



Visqueen Gas Barrier

Features and benefits

- BBA certified - third party accreditation
- Complies with BS 8485:2015 + A1:2019 - industry standard for methane and carbon dioxide protection
- Flexible - easy to detail and install on site
- Multi functional - also acts as a radon and damp proof membrane
- Dual jointing methods - lap joints can be taped or heat welded

Product description

Visqueen Gas Barrier is a multi-layer reinforced polyethylene gas barrier with a 20 micron aluminium foil. The barrier is coloured blue on the upper surface and silver on the reverse. The product is supplied in single wound rolls (not folded), 2m x 50m.

Approvals and standards

- Third party accreditation (BBA 13/5069)
- Conforms to the specification requirements of BS 8485:2015 + A1:2019
- Suitable for all Characteristic Gas Situation (CS) ground gas regimes
- Conforms to the specification requirements of NHBC Amber 1 and Amber 2 applications
- Conforms to the specification requirements of BR 211:2015
- CE Mark EN 13967:2017
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 18001:2007
- Environmental Management System ISO 14001:2015

Usage

Visqueen Gas Barrier is suitable for use in all types of buildings to prevent the ingress of harmful levels of ground gases e.g.methane, carbon dioxide and radon.

The barrier can be positioned above or below a solid concrete ground floor slab or above a precast suspended segmental ground floor system, e.g. beam and block floor.

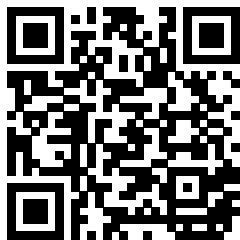
The barrier can also be used as a high performance radon membrane and/or damp proof membrane.

The product is not intended for use where there is a risk of hydrostatic pressure.

System components

- VisqueenPro Double Sided Jointing Tape, 50mm x 10m
- Visqueen Gas Resistant Foil Lap Tape, 75mm x 50m
- Visqueen Ultimate GR Lap Tape, 150mm x 10m
- Visqueen Ultimate Top Hat Units
- Visqueen Preformed Units
- VisqueenPro Detailing Strip, 300mm x 10m, 500mm x 10m
- Visqueen TreadGUARD 300, 2m x 75m
- Visqueen TreadGUARD 1500, 1m x 2m

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Visqueen Gas Barrier

Storage and handling

Visqueen Gas Barrier 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

Visqueen Gas Barrier should be installed on a smooth continuous surface e.g. grouted beam and block floor, a compacted blinding layer e.g. 50mm thick sand blinding, or smooth concrete blinding. The substrate should be free from irregularities such as voids or protrusions.

The barrier can be cut with a sharp retractable safety knife or robust scissors.

Installation

Visqueen Gas Barrier should be loose laid on the substrate with the blue side up so as to avoid sunlight glare.

The barrier should be clean and dry at the time of jointing. It should be overlapped by at least 150mm, bonded with Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Foil Lap Tape. In demanding site conditions seal lap joints with Visqueen Ultimate GR Lap Tape.

Alternatively lap joints can be heat welded to achieve an effective seal. Welded lap joints can be less than 150mm provided the joint integrity is not compromised.

Airtight seals should be formed around all service entry points. Visqueen Preformed Top Hat Units should be used for sealing service entry pipes. The base of the top hat and the upstand should be bonded using Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Foil Lap Tape. The upstand should be secured with the supplied jubilee clip.

Forming an effective barrier to gases may give rise to complex three-dimensional detailing where, it is recommended Visqueen Preformed Units are used e.g. corners. Alternatively Visqueen Pro Detailing Strip can be used to seal awkward junctions.

If the barrier is punctured or perforated a patch of the same material should be lapped at least 150mm beyond the limits of the puncture and bonded with Visqueen Pro Double Sided Jointing Tape and sealed with Visqueen Foil Lap Tape. Alternatively a patch can be formed using Visqueen Pro Detailing Strip and lapped at least 150mm beyond the extents of the puncture.

The barrier should be covered by a protective layer as soon as possible after installation to prevent damage e.g. from following trades. Care should be taken to ensure that the membrane is not punctured, stretched or displaced when applying a screed or final floor covering. A minimum thickness of 50mm screed is recommended. When reinforced concrete is to be laid over the barrier the wire reinforcements and spacers must be prevented from puncturing the barrier. Where there is a high risk of potential damage, the barrier should be covered with Visqueen TreadGuard protection, screed, or other approved protection material before positioning the reinforcement.

Usable temperature range

It is recommended that Visqueen Gas Barrier and all associated system components should not be installed below 5°C.

Additional information

When used in accordance BS8485:2015 + A1:2019 a subfloor ventilation system or pressure relief maybe required
 Where hydrocarbon or VOC contamination is present use Visqueen Ultimate VOC or HC Blok gas protection systems
 To assist build sequencing, Visqueen GR DPC is available for gas protection through the wall constructions
 For suspended beam and block floor detailing see GB-01
 Visqueen Preformed Top Hat Units should be used at service pipe penetrations see GB-51
 For internal and external corners Visqueen Ultimate Preformed Units should be used see PFU-553
 To seal around steel columns use Visqueen Pro Detailing Strip see GB-52
 For additional detailing information, contact Visqueen Technical Services +44 (0) 333 202 6800

Visqueen Gas Barrier

| Property | Test method | Units | Compliance criteria | Result |
|---|---------------------|---------------------------|---------------------|--------|
| Dimensions | EN 1848-2 | m | | 2 x 50 |
| Overall thickness including scrim mesh | EN 1849-2 | mm | | 0.66 |
| Effective thickness in between scrim mesh | EN 9863-1 | mm | | 0.4 |
| Mass | EN 1849-2 | g/m ² | -0%/+5% | 400 |
| Tensile strength - MD | EN 12311 | N | MLV | 350 |
| Tensile strength - CD | EN 12311 | N | MLV | 350 |
| Tensile elongation - MD | EN 12311 | % | MLV | 20 |
| Tensile elongation - CD | EN 12311 | % | MLV | 21 |
| Joint strength | EN 12317-2 | N | MLV | 332 |
| Watertightness 2kPa | EN 1928 | - | Pass/Fail | Pass |
| Resistance to impact | EN 12691 | mm | MLV | 200 |
| Dart impact | BS 2782 | g | MDV | 731 |
| Low temperature flexibility | EN 495-5 | °C | MDV | -40 |
| Durability against ageing | EN 1296 and EN 1928 | - | Pass/Fail | Pass |
| Durability chemical resistance | EN 1847 | - | Pass/Fail | Pass |
| Resistance to tearing (nail shank) CD | EN 12310-1 | N | MDV | 358 |
| Resistance to tearing (nail shank) MD | EN 12310-1 | N | MDV | 368 |
| Resistance to static loading | EN 12730 | kg | MLV | 20 |
| Water vapour transmission - resistance | EN 1931 | MNs/g | MDV | 7000 |
| Water vapour transmission - permeability | EN 1931 | g/m ² /d | MDV | 0.03 |
| Visible defects | EN 1850 -2 | - | Pass/Fail | Pass |
| Reaction to fire | EN 13501-1 | Class | MDV | F |
| BS 8485:2015 + A1:2019 testing requirements | | | | |
| Mass | EN 1849-2 | g/m ² | Average >370 | 400 |
| Methane permeability | ISO 15105-1 | mls/m ² /d/atm | Pass/Fail | <0.15 |
| Puncture CBR | BS EN ISO 12236 | N | MDV | 114 |
| Impact resistance | EN 12691 | mm | MDV | 1000 |
| Tensiles yield strength MD | ASTM D4885-01 | kN/m | MDV | 12.5 |
| Tensiles yield strength CD | ASTM D4885-02 | kN/m | MDV | 7.3 |
| Resistance to static loading | EN 12730 | kg | >MLV | 20 |
| Yield elongation CD | ASTM D4885-04 | % | MDV | 19 |
| Tear resistance - trouser method A - MD | BS ISO 34-1 | kN/m | MDV | 48.2 |
| Tear resistance - trouser method A - CD | BS ISO 34-1 | kN/m | MDV | 44.8 |
| Tear resistance - angle method B - MD | BS ISO 34-1 | N | MDV | 53.5 |
| Tear resistance - angle method B - CD | BS ISO 34-1 | N | MDV | 60.6 |

Health and safety information

Refer to the Visqueen Gas Barrier material safety datasheet (MSDS).

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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 PI designs and special projects

From initial design to the completed project, Visqueen are with you every step of the way. Whether it be hazardous ground gas protection and/or below ground waterproofing protection employing barrier, structurally integral or drained systems, Visqueen can offer professional indemnity (PI) insurance for bespoke Visqueen design solutions.

Visqueen Technical Support Managers work with all stakeholders to provide cost effective Visqueen solutions offering complete peace of mind throughout the construction phase and beyond.

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 three day courses giving detailed hands-on training in the practical skills required for safe and robust product installation.