

Visqueen Ultimate RadonBlok 600

Features and benefits

- Agreement certified - third party accreditation
- Complies with NHBC Foundation's NF94 guidance for use in Type A, Type B and Type C membrane locations in reinforced cast in situ suspended floor slabs and rafts
- Independently tested - proven radon resistance
- Conforms to BR 211:2023 - industry guidance for radon protection
- Outstanding welding characteristics - rapid installation
- Robust - resistant to on site damage
- Flexible - easy to detail and install on site
- Multi functional - also acts as a damp proof membrane
- Dual jointing methods - lap joints can be taped or heat welded

Product description

Visqueen Ultimate RadonBlok 600 is a flexible 0.6mm thick high performance co-polymer thermoplastic membrane. The product is purple in colour and supplied 2m x 25m in a single wound roll (not folded).

Approvals and standards

- Third party accreditation (IAB certificate 05/0214)
- Complies with NHBC Foundation's NF94 guidance for use in Type A, Type B and Type C membrane locations in reinforced cast in situ suspended floor slabs and rafts
- Conforms to the specification requirements of BR 211:2023
- CE Mark EN 13967:2012
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 45001:2018
- Environmental Management System ISO 14001:2015

Usage

Visqueen Ultimate RadonBlok 600 is used to prevent the ingress of radon in both basic and full radon protection areas. The membrane can be positioned within the ground floor construction either above or below the structural floor.

Radon, carbon dioxide, and methane protection – NHBC NF94 guidance:

Visqueen Ultimate RadonBlok 600 when installed with either taped or welded joints complies with NHBC Foundation's NF94 publication, Hazardous ground gas - an essential guide for housebuilders, in Type A membrane locations in cast in situ monolithic reinforced ground bearing rafts and reinforced cast in situ suspended floor slabs with minimal penetrations. Visqueen Ultimate RadonBlok 600 also complies with this guidance when installed with welded joints in Type B and Type C membrane locations in cast in situ monolithic reinforced ground bearing rafts and reinforced cast in situ suspended floor slabs with minimal penetrations. For site or zone characteristic gas situations of CS4 and above, contact Visqueen Technical Services.

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

System components

- Visqueen Ultimate RadonBlok Double Sided Tape, 30mm x 30m
- VisqueenPro Single Sided Tape, 75mm x 25m
- Visqueen GR Lap Tape, 150mm x 10m
- Visqueen Top Hat Units
- Visqueen Preformed Units
- VisqueenPro Detailing Strip, 300mm x 10m, 500mm x 10m
- Visqueen Radon Sump

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- Visqueen Class B FR Vapour Check is a fire resistant AVCL (air and vapour control layer)
- Surpasses all national Building Regulations and Standards for air and vapour control layers
- Fire classification B - s1, d0
- Competitive, efficient and fully tested system (including tapes) for fire resistance



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Visqueen Ultimate RadonBlok 600

Storage and handling

Visqueen Ultimate RadonBlok 600 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 Ultimate RadonBlok 600 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 membrane can be cut with a sharp retractable safety knife or robust scissors.

When installing the membrane in demanding site conditions, use Visqueen GR Lap Tape in place of VisqueenPro Single Sided Tape.

Installation

Visqueen Ultimate RadonBlok 600 should be loose laid on the substrate. The membrane should be clean and dry at the time of jointing. It should be overlapped by at least 150mm, bonded with Visqueen RadonBlok Double Sided Tape and sealed with VisqueenPro Single Sided Tape. Alternatively lap joints can be heat welded to achieve an effective seal. The overlap in the barrier is typically 100mm and when hand welding, a 35mm weld is normally achieved. When hand welding, a roller must be used.

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 RadonBlok Double Sided Tape and sealed with VisqueenPro Single Sided Tape. The upstand should be secured with the supplied jubilee clip. Alternatively VisqueenPro Detailing Strip can be used to seal service entry points. The upstand should be secured with a jubilee clip.

Forming an effective barrier to radon 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 membrane 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 RadonBlok Double Sided Tape and sealed with Visqueen Pro Single Sided Tape. Alternatively a patch can be formed using VisqueenPro Detailing Strip and lapped at least 150mm beyond the extents of the puncture.

Long periods of exposure to ultraviolet light will reduce the effectiveness of the membrane. The membrane should be covered by a protective layer immediately after installation to prevent damage from following trades, ultraviolet light, etc. 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 membrane the wire reinforcements and spacers must be prevented from puncturing the membrane. Where there is a high risk of potential damage, the membrane should be covered with Visqueen TreadGUARD protection, screed, or other approved protection material before positioning the reinforcement.

When used in full radon protection areas, a Visqueen Radon Sump or subfloor ventilation system maybe required.

Usable temperature range

It is recommended that Visqueen Ultimate RadonBlok 600 and all associated system components should not be installed below 5°C.

Additional information

Where ground gas protection is required to BS 8485:2015 + A1:2019, use Visqueen Gas Barrier system
 To assist build sequencing, Visqueen Zedex CPT DPC is available for radon protection through the wall constructions
 For suspended beam and block floor detailing see RADBLOK-01
 For ground bearing slab detailing see RADBLOK-14
 Visqueen Preformed Top Hat Units are available for service pipe penetrations see RADBLOK-51
 For internal and external corners Visqueen Preformed Corner Units are available see PFU-553
 To seal around steel columns use VisqueenPro Detailing Strip see RADBLOK-52
 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.

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Property	Test method	Units	Compliance criteria	Result
Length	EN 1848-2	m	-10%/+10%	25
Width	EN 1848-2	m	-2.5%/+2.5%	2
Straightness	EN 1848-2	-	Pass/Fail	Pass
Thickness	EN 1849-2	mm	-12%/+12%	0.6
Tensile strength - MD	EN 12311	N/mm ²	MDV	15
Tensile strength - CD	EN 12311	N/mm ²	MDV	15
Tensile elongation - MD	EN 12311	%	MDV	400
Tensile elongation - CD	EN 12311	%	MDV	400
Joint strength	EN 12317-2	N	MLV	400
Watertightness 2kPa	EN 1928	-	Pass/Fail	Pass
Resistance to impact	EN 12691	mm	MDV	200
Durability (artificial ageing)	EN 1296 and EN 1928	-	Pass/Fail	Pass
Durability chemical resistance	EN 1847	-	Pass/Fail	Pass
Resistance to tearing (nail shank) MD	EN 12310-1	N	MDV	345
Resistance to tearing (nail shank) CD	EN 12310-1	N	MDV	340
Water vapour transmission - resistance	EN 1931	MNs/g	MDV	1188
Water vapour transmission - permeability	EN 1931	g/m ² /d	MDV	0.12
Diffusion equivalent air layer thickness	EN 1931	m	MDV	238
Low temperature flexibility	EN 495-5	°C	MDV	-25
Radon Transmission Rate	SP test method	m ² /s	MDV	5.7 x 10 ⁻¹²
Methane gas transmission rate	ISO 15105-1	ml/m ² /day/atm	MDV	300
Visible defects	EN 1850 -2	-	Pass/Fail	Pass
Reaction to fire	EN 13501-1	Class	MDV	E

Health and safety information

Refer to the Visqueen Ultimate RadonBlok 600 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 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.