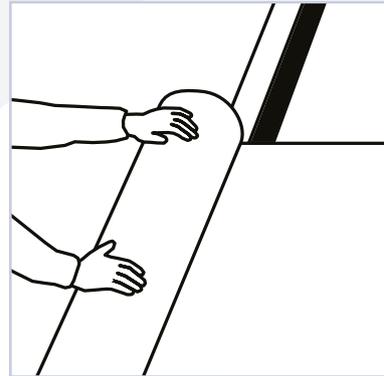
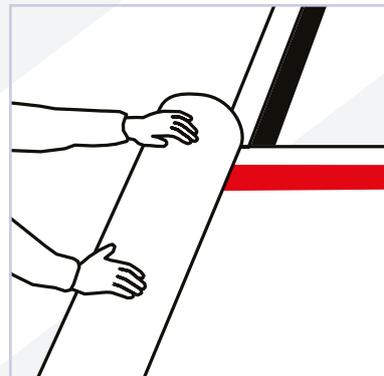


Figure 2 - Unrolling





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allow moisture and air movement. Where the underlay is required to be draped this should be more than 6mm and less than 25mm. The underlay is unrolled horizontally across the roof starting at the eaves. Subsequent rows of underlay should be lapped over the underlying row to shed water out and down the slope. Sufficient vertical overlap should also be allowed - see table and Figure 3 below. Once the overlaying underlay is in position the protective covering over the tape strip should be removed and the two layers of underlay brought together. Compression of the tape between the two layers may be assisted by having a colleague providing some resistance behind the underlay, from within the roof space. Tiling battens, and where appropriate counter battens, should be now fixed over the underlay ensuring that any drape is maintained.

Installation in low temperatures: with lower external temperatures, typically below 10°C, additional pressure may be required to ensure effective adhesion. The product should not be installed where the external temperature is below 5°C, particularly where the surface of the membrane is moist or icy. Once effectively bonded, low temperatures do not affect tape adhesion.

3. Taped overlaps using double sided tape: unroll the underlay exactly as indicated in Figure 1, such that the inner surface of the roll is facing uppermost. Where the membrane is unsupported, ensure there is sufficient drape to allow moisture and air movement. Where the membrane is required to be draped this should be more than 6mm and less than 25mm. MultiTX®Plus is unrolled horizontally across the roof starting at the eaves. Subsequent rows of membrane should be lapped over the underlying row to shed water out and down the slope. Sufficient vertical overlap should also be allowed - see table below and Figure 3. Once the lapped underlay is in position tape should be applied to the upper face of the lower layer of underlay, approximately 50 mm from the upper edge. Alternatively, the tape can be applied to the lower membrane once this has been positioned and before the overlapping layer is laid. Once the full length of underlay has been treated and both layers are in position, the protective covering over the tape strip should be removed and the two layers of underlay brought together. Compression of the tape between the two layers may be assisted by having a colleague providing some resistance behind the underlay, from within the roof space. Tiling battens, and where appropriate counter battens, should be now fixed over the membrane ensuring that any drape is maintained.

Installation in low temperatures: see tape manufacturer's guide for use at low temperatures to ensure effective adhesion.



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Minimum Overlaps

Roof Pitch°	Horizontal Lap (mm)		Vertical Lap Limit (mm)
	Partially Supported	Fully Supported	
12.5 to 14	225	150	100
15 +	150	100	100

Note: For Republic of Ireland a horizontal overlap of 225mm should be maintained for partially supported roofs up to a roof pitch of 22.5°. All other values in the table above are valid for ROI.

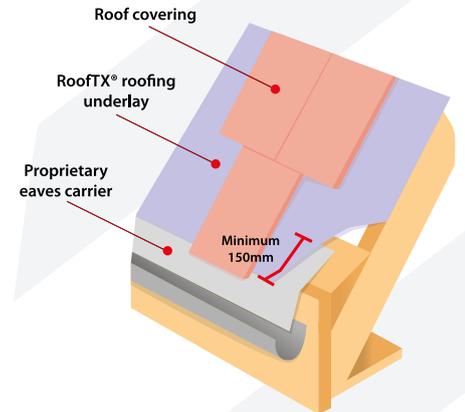
Eaves and roof edges: MultiTX® Plus should be unrolled across the roof and draped a minimum of 150mm onto the proprietary eaves carrier. The eaves carrier needs to extend beyond the outer fascia board / tilting fillet edge to ensure effective drainage into the gutter – see figure 3.

Ridges: In duo-pitched roofs MultiTX® Plus from one elevation should overlap the other by at least 150mm see figure 4. MultiTX® Plus should be sealed around penetrations through the roof at the ridge to accommodate high level void ventilation. With mono-pitched roofs MultiTX® Plus should be extended over the mono ridge by at least 100mm. It is recommended that MultiTX® Plus be extended to provide protection to the ends of roof timbers.

Verges: At verges MultiTX® Plus should be lapped over the outer walling (typically brickwork) by at least 50mm. Where the verge has a constructed overhang MultiTX® Plus should be fixed to the outer rafter.

Abutments: MultiTX® Plus should be returned up the abutment by at least 75mm below either a proprietary plastics or lead flashing – see figure 5.

Figure 3 - Eaves Detail



Underlay to extend a minimum of 150mm over proprietary eaves carrier, which must extend beyond the fascia to ensure effective drainage into the gutter

Lap at ridge to extend down slope, as head lap - see Overlap Table.

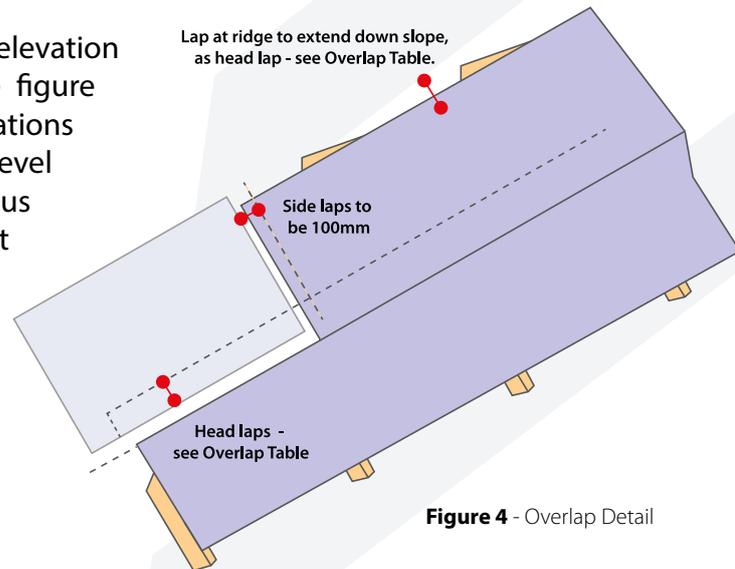


Figure 4 - Overlap Detail

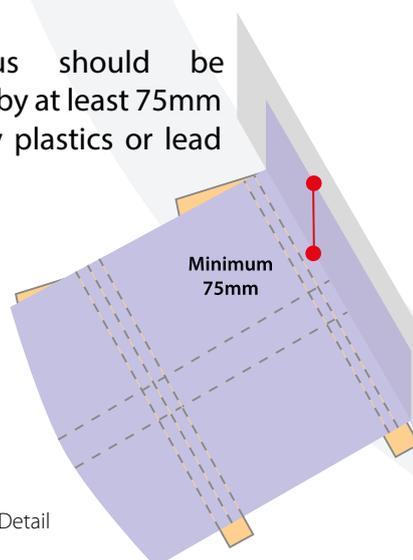
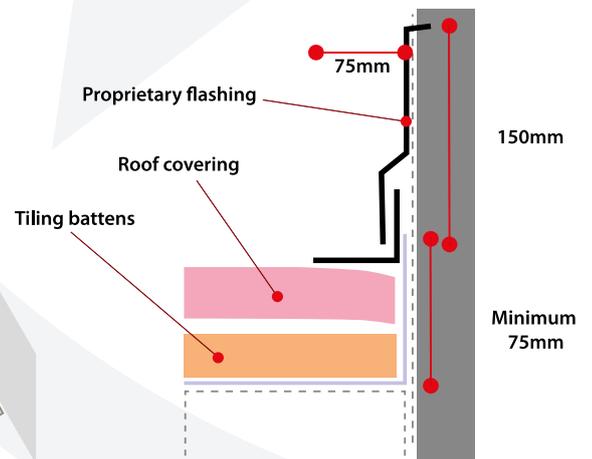


Figure 5 - Abutment Detail



RoofTX® Roofing Underlay to form up-stand of at least 75mm below 150mm deep proprietary flashing



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Hips and valleys: Should be covered with a separate 600mm wide strip of MultiTX®Plus.

Details: Ensure that when detailing around service penetrations, roof lights or chimneys MultiTX®Plus is dressed a minimum of 100mm to the up-stand and is effectively sealed and weathered by an appropriate flashing.

Health and Safety

Care should be taken in handling materials at height in particular ensure that manual handling regulations are not exceeded. Sufficient edge protection, netting and appropriate scaffolding and hoisting are necessary to ensure the safe application of roofing membranes and underlays. Before work commences a method statement and risk assessment should be prepared.

For CE Accompanying Technical Document please contact your Distributor or visit www.donlow.co.uk.

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