

Visqueen Protect&Drain

Features and benefits

- Provides a combined protection layer and drainage layer
- Range of thicknesses available - provides options for water flow capacity
- Large format rolls - rapid installation

Product description

Visqueen Protect&Drain is a geocomposite void former comprising a cusped high density polyethylene (HDPE) core, bonded to a nonwoven polypropylene geotextile filter membrane.

The product is supplied in rolls and available in the following three thicknesses; 6mm (970mm x 25m), 12mm (1m x 25m) and 25mm (900mm x 25m).

Approvals and standards

- Visqueen certified with Quality Management System ISO 9001:2015
- Visqueen certified with Occupational Health and Safety System ISO 45001:2018
- Visqueen certified with Environmental Management System ISO 14001:2015

Usage

Visqueen Protect&Drain is used for below ground waterproofing applications where an externally applied Type A barrier membrane (tanking membrane) protection layer is required combined with an integral sub surface drainage layer. The product forms a void to collect and transmit water into adjacent sub surface drainage outlets or collector pipes and so reduce the risk of a head of water (hydrostatic pressure) forming against the structure.

Typical applications include use as part of a groundwater management system for slab edges, retaining walls, basement walls and lift pit walls. Product selection should be based on the groundwater risks highlighted in the site ground investigation report.

Although typically used on vertical substrates, the product can also be used on horizontal substrates. Contact Visqueen Technical Services +44 (0) 333 202 6800 for specification guidance for use on horizontal substrates.

When designing structural waterproofing in accordance with BS8102: 2009, it is advised to assume that groundwater will come to bear on the full height of the retaining structure at some point during its lifetime. Incorporating Visqueen Protect&Drain into the groundwater management design reduces the risk of a head of water forming against the structure.

Protect&Drain 25mm can also be used as a protection layer for externally applied ground gas Type A barrier membranes (tanking membranes). The void created should be continuous with the below slab ventilation or pressure relief system.

System components

- VisqueenPro Double Sided Jointing Tape, 50mm x 10m
- VisqueenPro Detailing Strip, 300mm x 10m, 500mm x 10m

Visqueen Protect&Drain

Storage and handling

Visqueen Protect&Drain should be stored on end, under cover in the original packaging.

Care should be taken when handling the product in line with current manual handling regulations.

Preparation

Visqueen Protect&Drain can be cut with a sharp retractable safety knife.

Installation

Visqueen Protect&Drain is designed to be installed with the geotextile filter membrane facing the direction of the water flow i.e facing towards the backfill.

Unroll into position. The product can be installed as a series of abutting strips running across the face of the vertical substrate e.g. starting at the bottom and running left to right, or installed vertically on the substrate e.g. top to bottom.

The strips can be temporarily held in position using VisqueenPro Double Sided Jointing Tape.

The geotextile filter membrane extends beyond the width of the dimpled HDPE core at one side; this creates an overlap flap which should be secured to the adjacent strip with VisqueenPro Detailing Strip. Seal perimeter edges of installation with VisqueenPro Detailing Strip to prevent ingress of fines/soil.

Service pipe penetration should be sealed with VisqueenPro Detailing Strip.

In accordance with BS 8102:2009, the system should be connected to a maintainable land drain system designed by a drainage engineer.

As the product provides a conduit for groundwater to reach the perforated land drain pipe, continuity between the two must be achieved, e.g. wrap the product around the pipe so that the geotextile filter membrane is in contact with the pipe, or peel sufficient geotextile filter membrane from the HDPE core to wrap over the pipe and extend the HDPE core under the pipe. Other detailing is acceptable provided that the groundwater can readily flow from the Protect&Drain into the maintainable land drain system.

Backfill material must be free from any sharp objects or debris which might otherwise damage the geotextile filter membrane. Angular fill or fill containing aggregate larger than 50mm diameter is unsuitable.

Usable temperature range

There are no temperature range restrictions for installing Visqueen Protect&Drain however it is recommended that the associated system components should not be installed below 5°C.

Additional information

For guidance on the correct specification and detailing contact Visqueen Technical Services +44 (0) 333 202 6800.

The information in this datasheet was correct at the time of publication. It is the user's responsibility to obtain the latest version of the datasheet as it is updated on a regular basis. The information contained in the latest datasheet supersedes all previously published editions.

Visqueen Protect&Drain

Property	Test method	Units	Result	Result	Result
Thickness	BS EN ISO 9863-1	mm	25	12	6
Width		mm	900	1000	970
Length		m	25	25	25
Roll diameter (approx)		m	1.3	1	1
Roll weight		kg	40	30	29
Compressive strength	BS EN 25619-2	kPa	300	500	700
Static puncture (CBR)	BS EN 12236	kN	2.2	2.4	1.7
Water permeability - geotextile	BS EN 11058	l/m ² /s	100	100	100
Water flow capacity @ 20kPa (i=1)	BS EN 12958	l/m/s	15	7	2

Health and safety information

Refer to the Visqueen Protect&Drain safety datasheet (SDS).

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About Visqueen

The Visqueen name has long been recognised as one of the leading manufacturers of high quality advanced membrane technologies and design based solutions by specifiers, distributors, builders merchants and contractors throughout the UK and Europe.

For further guidance on the Visqueen services shown below, please refer to the relevant section of the Visqueen website (www.visqueen.com) or contact Visqueen Technical Services on +44 (0) 333 202 6800 or enquiries@visqueen.com

Complete Range, Complete Solution



Structural Waterproofing



Gas Protection



Damp Proof Membrane



Tapes



Damp Proof Course



Stormwater



Vapour Control

Visqueen Technical Support

Visqueen combine an extensive product portfolio with industry leading levels of service and support which includes guidance over the phone, bespoke CAD drawings to help with complex detailing, electronic NBS specifications and access to a dedicated team of highly knowledgeable and experienced field based Technical Support Managers.

Visqueen Technical Support is available to all our customers including architects, specifiers, distributors, builders merchants, contractors and end users. All of our technical team have been awarded the industry recognised qualification Certificated Surveyor in Structural Waterproofing (CSSW).

Visqueen CPD Seminars

The Visqueen Continuing Professional Development (CPD) Seminars provide up-to-date information on changes within Building Regulations/Building Standards and nationally recognised industry guidance affecting damp proofing, water vapour control, hazardous ground gas protection and below ground structural waterproofing.

The one hour seminars have been produced for design specialists within the construction sector and are delivered by our team of Technical Support Managers.

Visqueen Training Academy

Based at our manufacturing facility in Derbyshire, the Visqueen Training Academy is available to support Visqueen customers throughout the UK by providing a wide range of both theory and practical skills related training.

Courses include one day product awareness training for our distributors and builders merchants to help them in their day-to-day jobs, through to intensive two day courses giving detailed hands-on training in the practical skills required for safe and robust product installation.