

## Structural Waterproofing Systems

### RADBAR 500 Micron Gas Barrier

#### Application

Radbar 500 micron gas barrier is a safe solution to prevent the ingress of CO2 Methane and Radon gas when used in the construction of buildings and dwellings. Typical areas where the membrane may be used are, coalfields, contaminated industrial sites, landfill and brown field sites.

#### Description

Radbar 500 micron gas barrier is a very effective gas barrier and protects buildings and occupiers from the ingress of gas and moisture. 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 414 "Protective measures for housing on gas contaminated land" Radbar is an effective solution to the problem and can be laid with confidence. Its distinctive orange colour and printed traceability code on the film, ensures that material can easily be identified.

#### Storage on Site

Radbar 500 micron 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. Radbar 500 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 practise 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.

#### Installation

Radbar 500 micron gas membrane system must be laid in accordance with the Building Research establishment BRE No.414. "Protective measures for housing on gas contaminated land" Radbar 500 micron gas membrane can be used in most common floor constructions, Radbar 500 micron gas membrane 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 500 micron gas membrane 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.

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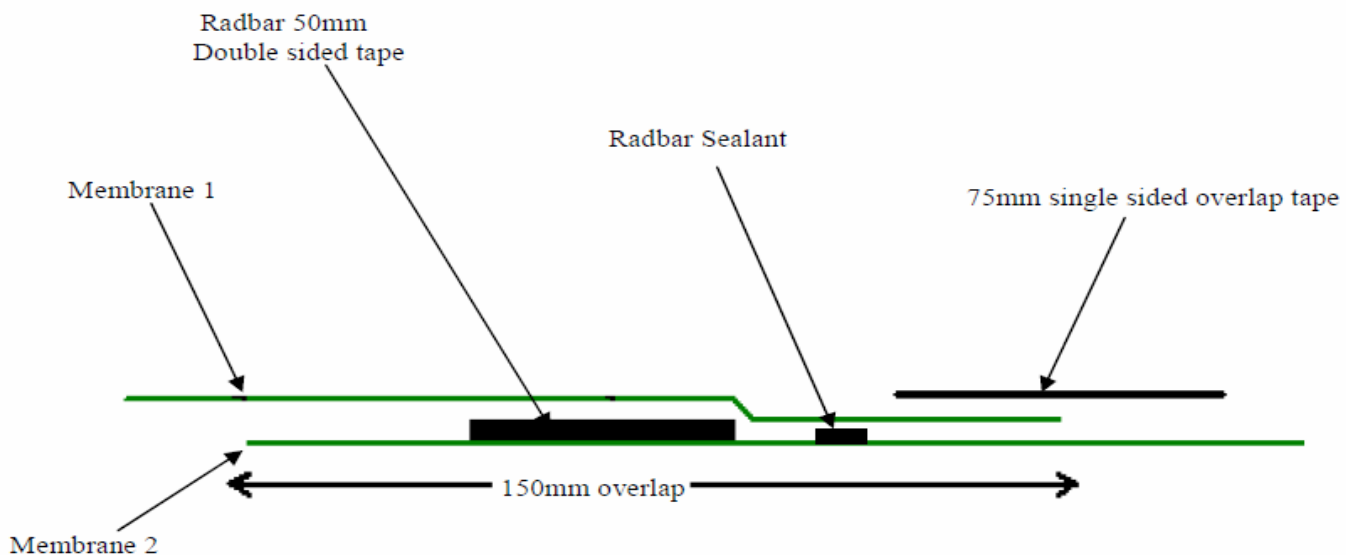
### Protecting the Membrane after Installation

Radbar 500 micron 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.




### Joining Radbar 500 micron 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 and Radbar Sealant. (As in figure 1)

(figure 1)



### Technical Data

Radbar 500 Micron Gas Membrane	
<b>Technical Data</b>	
Thickness	500mu
Width (m)	2metres - 0 + 2.5%
Length (m)	25 metres - 0 + 10%
Roll Weight	23Kg
<b>Elongation</b>	
BS 2782 1976 (1996) Method 320A	Unaged: Long 400% Trans 500%
Tested on 360 micron material  <b>Radon GAS (rn-222)</b> (SP Swedish National Testing and Research Institute)	
Radon Permeability ( $10^{-12}$ m <sup>2</sup> /s)	8±15%
Radon Transmittance ( $10^{-9}$ m/s <sup>-1</sup> )	22±15%
 <b>Methane Gas</b> (Rapra tested)	
permeability test in accordance with ISO 2782: 1995	Permeability Value: 2.71 E-17 #
permeability test in accordance with ISO 2782: 1995	Gas Trans. Rate 23.7 cc/m <sup>2</sup> /hr #
 <b>Gas (CO2)</b> (Rapra tested)	
permeability test in accordance with ISO 2782: 1995	Permeability Value: 4.67 E-17 #
permeability test in accordance with ISO 2782: 1995	Gas Trans. Rate 39.5 cc/m <sup>2</sup> /hr #
N.B. # Tested on 1600 Gauge material <b>Technical Performance</b>	
BS 3177 1959 (1995)	Water Vapour Trans Rate g/m <sup>2</sup> /day 0.15
Density	0.92g/cm <sup>3</sup>
BS EN ISO 536 (1997)	Mass/unit area 460g/m <sup>2</sup>