

# MultiTX<sup>®</sup>

## PLUS

# Underlay Installation Instructions

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

### Cold Pitched Roofs

Where MultiTX<sup>®</sup>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) 25mm length at eaves for pitches of 15° or less;
- b) 10mm 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 262:2002) 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 with mastic. When a new house is drying out, it should be ventilated to the outside and care taken to minimise water vapour entering the roof.

### Warm Pitched Roofs

When MultiTX<sup>®</sup>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. A vapour control layer should be used on the underside of the insulation. Further guidance can be found in BS5250, BS5534 and BRE report (BR262:2002) Thermal insulation: avoiding risks.

### General Installation Information

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 10mm. MultiTX<sup>®</sup>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 overlap should also be allowed - see table and Figure 3 below for overlap requirements.

**2. MultiTX<sup>®</sup>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 allow moisture and air movement. Where the underlay is required to be draped this should be 10mm. 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 overlap should also be allowed - see table and Figure 3 below for overlap requirements. Once the overlaying underlay is

Figure 1

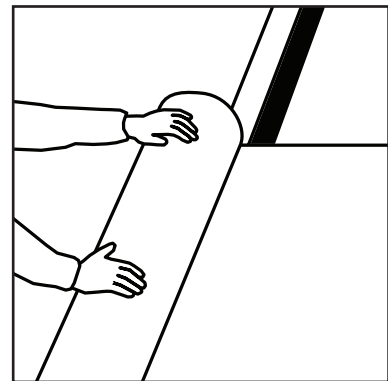
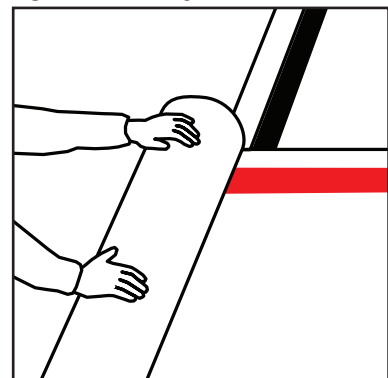


Figure 2 - Unrolling



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, centred over the overlap, and where appropriate counter battens, should be fixed over the underlay ensuring that any drape is maintained.

**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 10mm. 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 and Figure 3 below for overlap requirements. 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, centred over the overlap, and where appropriate counter battens, should be fixed over the membrane ensuring that any drape is maintained.

### Minimum Overlaps

Roof Pitch°	Head Lap (mm)		Side Lap (mm)
	Unsupported	Supported	
12.5 to 14	225	150	100
15 to 34	150	100	100
35+	150	75	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 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.

**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](http://www.donlow.co.uk)

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Figure 3 - Eaves Detail

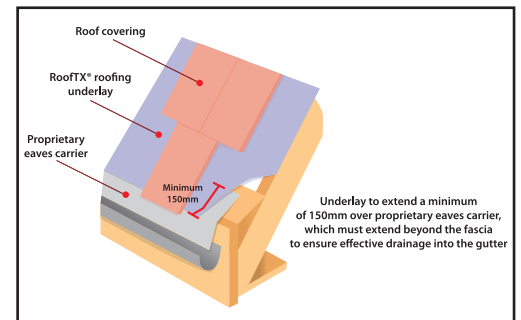


Figure 4 - Overlap Detail

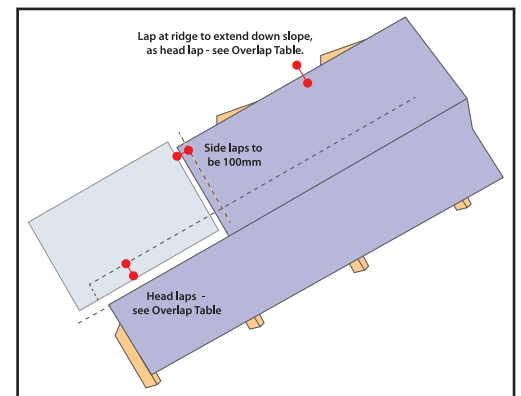


Figure 5 - Abutment Detail

