

Visqueen CM20 Membrane

Features and 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 pending (BBA Certificate pending)
- 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 CM Anti-Lime Sealer
- Visqueen Cavity Membrane System Components

Visqueen CM20 Membrane

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.

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

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.

Visqueen CM20 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.

Visqueen CM20 Membrane

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/m ²
Water void volume	N/A	14.6 l/m ²
Compressive strength	BS EN ISO 25619-2	170 kN/m ²
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 m ² /s
Radon diffusion coefficient (jointed)	ISO/TS 11665-13, method C	1.8x10 ⁻¹² m ² /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).

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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.