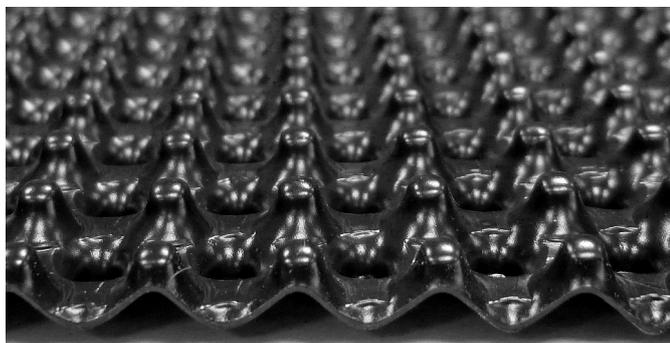


Rev 1.4 - 3 December 2014

PRODUCT CODE - M30

PRODUCT OVERVIEW

Newton 207 DeckDrain is a double cusped, deck and flat roof drainage membrane, that incorporates a non-woven geotextile filter layer, bonded to a water impermeable HDPE (High Density Polyethylene) core. The unique double cusped design provides two layers of drainage; allowing for primary drainage through the geotextile filter, as well as secondary drainage between the underside of 207 DeckDrain and the primary waterproofing layer. The lower drainage layer eliminates the risk of trapped water, a problem associated with conventional single cusped deck drainage membranes.



KEY BENEFITS

- Provides a clear and clean drainage path for surface water to roof drainage outlets.
- Unique double cusped (drainage studs to the upper and lower surfaces) design provides a clear and clean drainage path above the deck primary waterproofing membrane, to ensure that water cannot be trapped above the deck membrane, as can be the case with single cusped deck drainage membranes.
- Very high compressive strength.
- Suspended soil particles (fines) are filtered out by the geotextile layer.
- Quick and easy to install.

NEWTON 207 DECKDRAIN		
Width (m)	1.10	
Length (m)	25.00	
Area (m ²)	27.50	
Packaged Weight (kg)	20.00	
Mass (g/m ²)	720	EN ISO 9864
Thickness at 2 kPa (mm)	7.4	EN ISO 9863-1
Water Flow at 20 kPa - 1:80 slope (l/m)	0.07	EN ISO 12958
Water Flow at 100 kPa - 1:80 slope	0.04	EN ISO 12958
Water Flow at 200 kPa - 1:80 slope (l/m)	0.02	EN ISO 12958
Compressive Strength - Temporary (kPa)	>240	ASTM D1621
Compressive Strength - Constant (kPa)	>120	ASTM D1621
CBR Puncture Resistance (N)	2800	EN ISO 12236
Tensile Strength MD/CD (kN/m)	19 / 10	EN ISO 10319
Service Temperature Range (°C)	-40 to +80	
Life Expectancy (Years)	120	
Chemical Resistance	Excellent	EN 14030
Oxidation Resistance	Excellent	EN ISO 13438

STUDDED CORE		
Colour	Black	
Material	HDPE	
Density (g/m ²)	620	
Stud depth (mm)	4.80 (Double Cusped)	
Thickness (mm)	6.20	
Vicat Softening Temperature (°C)	148	

GEOTEXTILE		
Colour	White	
Material	Polypropylene	
Thickness at 2kPa (mm)	1.2	EN ISO 9863-1
Puncture Resistance CBR	1600	EN ISO 12236

NOTES

Newton 207 DeckDrain is resistant to a wide range of chemicals, impervious to extensive green roof root penetration, rot-proof and unaffected by soil bacteria and fungi. John Newton premium-quality products conform to applicable EN and national standards. The values quoted in the table are typical values and are subject to tolerances.

TYPICAL APPLICATIONS

As the drainage layer above a deck, balcony or flat roof waterproofing membrane such as Newton Acriflex Winter, particularly where:

1. block pavements or flooring slabs are bedded on sand as the surface finish.
2. soil filled planters are included to the deck or flat roof.
3. an Intensive Green Roof is planted to the deck or flat roof.

Also suitable for use as a vertical drainage layer when used as part of a professionally designed and installed externally applied basement waterproofing system.

NEWTON 207 DECKDRAIN

Drainage Membrane for Decks and Flat Roofs

SUITABLE SUBSTRATE

Directly above primary deck or roof waterproofing membrane

DECK AND FLAT ROOF DRAINAGE DESIGN

Decks, flat roofs (and balconies functioning as roofs) should be engineer designed to provide adequate rainwater disposal to suitable drainage outlets. The design fall should be 1:40 to ensure a finished fall of at least 1:80.

With concrete construction it is preferable that the fall is created at the concrete pour. If this is not possible or the fall is to be created retrospectively, the fall should be formed with screed. With timber roofs and decks, the timber frame should be constructed to the correct design fall. Drainage falls to warm-decked roofs using tapered insulation should be designed by the insulation manufacturer, with falls of not less than 1:60. They should be laid directly onto the vapour control layer, with the primary waterproofing above. Cross-falls should be achieved using mitred joints.

Allowance for deflection should be made in the structural design where falls are achieved using screeds, particularly on large roofs.

The size and number of outlets should be designed to meet the expected rainfall intensity in accordance with BS EN 12056- 3. For flat roofs and decks bounded by parapets at least two outlets (or one outlet plus an overflow) should be provided. Outlets should have a recessed mouth to allow the free flow of water.

207 DECKDRAIN DRAINAGE PERFORMANCE

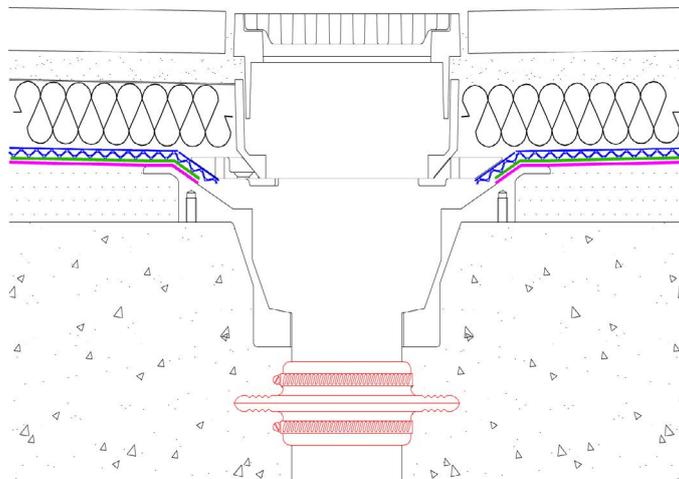
When used conventionally below block pavements or slabs bedded on sand, Newton 207 DeckDrain requires at least one drainage outlet per 10 linear metres of membrane. The maximum flow of water reaching the outlets over a 1 metre width of 207 DeckDrain during rainfall of 50mm per hour with a fall or slope of 1:80 is 0.07 litres per metre width per second. The total volume of water to be drained is dependent on the width of the membrane and the drainage calculation should take this into account. Where insulation is placed above Newton 207 DeckDrain this will result in more water running off the finished surface (and through the sand blinding) and less water entering the upper drainage void.

Because the membrane is impermeable to water ingress, rainfall above 50mm per hour will increase the percentage of rainfall being discharged above the 207 Membrane and also above the finished surface. It is possible that some water will enter the secondary drainage layer (below the membrane and above the primary waterproofing layer), thus increasing water flows. This drainage layer is primarily designed to be available to prevent standing water to the surface of the primary waterproofing layer but will increase water flow if water enters this space.

For further information, please call our Technical Department on the number at the foot of the page.

TYPICAL DETAIL - DRAINAGE MEMBRANE

The detail below shows a typical use of Newton 207 DeckDrain, shown here above Newton Acriflex Winter.



SPECIFICATION

Newton Waterproofing Systems are in partnership with RIBA NBS who publish details of our products and systems within their specification clause library to allow Architects ease of specification through their NBS Plus interface.

NBS clauses can be accessed via the technical resources area of the web site where a live NBS Feed is available at [NBS Plus Live Feed](#)

Our website has drawings available for download here [Technical Drawings](#) and a selection are also available via [FastrackCAD](#)

TRAINING AND COMPETENCY OF THE USER

Newton 207 is always be used in conjunction with a primary waterproofing membrane such as Newton Acriflex Winter as part of a designed waterproofing solution for decks, flat roofs, terraces and balconies and should therefore be installed by a competent person with responsibility for the overall design and installation of the waterproofing system.

TOOLS REQUIRED

- Tape measure
- Shears or utility knife

CONSTRUCTION AND MOVEMENT JOINTS

Newton 207 DeckDrain should continue over construction and movement joints and acts as a de-coupling membrane preventing movement from the substrate transferring through to the surface finish.

NEWTON 207 DECKDRAIN

Drainage Membrane for Decks and Flat Roofs

LIMITATIONS

- Should not be used as an Extensive Green Roof membrane. Please use Newton 220 Reservoir.
- Not suitable for use directly above insulation. When the build includes the drainage membrane above insulation, the insulation must be reinforced 3B roofing felt and then waterproofed Newton Acriflex Winter.

INSTALLATION

The membrane is rolled out in the direction of the fall with the geotextile surface facing upwards. Cut lengths with a utility knife or shears to suit dimension of the surface area.

Subsequent lengths of membrane are placed adjacent to the previously rolled out lengths to form simple butt joints, with the extra flap of geotextile overlapping the joint. It is not necessary to overlap the dimpled cores.

If preferred, the dimpled core can be overlapped to the previously laid sheet to form a stud into stud joint.

This joint can be taped with Newton Waterseal Tape if required. Please note: To form a stud into stud joint, some of the geotextile will have to be removed from the edge of the previously laid sheets.

Take the 207 DeckDrain into the double entry drainage outlets. There is no need to seal to outlets or protrusions through the membrane.

Lap the membrane down vertical surfaces to suit either high level drainage or to joint to Newton 410 Geodrain, if the drainage is to continue to below the footing of the foundation wall.

There is no need to lap 207 DeckDrain up vertical interfaces.

PACKAGING

Newton 207 DeckDrain is supplied in wrapped and labelled 25m long x 1.1m rolls.

STORAGE

Newton 207 DeckDrain should be stored away from direct sunlight. Rolls should be stored in the upright position.

HEALTH AND SAFETY

Newton 207 DeckDrain should only be used as directed. There is no legal requirement for a Material Safety Data Sheet MSDS for this product. PPE should be worn at all times when working on building sites including eye protection when drilling or fixing. Working at height and working within excavations safety procedures should be adhered to for your personal protection. See Newton System 200 Drainage Membranes MSDS for advice on handling, cutting, use of tapes etc. which is available on request from newton or online via our web site. Please see contact details below.