Technical Datasheet

Visqueen Protect&Drain

Features & 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 cuspated 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 waterproofng 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 Office on 0333 202 6800 for specification guidance for use on horizontal substrates.

When designing structural waterproofing in accordance with BS8102: 2022, 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

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.

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Visqueen Protect&Drain

In accordance with BS 8102:2022, 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 Office on 0333 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.

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/m²/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).

About Visqueen

Visqueen is a leading provider of construction membrane technologies and design-based solutions for ground gas, structural waterproofing, damp proofing and fire protection.

We offer complete support at every stage of the specification, including the supply chain process. As the UK's principal technical authority, we are best placed to ensure that the principal designer and contractor specify the most technically suited, durable, and competitive solution to guarantee their project is protected for the lifetime of the building.

Visqueen is at the forefront of advanced membrane technology and innovation in the construction industry, earning the trust and loyalty of specifiers throughout the UK and Europe.

For more information, visit visqueen.com or contact our sales office at +44 (0) 333 202 6800 or enquiries@visqueen.com

Complete Range, Complete Solution

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Visqueen Protect&Drain



Passive Fire Protection | Gas Protection | Damp Proof Membrane | Air and Vapor Control | Stormwater | Damp Proof Course | Temporary Protection

Visqueen Technical Support

Visqueen offer a comprehensive full nationwide technical support. Our team of CSSW qualified technical support managers provide on site design-based solutions for specifiers, contractors and builders merchants, and will ensure that from design stage to installation the project is fully risk assessed and the specification is approved by all stakeholders.

Our Technical Office, can design, prepare and manage CAD detailing, together with assisting in quantity take offs, while offering advice on technical installations and product selection.

Competency & Design

Visqueen promotes competency in building design by ensuring that its technical team possesses the necessary skills, knowledge, experience, and ethical practices. The company adopts the "golden thread of information," ensuring all project data is digitally secure and accessible throughout a building's lifecycle. This approach aligns with the Building Safety Act and aims to foster accountability and compliance with evolving regulations, providing clients with confidence in the safety and reliability of their projects.

Visqueen CPD Seminars

Visqueen's CPD Seminars offer insights into Building Regulations, Standards, and industry guidance related to damp proofing, hazardous ground gas protection, and structural waterproofing. These one-hour seminars are tailored for construction design professionals and delivered by our Technical Support Managers. Visit our website to book a free CPD.

Visqueen Contract Design Services

Visqueen Contract Design Services offers a bespoke design service led by our team of Certified Surveyors in Structural Waterproofing (CSSW), providing experienced and specialised waterproofing design expertise for complex projects. We provide comprehensive support throughout the entire project, ensuring that all work meets the requirements of warranty providers and adheres to the highest standards of quality, reliability and current legislation.

Visqueen Training Academy

Based at our Derbyshire facility, the Visqueen Training Academy offers a variety of training programs across the UK. These include one-day product awareness sessions for distributors and builders' merchants, and intensive two-day courses for hands-on product installation training. Contact us for more information.

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