

Manthorpe 120

GLRU120-10

1.0m × 50m LR Breathable Roofing Underlay



- Suitable for both supported and unsupported applications
- Conforms to the requirements of BS 5534 and BS 5250
- Can be used in both cold and warm roof details

BATTEN GAUGE	WIND UPLIFT RESISTANCE	WIND ZONE SUITABILITY
≤ 345 MM	1196 PA	1 TO 3
≤ 250 MM	2501 PA	1 TO 5
≤ 100 MM	>2501 PA	1 TO 5

For unsupported applications refer to the table above for wind zone suitability, these apply to underlays used when; there is a continuous well-sealed ceiling, the ridge height is not greater than 15m, the roof pitch is between 12.5° and 75°, the site altitude is not greater than 100m and situated in an area with no significant site topography. For situations that fall outside of the scope listed above, refer to BS 5534 ¹ for method of calculating specific wind uplift resistance requirements or seek further professional advice.



In fully supported details the underlay can be used in all wind zones.

The product is intended to be installed in accordance with the guidance overleaf and to the requirements of BS 5534 ¹; The Code of practice for Slating and tiling for pitched roofs and vertical cladding and BS 8000-6 ²; Workmanship on building sites, Code of practice for slating and tiling of roofs and walls.

The product should be stored flat on their sides, on a smooth, clean, dry surface, under cover and protected from exposure to sunlight and potential heat sources.

SEE OVERLEAF FOR FITTING INSTRUCTIONS



EN 13859-1:2010 Flexible Sheets for Waterproofing
Part 1: Underlays for Discontinuous Roofing.
MBP_DT_DOP005



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Fitting Guidance

The Manthorpe120 LR underlay should be installed by a competent roofing professional with experience of such underlays and in accordance with the guidance of BS 5534 ¹, BS 8000-6 ² and BS 5250 ³.

- Prior to installation of the underlay, first fit a Felt Support Tray (G1281) along the run of the eaves. Ensure the trays are overlapped by at least 150mm to ensure continuous support.
- Roll out the Manthorpe120 underlay along the eaves with the printed side of the roll facing upwards. The underlay should lap down over the Felt Support Tray by at least 150mm but not far enough so that it is exposed to UV light once the roof covering is installed. It is also recommended that the bottom edge be taped to the tray to prevent it from flapping in high winds.
- In unsupported details, the underlay should be fitted to allow a nominal 10mm drape between rafters or counter battens to ensure that water can run freely down the underlay to discharge into the gutter. Prior to the fitting of the tiling battens, the underlay drape can be temporarily secured with clout nail fixings, positioned above the proposed upper lap line.
- In situations where fixing penetrations in the underlay are at risk of water ingress, such as nail holes in low pitch roofs or fully supported counter batten details, batten sealing tape should be used for additional protection against water leakage.
- Once the first section is secured, roll out the second course of underlay ensuring that it is overlapped over the first by the required amount for the pitch of the roof (see Table 1), the lap markings printed on the roll can be used to aid in this. Take care to match the amount of drape used on the course below to avoid any excessive gaps.
- If the lap between underlay courses is not directly secured by a tiling batten, then an additional batten should be installed within 75mm of the bottom edge of the upper underlay course to prevent excessive uplift of the unsecured edge.
- It is recommended that vertical joints between two sections of underlay be avoided, where this is unavoidable vertical joints should be made watertight. Unsupported details should be overlapped by at least one full rafter bay, with the end of the lower lap fully secured to the rafter across its width. Avoid placing vertical joints in the underlay over the same rafter bay on consecutive courses.
- At ridge and hip intersections, the underlay should be lapped over the apex by the lap used for the pitch (Table 1), a minimum of 150mm. For ventilated ridge details, the underlay should be cut short of the ridge line by 5mm to ensure a ventilation path. For monopitch roofs, underlay should extend over the mono ridge and top fascia board by not less than 100mm.
- For bedded verge details the underlay should lap onto the outer skin of the brickwork by 50mm or in the case of an overhanging verge, fixed to the flying rafter. For dry fix verge details the underlay can extend to the face of the gable.
- For roofline wall abutments at the side edges and top edges, the underlay should be turned up the abutment by not less than 50 mm under the flashings. If high level abutment ventilation is being used, the top edge can be returned back behind the last tiling batten to maintain a ventilation path. For back abutments, underlay should be detailed to lap over the back gutter lining by 100 mm for roof pitches of $\geq 35^\circ$, and 150 mm for roof pitches of $> 15^\circ$ and $< 35^\circ$.
- For valley details, a continuous strip of underlay should be laid down the valley and should overlap the underlay at the sides by no less than 300mm.
- All penetrations to the underlay should be suitably sealed to prevent water ingress. All cuts through the underlay should be turned upward and taped to minimise the risk of ingress through the opening.



Manthorpe Building Products Ltd Brittain Drive, Codnor Gate Business Park, Ripley, Derbyshire. DE5 3ND	EN 13859-1:2010 Flexible sheet for roofing underlays 3 layer polypropylene composites 120 g/m ² 50 m × 1,0 m × 0,55 mm Low Vapour Resistance (LR) underlay for use below discontinuous roof coverings of buildings			
				
	Notified Testing Body(s)		1023 1486	
Declaration of Performance				
MBP_DT_DOP005				
Reaction to fire				
		E-d2		E-d2
Water penetration resistance				
Before artificial ageing				
		Class W1		Class W1
After artificial ageing				
		Class W1		Class W1
Tensile Strength [N/50mm]				
		Longitudinal MD	Transverse CD	Longitudinal MD
		Before artificial ageing	245 (±45)	175 (±45)
		After artificial ageing	210 (±45)	150 (±45)
		Longitudinal MD	Transverse CD	Longitudinal MD
		Before artificial ageing	50 (±25)	60 (±25)
		After artificial ageing	30 (±20)	40 (±20)
Tear Resistance [N]				
		Longitudinal MD	Transverse CD	Longitudinal MD
		130 (±30)	140 (±30)	130 (±30)
		140 (±30)	130 (±30)	140 (±30)
Flexibility at low temperature [°C]				
		-40		-40
Water vapour resistance S_d [m]				
		0,02 (+0,020 / -0,005)		0,02 (+0,020 / -0,005)

Table 1 - Minimum Horizontal Laps

Roof Pitch	Unsupported	Fully Supported
12.5° ≤ 15°	225 mm	200 mm
≤ 22°	200 mm	200 mm
> 22°	150 mm	150 mm

Additional Guidance

The Manthorpe120 underlay has undergone artificial ageing testing to the requirements of BS EN 13859-1 to measure its baseline resistance to UV degradation when exposed on site. It is recommended however that the finished roof covering be installed as soon as possible to limit this exposure to a minimum and that it is left uncovered for no longer than one month.

In addition the underlay is not intended to act as the primary barrier to wind driven rain and snow and should not be considered a suitable weatherproofing for protection of a "water-tight" building, the finished roof covering should be installed as soon as practically possible.

The air permeability of the Manthorpe120 underlay is characterised as Low Vapour Resistance (LR) by BS 5250 ³, which allows it to be used as part of a construction with a reduced ventilation solution when used with a normal or well-sealed ceiling with cold pitched roofs and in warm pitched roofs that include a vapour control layer. However, with air impermeable outer roof coverings additional ventilation solutions may be required, refer to the guidance of BS 5250 ³ for further details.

In fully supported details, LR underlays should be treated for design purposes as an HR underlay and be subject to traditional ventilation requirements. LR underlays laid on open jointed square-edged board sarking, typically set at 150 mm wide with a minimum 2 mm gaps between each board, may be treated, for design purposes, as unsupported LR underlays.

Certain water or solvent based timber preservatives used in roofing can adversely affect the performance of some underlay materials, these preservatives should be dried out before the timber is used and the roofing work is commenced. In addition, oil and fuel from power tools should also be kept from contacting the underlay.

¹ BS 5535:2014+A2:2018 - Code of Practice for Slating and Tiling for Pitched Roofs and Vertical Cladding
² BS 8000-6:2013 - Code of Practice for Slating and Tiling of Roofs and Claddings
 - Workmanship on Building Sites
³ BS 5250:2011 - Code of practice for the Management of Moisture in Buildings.