Technical Datasheet

Visqueen CM20 Membrane

Features & benefits

- Suitable for use as part of a Type C waterproofing protection system in accordance with BS 8102:2022
- Compliant with the requirements of NHBC Chapter 5.4 as a method of waterproofing protection
- Suitable for heritage buildings and conservation projects - causes little or no damage to the existing structure
- 1mm HDPE membrane - acts as a radon barrier
- Suitable for new and retrofit substructure walls, floors, vaults and tunnels

Product description

Visqueen CM20 Membrane is a 20mm studded cavity membrane formed from 1mm thick high density polyethylene (HDPE). The cavity membrane is black in colour and supplied in rolls, 2m x 20m which includes a 50mm stud free overlap flange along the length of the roll.

Approvals and standards

- Third party certification (BBA Certificate 24/7176)
- CE Mark EN 13967:2012+A1:2017
- Suitable for use as part of a Type C (drained) waterproofing protection system to BS 8102:2022
- 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

Type C waterproofing is defined in BS 8102:2022 as ‘drained protection’. This is achieved by the incorporation of a drained cavity within the below ground structure. The walls and floor must provide enough primary resistance to water ingress to ensure the cavity only accepts a controlled amount of water or dampness. Water is collected in the cavity, between the external wall/floor and an internal lining (cavity membranes), and diverted to a suitable drainage point.

Visqueen CM20 Membrane is used as an internally applied horizontal membrane as part of a Visqueen cavity membrane and drainage system. However in areas vulnerable to high water ingress, the membrane is suitable for use for both horizontal and vertical substrates.

The membrane system is used for damp proofing and internally waterproofing new or retrofit substructure build projects such as the walls and floors of basements, vaulted ceilings, retaining walls, and tunnels.

The membrane system causes little or no damage to the existing structure making it suitable for heritage buildings and conservation projects.

When used as part of a Visqueen cavity membrane and drainage system, Visqueen CM20 Membrane is suitable for structures requiring Grades 1, 2 or 3 waterproofing protection.

When used as part of a radon protection and extraction system, Visqueen CM20 Membrane will restrict the ingress of radon into buildings.

The Visqueen cavity membrane and drainage system can also be used in conjunction with Visqueen Type A or Type B waterproofing protection systems where combined protection is required.

System components

- Visqueen Cavity Drain Membrane System Components
- Visqueen CM Anti-Lime Sealer

Storage and handling

Visqueen CM20 Membrane should be stored upright, under cover in a dry clean environment and in its original packaging.

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

Preparation

All surfaces should be firm, sound and free from obstructions which would hamper free drainage. Defects that might result in unacceptable water ingress in the structure should be repaired before the system is installed. Any embedded timber must be removed as these materials can deteriorate over time in the presence of moisture.

When used in new construction, the concrete slab must be laid in accordance with BS 8204-1:2003+A1:2009 to achieve a flat surface not deviating more than 5 mm from the underside of a 3000 mm straight edge.

Unsound plaster, render or screed should be removed and surfaces made level; floors should be to the above tolerance. Leave all new works to dry thoroughly before applying Visqueen CM20 Membrane.

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All surfaces should be pre-treated with Visqueen CM Anti-Lime Sealer to reduce the risk of leaching of free lime or mineral salts and to avoid the obstruction of the drainage system. Surfaces should be smooth and free from sharp protrusions.

Visqueen CM20 Membrane can be cut with a retractable safety knife or robust scissors.

Installation

Horizontal Floor Application
Bond the membrane lap at the flanges (a 50mm band of membrane running along the edge where no studs are present) with Visqueen CM Butyl Tape and seal the lap edge with Visqueen CM Butyl Overseal Tape. Where stud-to-stud joints occur overlap by three rows, bond the lap with Visqueen CM Butyl Rope and seal the lap edge with Visqueen Butyl Overseal Tape. Mechanical fixings should not be applied to the floor membrane. Abut the horizontal membrane to the vertical membrane and seal the junction with Visqueen CM Butyl Corner Detail Tape. Floors should have a drainage outlet point. There should be a fall towards the outlet point or a drainage channel made around the perimeter of the floor, to ensure that water can flow to the outlet.

Vertical Wall Application
Position the Visqueen CM20 Membrane on the wall and drill a 10 mm diameter hole through the centre of the stud into the wall. Take care when drilling holes to avoid excessive masonry dust from falling into the cavity. Place the Visqueen CM Brick Plug with seal washer into the hole and drive the fixing home with a wooden or rubber mallet. The seal must be compressed to function as a barrier against water ingress, and this should be visually checked as each plug is fixed. Spacings between these fixings will depend on the method of dry lining to be applied. When using preservative-treated timber battens the fixings should be kept to a maximum of 400 mm centres vertically and 600 mm horizontally. Proprietary metal fast track systems and independent frame systems will require fewer fixings, but sufficient number should be used to ensure that the membrane is reasonably tight to the wall, especially at corners.

Bond the membrane lap at the flanges (a 50mm band of membrane running along the edge where no studs are present) with Visqueen CM Butyl Tape and seal the lap edge with Visqueen CM Butyl Overseal Tape. Ensure flanges run vertically on walls and are positioned in front of the preceding width of membrane. Where stud-to-stud joints occur overlap by three rows, bond the lap with Visqueen CM Butyl Rope and seal the lap edge with Visqueen Butyl Overseal Tape. Where horizontal joints occur, ensure that the lower sheet is positioned to the front. Where the vertical membrane extends down past the horizontal membrane seal the junction with Visqueen CM Butyl Corner Detail Tape.

Vaulted Ceiling (where the design permits the use of Visqueen CM20 Membrane)
These can be lined using Visqueen CM20 Membrane, taking care to seal all mitred joints with Visqueen CM Butyl Tape/Rope/Overseal Tape as appropriate.

Service Entry Seal
Where there are services such as pipes, ducting or steel stanchion that protrude through walls or floors, the membrane should be carefully cut and trimmed around the obstacle and the junction sealed using Visqueen CM Butyl Corner Detail Tape.

Water Management
A drainage system of suitable capacity should be provided to collect and dispose of the infiltrating water. The system must be maintainable and inspected at regular intervals. Please contact Visqueen Technical Support for further information.

Condensation Risk
As with any room, there is a need to control the generation and dispersal of moisture in the internal environment and to select appropriate designs to minimise the risk of both surface and interstitial condensation, especially where insulation is used over the membrane.

The membrane has a high resistance to vapour diffusion, and when placed on the cold side of a construction may increase the risk of interstitial condensation. A calculation should be carried out to BS 5250: 2021 and designers should consider appropriate techniques for managing the safe egress of moisture vapour with care, such as control of the internal room environment or use of an air and vapour control layer e.g. Visqueen High Performance Vapour Barrier, on the warm side of the insulation.

Usable temperature range

It is recommended that Visqueen CM20 Membrane and system components should be installed above 5°C.

Additional information

Where the area to be installed with Visqueen CM20 Membrane is below ground, or where conditions are damp, a full survey by a specialist waterproofing surveyor is necessary, to diagnose the cause and to establish if treatment is required.

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.

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Property	Test standard	Result
Dimensions	N/A	2m x 20m
Stud height (approx)	N/A	20 mm
Membrane colour	N/A	Black
Mass	N/A	1 kg/m²
Water void volume	N/A	14.6 l/m²
Compressive strength	BS EN ISO 25619-2	170 kN/m²
Tensile strength MD	BS 12311-2	416 N
Tensile strength CD	BS 12311-2	488 N
Radon diffusion coefficient (unjointed)	ISO/TS 11665-13, method C	$6.5x10^{-12}$ m²/s
Radon diffusion coefficient (jointed)	ISO/TS 11665-13, method C	$1.8x10^{-12}$ m²/s
Watertightness @ 60 kPa for 24 hours	BS EN 1928	Pass
Resistance to static loading	BS EN 12730	>20 kg
Reaction to fire	BS EN 13501-1	Class F

Health and safety information

Please refer to Visqueen CM20 Membrane 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



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

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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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