

Visqueen High Performance Radon Membrane

Page 1 of 3



- Accredited by the Irish Agrément Board (IAB: 05/0214)
- Prevents the ingress of Radon gas
- High resistance to puncturing & tearing

Description

Visqueen High Performance Radon Membrane is an LDPE un-reinforced membrane. Visqueen High Performance Radon Membrane™ is suitable for use in concrete floors not subject to hydrostatic pressure, in accordance with the relevant clauses of IS 325:Part 2:1995 and of BS CP 102:1973 Code of Practice for protection of buildings against water from the ground. The product can be installed as an over-site membrane, either between a sand blinded hardcore (50mm of sand minimum) bed and the base concrete, or layered on top of high-density insulation (25kg/m³) with a concrete screed layered over it.

Application

Visqueen High Performance Radon Membrane™ can be used in most common floor constructions. It is installed in a similar way to damp proof membranes, but with much greater attention to sealing, detailing and workmanship. The radon barrier will also perform the same function as a damp proof membrane. To be fully effective, a radon barrier must bridge cavities in walls to the exterior of the building. Where necessary, narrow strips of membrane can be used to seal walls and cavities. All designed cavities must be properly closed.

Guidance on the design of radon protection systems for new and existing buildings is given in the DoELG document Radon in Buildings and in the BRE (UK) document Radon – Guidance on protective measures for new dwellings.

To avoid creating slip planes in masonry walls, a damp proof course should not be laid on the same course of blockwork as the Visqueen High Performance Radon Membrane™ (see the recommendations in IS 325:Part 2:1995 Code of Practice for use of masonry, Part 2: Masonry Construction). Consideration must be given to the positioning of a radon barrier in relation to thermal insulation. The recommendations contained in IS 325: Part 2:1995 and the BRE Report Thermal Insulation – avoiding risks should be followed. The integrity of a radon barrier must be maintained during installation. The Visqueen High Performance Radon Membrane™ is resistant to puncturing and tearing, but where damage occurs this must be repaired by covering with a second

layer of membrane, overlapped by at least 150mm, sealed with double sided tape and secured with girth jointing tape. Installation of the Visqueen High Performance Radon Membrane™ must be in accordance with the recommendations of IS 325:Part 2:1995, clause 11 of BS CP 102:1973 Code of Practice for protection of buildings against water from the ground, and the requirements of this Certificate. Additional guidance on the use of damp proof membrane materials is given in BS 8000: Part 4:1989 Code of Practice for waterproofing. Sheets must be clean and free from dirt and grease before application, and in view of the difficulty of achieving gas tight seals under wet or dirty site conditions it is recommended that special care be taken with this aspect of the installation.



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Installation

After the Visqueen High Performance Radon Membrane™ has been unrolled, double sided tape should be applied approximately 50mm from the edge. The next width of radon barrier should then be overlapped. For an effective radon proof system all laps must be a minimum of 150mm and the joint should be secured with girth jointing tape which provides added security against any potential leakage path. Ensure that the membrane is clean, dust free and dry at the time of jointing. Top hat units should be used to form airtight seals around service entry points. The base of the top hat unit must be sealed to Visqueen High Performance Radon Membrane™ using double sided tape and girth jointing tape. The unit must be fastened to the service pipe using a combination of the jointing tape system and a jubilee clip to provide fastness. Where sub floor depressurisation is required, then a radon sump should be used, located as close to the centre of the building as possible. All pipe work connecting to the sump should fully sealed using the jointing tape system. A venting pipe should be connected to the sump, which needs to leave the building. Until such time as a fan is installed, the pipe should be capped (Note: a sump is only installed as a fallback measure and does not provide any radon removal until a fan is installed or is connected to a passive stack system). A screed or other protective layer should cover Visqueen High Performance Radon Membrane™ as soon as possible after installation. Care should be taken to ensure that the membrane is not punctured, stretched or displaced when applying the screed or concrete. A minimum thickness of 50mm screed is recommended. When reinforced concrete is to be laid over the barrier, the wire reinforcements must be prevented from contacting the barrier. It is recommended that the barrier is covered with screed before positioning the reinforcement. When underfloor heating is being installed, it is recommended that the Visqueen High Performance Radon Membrane™ is positioned between the blinded hardcore and the insulation to protect the installation from moisture and to avoid any risk of overheating the membrane. External and internal corners should be rounded. Where this is unavoidable, the angles must be strengthened with a 300mm wide strip of the membrane.

TYPICAL PROPERTIES

Technical Properties

Material	Conductivity W/mK
Thickness	380µm
Radon Permeability	$8 \times 10^{-12} \text{ m}^2/\text{s}$
Water Vapour Permeability	0.15 g/m ² /day
Weight	0.395 kg/m ²
Tensile Strength	MD: 24.2 N/mm ² CD: 20.7 N/mm ²
Low Temperature Flexibility	-30C
Standard Roll Width	4m
Standard Roll Length	15,18,20m
Colour	Red
Elongation at max load	MD: 360% CD: 380%
Tear Resistance	MD: 185 N CD: 185 N
Dimensional Stability	MD: -0.37% CD: +0.20%

The information given in this datasheet is based on data and knowledge correct at the time of printing. Statements made are of a general nature and are not intended to apply to any use or application outside any referred to in the datasheet. As conditions of usage and installation are beyond our control we do not warrant performance obtained but strongly recommend that our installation guidelines and the relevant British

SPECIFICATION SUPPORT

The following items are available to view online or to download from www.visqueenbuilding.co.uk

- . Technical Datasheets
- . Typical installation CAD details
- . Health and Safety data

Register online for access to NBS Clauses and for information about our CPD Seminars



TECHNICAL SUPPORT

For advice on detailing or installation call Visqueen Building Products Technical Help Line 0845 302 4758. Pricing & Availability may be obtained from our UK Network of merchant stockists. For details of these call our Sales Office on 0845 302 4758.

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Standard Codes of Practice are adhered to. Please contact us if you are in any doubt as to the suitability of application.

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