Technical Datasheet

Visqueen Ultimate Self Adhesive Membrane

Features & benefits

- Third party accreditation pending
- Complies with CIRIA C748:2014 - industry standard for volatile organic compounds (VOC) protection
- Type A Barrier Membrane (Tanking Membrane) - resistant to VOCs, ground gases and ground water in accordance with BS 8102:2022
- Complies with the methane gas transmission rate, mass per unit area and thickness requirements of BS 8485:2015 + A1:2019 - industry standard for methane and carbon dioxide protection
- Also provides radon and damp proof membrane protection
- Combined self adhesive and heat welded joint application for VOC protection

Product description

Visqueen Ultimate Self Adhesive Membrane is a hydrocarbon and volatile organic compound (VOC) resistant self adhesive tanking membrane. The membrane has a grey self adhesive butyl coating on the underside which is protected with a white siliconised release film.
The membrane roll size is 1.5m x 15m with a 50mm weldable selvedge along the long edge.

Approvals and standards

- Third party accreditation pending
- Suitable for use as a Type A Barrier Membrane (Tanking Membrane) to BS 8102:2022
- Complies with CIRIA C748:2014 for VOC protection
- Complies with the methane gas transmission rate, mass per unit area and thickness requirements of BS 8485:2015 + A1:2019
- Suitable for all Characteristic Gas Situation (CS) ground gas regimes
- Conforms to the specification requirements of BR 211:2023
- UKCA UKNI CE to EN 13969:2004
- 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 Ultimate Self Adhesive Membrane is a cold applied, self adhesive product, suitable for use as a Type A Barrier Membrane (Tanking Membrane) for above and below ground applications e.g. basements, retaining walls and lift pits. It is specifically designed for use in all types of buildings to prevent the ingress of harmful levels of volatile organic compounds (VOCs) and hazardous ground gases e.g. methane, carbon dioxide and radon.

The membrane can be applied to a variety of substrates including concrete, flush pointed blockwork, flush pointed brickwork, weather defence sheathing boards and steelwork, in both vertical and horizontal applications.
The membrane can be used to achieve one form of waterproofing to Grades 1, 2 and 3 as defined in BS 8102:2022.

Storage and handling

Visqueen Ultimate Self Adhesive Membrane should be stored horizontally under cover in its original packaging. Care should be taken when handling the product in line with current manual handling regulations.

Preparation

All surfaces to which Visqueen Ultimate Self Adhesive Membrane are to be applied should be free from cavities or projections, have a smooth finish, be dry and free from dust, loose particles and frost. Masonry, concrete, sheathing boards or metal surfaces should be primed using Visqueen Liquid Gas Membrane and allowed to dry thoroughly. When applying to blockwork or brickwork the joints must be flush pointed or the masonry rendered to ensure a smooth, continuous surface.

The membrane can be cut with a sharp retractable safety knife.

Installation

Visqueen Ultimate Self Adhesive Membrane side and end lap joints should be a minimum of 150mm and should be pressed and rollered to form a continuous bond and to ensure watertightness.

To ensure VOC protection, side laps should be sealed by fully welding the 50mm wide selvedge. Exposed edges of coating at end laps should be sealed using a minimum 100mm wide strip of Visqueen Ultimate Gas Barrier NF-500, Visqueen Ultimate Gas Barrier NF-600, or inverted Visqueen Ultimate Self Adhesive Membrane laid centrally over the joint and fully welded.

At 90 degree changes of direction a Visqueen Axiom UniSeal fillet should be formed prior to membrane installation.

For vertical wall applications cut the membrane to a suitable length allowing an additional 150mm for the laps. Position and peel back release film and apply the self adhesive face to the substrate. Apply pressure to ensure a full bond is achieved. Commence at the top of the wall and work downwards, progressively removing the release film.

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Visqueen Ultimate Self Adhesive Membrane

For horizontal floor applications unroll the membrane where required allowing an additional 150mm for the laps. Re-roll one half of the membrane and cut release film taking care not to damage the membrane. Roll out the membrane progressively removing the release film. Press the membrane onto the substrate e.g. using a soft broom to ensure full adhesion. Repeat for the other half of the roll.

Watertight seals should be formed around all service entry points. Visqueen Ultimate Preformed Top Hat Units or Visqueen Ultimate Self Adhesive Membrane should be used for sealing service entry pipes. Ensure all exposed edges of self adhesive coating are protected as described above.

If the membrane is punctured or perforated, a patch of the same material should be lapped and bonded at least 150mm beyond the extents of the puncture. Ensure all exposed edges of self adhesive coating are protected as described above.

The membrane should always be fully protected immediately after it is installed. When used externally on a retaining wall, the membrane should be protected from backfill with Visqueen Protect&Drain, which also provides a preferential pathway for ground gases.

When forming day joints, the upper edge of the membrane should be adequately secured e.g. bonding onto the top of the retaining wall, or if terminated on a vertical face, the upper edge should be secured with Visqueen Fixing Strip and Visqueen Fixings Pins for Masonry.

Usable temperature range

It is recommended that Visqueen Ultimate Self Adhesive Membrane and all associated system components should not be installed below 0°C. For ease of installation during hot weather conditions (ambient temperatures above 25°C), it is recommended that the product is stored in a cool location prior to use. Elevated product temperatures may temporarily increase the adhesion between the siliconised release film and the adhesive, making the release film more difficult to remove. Allowing the product to cool before installation will minimise this effect.

Additional information

Where concrete construction joints occur Visqueen IGW Waterstop system should be incorporated. When waterproof concrete is required, or for additional detailing information, 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.

Property	Test method	Units	Compliance criteria	Result
Length	BS EN 1848-2	m	±1%	15
Width	BS EN 1848-2	m	±2.5%	1.5
Thickness	BS EN 1849-2	mm	±10%	1.3
Tensile Strength - MD	BS EN 12311	N/mm²	MDV	12
Tensile Strength - CD	BS EN 12311	N/mm²	MDV	14
Joint Strength - MD	BS EN 12317-2	N	MDV	198
Joint Strength - CD	BS EN 12317-2	N	MDV	195
Watertightness 60kPa	BS EN 1928	-	Pass/Fail	Pass
Watertightness 60kPa (alkali ageing)	BS EN 1928	-	Pass/Fail	Pass
Watertightness 60kPa (heat ageing)	BS EN 1928	-	Pass/Fail	Pass
Resistance to impact	BS EN 12691	mm	MDV	400
Resistance to tearing (nail shank) MD	BS EN 12310-1	N	MDV	360
Resistance to tearing (nail shank) CD	BS EN 12310-1	N	MDV	460
Water vapour resistance	BS EN 1931	MNs/g	MDV	5456
Diffusion equivalent air layer thickness	BS EN 1931	m	MDV	1042
Vinyl chloride gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	mg/m²/day	MDV	90
Ethyl benzene gas tranismission rate -	BS ISO 15105-2	ml/m²/day	MDV	0.188

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unjointed membrane to ground VOC vapours - 100%				
Trichloroethene gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	ml/m²/day	MDV	0.137
Xylene gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	ml/m²/day	MDV	0.078
Naphthalene gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	mg/m²/day	MDV	9
Benzene gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	ml/m²/day	MDV	0.118
Toluene gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	ml/m²/day	MDV	0.082
Hexane gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	ml/m²/day	MDV	0.123
Tetrachloroethene gas tranismission rate - unjointed membrane to ground VOC vapours - 100%	BS ISO 15105-2	ml/m²/day	MDV	0.071
Methane gas transmission rate - membrane	BS ISO 15105-1	ml/m²/day	MDV	13.2
Methane gas transmission rate - taped membrane joint	BS ISO 15105-1	ml/m²/day	MDV	13.7
Methane gas transmission rate - welded membrane joint	BS ISO 15105-1	ml/m²/day/atm	MDV	15
Carbon dioxide gas transmission rate - membrane	BS ISO 15105-1	ml/m²/day/atm	MDV	28.7
Carbon dioxide gas transmission rate - taped membrane joint	BS ISO 15105-1	ml/m²/day/atm	MDV	30.2
Carbon dioxide gas transmission rate - welded membrane joint	BS ISO 15105-1	ml/m²/day/atm	MDV	22
Radon gas diffusion coefficient - membrane	PD ISO/TS 11665-13, method A	m²/s	MDV	(1.3 ± 0.2) x 10-13
Radon diffusion length, l	PD ISO/TS 11665-13, method A	m		(2.5 ± 0.3) x 10-4
Radon resistance, R_{rn}	PD ISO/TS 11665-13, method A	Ms/m		4389 ± 522

Health and safety information

Refer to the Visqueen Ultimate Self Adhesive 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

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Complete Range, Complete Solution

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Visqueen Ultimate Self Adhesive Membrane

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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