

NEWTON 208 DECKDRAIN

Drainage Membrane for Decks and Flat Roofs

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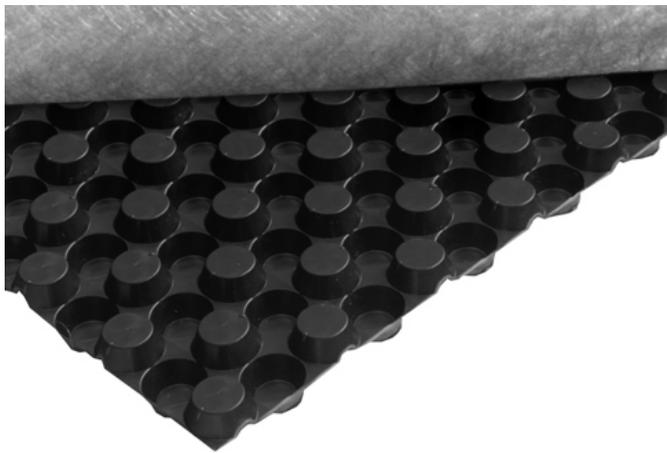
PRODUCT CODE - M33

PRODUCT OVERVIEW

Newton 208 DeckDrain is a double cusped, deck and flat roof drainage membrane, that incorporates a polypropylene geotextile filter layer, bonded to a water impermeable HDPE (High Density Polyethylene) core. The 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 208 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.

BENEFITS

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



TYPICAL APPLICATIONS

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

- Block paving or flooring slabs are bedded on sand as the surface finish.
- Soil filled planters are included to the deck or flat roof.
- 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.

TECHNICAL DATA

Width (m)	2.00
Length (m)	20.00
Area (m ²)	40.00
Packaged Weight (kg)	30.00
Density (g/m ³)	740
Height (mm)	8.4
Compressive Strength - Temporary (kPa)	250
Compressive Strength - Constant (kPa)	120
Service Temperature Range (°C)	-40 to +80
Chemical Resistance	Excellent

STUDED CORE

Colour	Black
Material	HDPE
Density (g/m ³)	604
Stud depth (mm)	4.0 (Double Cusped)
Thickness (mm)	0.60
Vicat Softening Temperature (°C)	148

GEOTEXTILE

Colour	White
Material	Polypropylene
Thickness	1.1
Density (g/m ²)	136

NOTES

Newton 208 DeckDrain is resistant to a wide range of chemicals, is rot proof and unaffected by soil bacteria and fungi. Newton Waterproofing Systems premium-quality products conform to applicable EN and national standards. The values quoted in the table are typical values and are subject to tolerances.

SUITABLE SUBSTRATE

Directly above primary deck or roof waterproofing membrane.

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

DECK & 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 placement. 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. The insulated boards should be 100% bonded to the vapour control layer, with the primary waterproofing above supported on fully bonded 3B felt. 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.

208 DECKDRAIN DRAINAGE PERFORMANCE

When used conventionally below block paving or slabs bedded on sand, Newton 208 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 208 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 208 DeckDrain (inverted warm roof) 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 208 DeckDrain and also above the finished surface. It is possible that some water will enter the secondary lower drainage layer of the 208 DeckDrain (directly 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.

TRAINING & COMPETENCY OF USER

Newton 208 DeckDrain 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 & MOVEMENT JOINTS

Newton 208 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.

LIMITATIONS

- Should not be used as an Extensive Green Roof membrane. Please use Newton 220 Reservoir.
- Not suitable for use directly above insulation unless the insulation is fully bonded and then reinforced with fully bonded 3B roofing felt and then waterproofed with the primary waterproofing membrane.

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. 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 208 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 join to Newton 410 Geodrain, if the drainage is to continue to below the footing of the foundation wall.

There is no need to lap 208 DeckDrain up vertical interfaces.

COLOUR

Double cusped core is black. Geotextile layer is White.

PACKAGING

Newton 208 DeckDrain is supplied in wrapped and labelled 20m long x 2.0m rolls.

STORAGE

Newton 208 DeckDrain should be stored away from direct sunlight. Rolls should be stored in the upright position.

HEALTH & SAFETY

There is no legal requirement for a Material Safety Data Sheet (MSDS) for this product.

Use appropriate PPE for the environment the system is installed within. Use products only as stated within the this data sheet.