Radbar® 300µM RADON GAS BARRIER

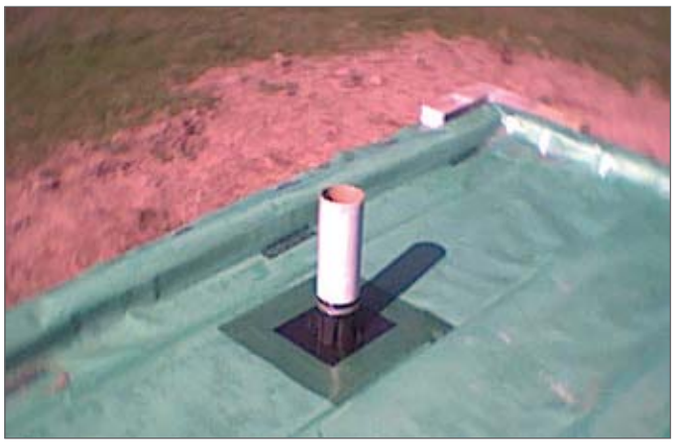
CE mark to EN 13967

CAPITAL VALLEY PLASTICS

Radbar 300µm is a manufactured blown polythene, mono layer film produced from virgin polymer. Radbar radon resisting membrane is a passive control system.

THE RADBAR RADON SYSTEM consists of a membrane extending the whole of the floor and walls. The system should incorporate an under floor ventilated sump or sumps, which can be subsequently converted to an active system by use of suitable ventilation fans. Radbar radon resisting membrane when installed in accordance with the BRE and NHBC recommendations, will also act as a damp proof membrane to protect the building against the ingress of moisture from the ground.

- **Certified by the British Board Of Agreement and the Irish Agreement Board. Radbar complies with NHBC Recommendations and CIRIA C665.**
- **Suitable for use as a Radon Gas Barrier and a Damp Proof Membrane.**
- **Radbar 300µm has been independently tested for Radon Gas Resistance.**
- **Radbar 300µm is produced from high quality polymers, is very robust and has a high resistance to puncture.**



CE
EN 13967
Type A
14

Independently Tested rapra TECHNOLOGY

Pifa QUALITY ASSURED
Membership 1995/09

NSAI Agrément
Radbar Radon & CO_2 Resisting Membrane
CERT No. 03/0115

BBA BRITISH BOARD OF AGREMENT
Designated by Government to issue European Technical Approvals

nqa. ISO 9001 Registered
UKAS QUALITY MANAGEMENT 015

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Application

Radbar 300µm Radon Gas Barrier is a safe solution to prevent the ingress of Radon gas when used in the construction of buildings and dwellings. Radon barriers provide significant protection and are relatively cheap to install in new buildings, being in effect an enhanced gas tight dpm. They are also much cheaper and less intrusive than radon remedial measures used for existing buildings. It is therefore prudent to provide them where there is any reasonable indication that a site has enhanced radon potential. In addition, someone purchasing a new property will expect their new building to be protected against radon if it is in an area at risk. Providing protection in borderline cases reduces the need to explain why measures have been omitted. The building regulations require that proper precautions be taken to prevent danger to health and safety when building on gas contaminated land. When installed in accordance with the BRE report 211 "Guidance on protective measures for new buildings" (supports building regulations approved document C2 (2004), (also approved document L 2007) Radbar is an effective solution to the problem and can be laid with confidence.

Storage on site

Radbar 300µm Radon Gas Barrier is not recommended for use when exposed to sunlight and general outdoor weather conditions for long periods of time. Weathering will not occur when installed with code of practice CP102 1973. Rolls should be stored undercover and on a flat level surface.

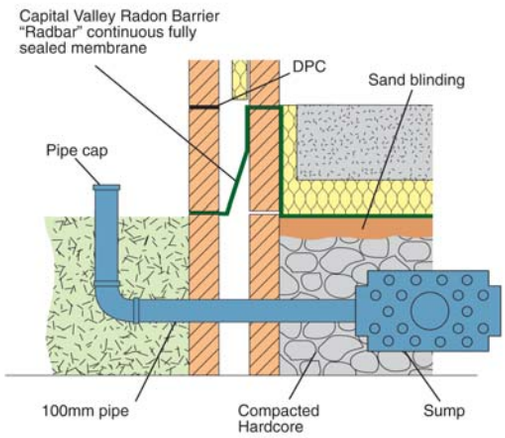
Handling on site

Quality control during the laying of the membrane is extremely important. The membrane should be protected either through the use of temporary boarding over its whole area, or the immediate laying of a floor screed. A high standard of workmanship is required if radon protective measures are to prove successful. Regular supervision and checking is essential. There is no room for an 'out of sight, out of mind' philosophy as subsequent radon measurement will show up any failures. While there is no statutory requirement to inspect the barrier, BRE strongly recommends that an inspection is carried out before covering up.

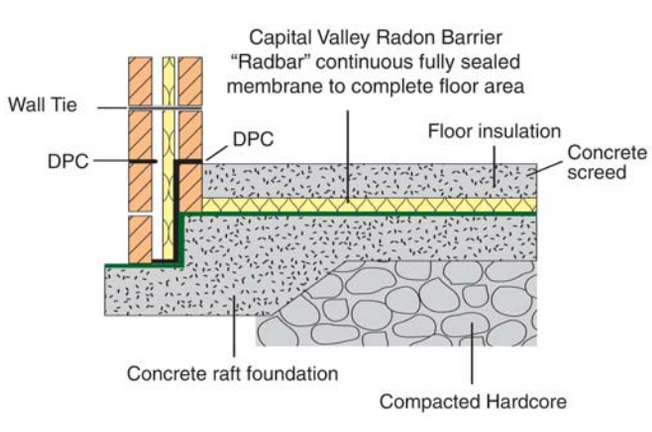
Installation

Radbar 300µm Radon Gas Barrier system must be laid in accordance with the Building Research establishment BRE No. 211 "Guidance on protective measures for new buildings" (supports building regulations approved document C2 (2004), (also approved document L 2007). Radbar 300µm Radon Gas Barrier 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 joint sealing of the gas resisting membrane, under wall sealing and workmanship. The membrane will also perform the same function as a damp proof membrane. Where there is risk of hydrostatic pressure this product is not intended for use. Radbar 300µm Radon Gas Barrier should be laid on a smooth surface or sand blinding to prevent the membrane from puncture. The membrane must be free from grease and dirt.

Cavity Wall / Floating Slab Application



Raft Foundation



The drawings should not be considered working drawings. It is the designer's responsibility to develop final details suitable for individual buildings.

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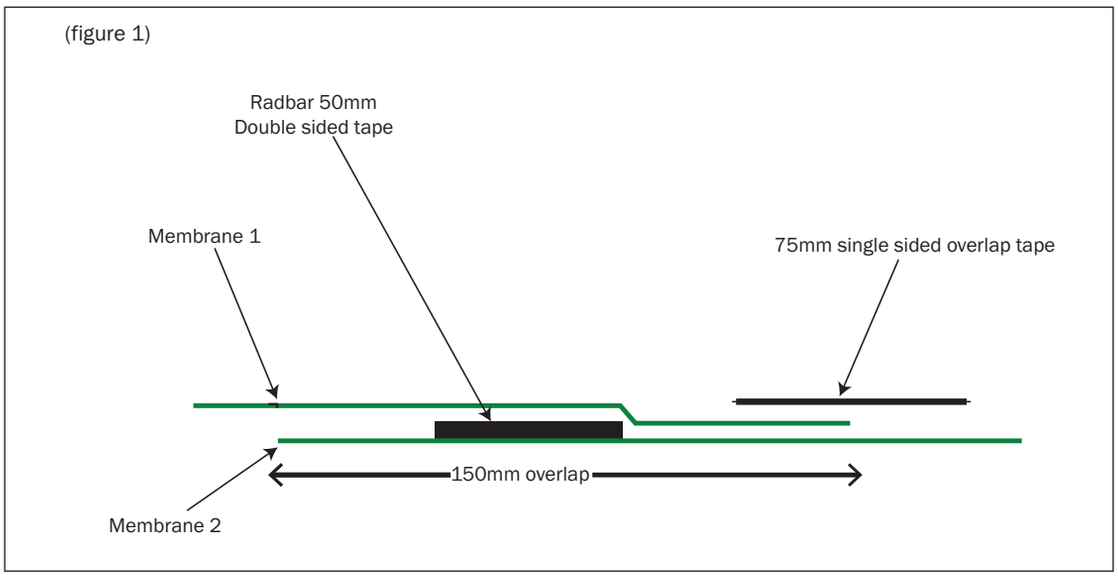
Protecting the Membrane after Installation

Radbar 300µm Radon gas barrier should be protected as soon as possible once installed. A minimum thickness of 50mm screed is recommended. Care should be taken when the screed is applied not to cause stretching, puncture or displacement of the membrane.



Jointing Radbar 300µm Radon Gas Barrier

Sheets must be clean and free from dirt and grease before application of Radbar double sided gas tape, and in view of the difficulty of achieving gas tight seals under wet or dirty conditions it is recommended that special care is taken with this aspect of the installation. Unroll one width of the membrane after determining the most effective method of covering the area. Apply the Radbar double sided gas tape about 50mm from the edge, leaving the backing paper on. Lay the next width of membrane overlapping the first by 150mm. Remove the backing paper from the Radbar double sided gas tape and join the top sheet to the bottom sheet by applying pressure with a hand roller. Where the membranes overlap apply the 75mm single sided tape, equidistant on both membranes. See figure 1.

All service entry points must have airtight seals. Top hats and corner pre-forms must be sealed using Radbar Double sided gas tape. (As in figure 1)

Jointing of Membrane

1A
Unroll the first membrane, ensure the surface is dry and free from dust or grease. Inspect the membrane to ensure that there are no indentations or protrusions. If there are remove and apply sand blinding.

2A
Apply Radbar Double Sided Tape to the membrane, 50mm from the edge. It is very important that the membrane is dry and free from dust and dirt.

3A
The second membrane must be unrolled overlapping the first membrane by 150mm. Remove the protective paper from the Radbar Double Sided Tape and apply pressure to the membrane while joining the two membranes together.

4A
Seal the two membranes by installing Radbar Single Sided Tape to the edge. (ensure that the membrane is completely dry, free from dust and dirt.

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TECHNICAL DATA

Radbar 300µm Radon Gas Barrier

Technical Data	
Thickness	300µm
Width (m)	4metres - 0 + 2.5%
Length (m)	25 metre - 0 + 10%
Colour	Green Tint / Red
Roll Weight	27.6Kg
Elongation	
BS 2782 1976 (1996) Method 320A	Unaged: Long 600% Trans 600%
SP	Aged: Long 500% Trans: 500%
Radon GAS (rn-222) (SP Swedish National Testing and Research Institute)	
Radon Permeability (10^{-12} m^2/s)	6±15%
Radon Transmittance (10-9 m/s^{-1})	5±15%
Technical Performance	
BS 3177 1959 (1995)	Water Vapour Trans Rate $g/m^2/day$ 0.29
Density	0.92g/cm^3
BS EN ISO (1997)	Mass / unit area 368g/m^2
BS 3177	Water Vapour Resistance (MNsg-^{3}) 708
BS 747 (MOAT 27 : 5.4.1)	Tear strength (nail) (Max load N) >118

Radbar 300µm Radon Gas Barrier is classified as non-hazardous (code of practice CP102 1973). The product is chemically inert and any acids or alkalis present in the subsoil will not affect the membrane.

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