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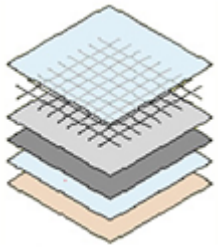
Geomembrane
Solutions

01536 740040
office@pageo.co.uk
www.pageo.co.uk

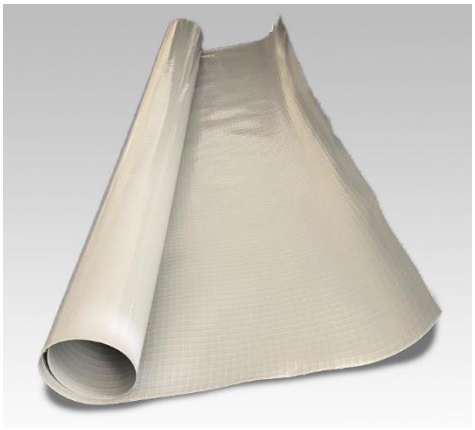
Technical Data Sheet – Monarflex® RAC

(Rev. Jan 2025)

Methane, Carbon Dioxide, Radon and Volatile hydrocarbons – a robust high performance gas barrier, suitable for under slab application.



Top layer	LDPE with stabilizers, Grey
Reinforcement	12x12 mm Polyester multifilament 1670 dtex
Coater Layer	LDPE with stabilizers
Aluminium	Aluminium layer
Coater Layer	LDPE with stabilizers
Bottom Side	LDPE with stabilizers, Grey



- Exceptional flexibility and puncture resistance
- Comprehensively tested with independent validated test results
- Outstanding welding characteristics – efficient installation

Description:

Monarflex RAC is manufactured from four layers of virgin low-density polyethylene (LDPE) with 12mm x 12mm polyester multifilament grid in between to give exceptional strength and tear resistance. The membrane incorporates a 12 µm aluminium foil for extremely low permeability to gases. It also acts as a high performance DPM. Both top and bottom surfaces are grey with a smooth finish.

The original gas barrier membrane, Monarflex RAC has been leading the market since the mid 1990's for high performance quality specific membranes in this sector. It is a multi-foil membrane with a reinforcing scrim and aluminium layer. RAC was originally developed to be welded with the unique extrusion welding system. However, it is equally easily joined by modern thermal welding machines.

Applications:

Monarflex RAC is suitable for the following applications:

- Carbon dioxide and methane affected sites in accordance with BS8485:2015+A1:2019 & NHBC
- VOC affected sites
- Radon affected sites in accordance with BRE211:2015
- Damp protection in accordance with Building Regulations Part C.

Approvals & Standards:

■ BS8485:2015+A1:2019 – Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings. Passed the stringent methane 40ml/m /day/atm (ISO15105-1 to BS8485:2015+A1:2019 requirement) threshold and physical property requirements.

■ CE Mark EN13967 – Moisture Barrier Type A. Flexible sheets for waterproofing. Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet.

CE **Moisture Barrier Type A – EN 13967**

BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate
00/3668
Product Sheet 2

Technical Data:

Technical data	Unit	Value	Tolerance	Test method
Length	m	25	+1% -0%	EN 1848-2
Width	m	2	+/- 2%	EN 1848-2
Thickness	mm	0,8	+/- 10%	EN 1849-2
Weight	g/m^2	800	+/- 5%	EN 1849-2
Straightness	Pass/Fail	Pass		EN 1848-2
Visible defects	Visible	No visible defects		EN 1850-2
Tensile strength	N/50mm	MD: > 800 CD: > 800		EN 12311-1
Elongation	%	MD: > 15 CD: > 15		EN 12311-1
Methane gas transmission	$cm^3(m^2.d.bar)^*$	$\leq$ 0.12		ISO 15105-1
Sd value	m	>1500m		EN 1931
Water vapour transmission	$(m^2.s.Pa)/kg$	$6{,}18x10^{-14}$	$4{,}68x10^{-14}$	EN 1931
Nail tear resistance	N	MD: > 600 CD: > 600		EN12310-1
Resistance to static loading	N	Pass at 200N		EN 12730, Method B
Impact resistance	mm	250mm		EN 12691, Method A
Bitumen compatibility	Pass/Fail	Pass class W1		EN 1548
Joint strength tape	N/50mm	> 60		EN 12317-2
Joint strength welding	N/50mm	> 100		EN 12317-2
Water tightness to liquid water	kPa	Pass at 2 kPa		EN1928
Durability of water tightness against ageing	kPa	Pass at 2kPa		EN 1296
Durability of water tightness against chemicals	kPa	Pass at 2 kPa	.	EN 1847

*a measurement in cm3/(m2.d.bar) is directly equivalent to one in ml/day/m2/atm

System Components:

- PAG SAGR - Self Adhesive Gas Resistant Membrane
- PAG Cross Linked Butyl Sealant
- PAG Primer

(Please note that the membrane can be welded as a preferred alternative to using tape)

NBS Specification:

Monarflex® RAC is specified using the following:
Clause: J40/145
Product: Monarflex RAC
Supplier: PAGeo Ltd, Darwin House, Corby Gate Business Park, Corby, NN17 5JG.

Roll Sizing & Weight:

2m x 25m (50m²)
40 kg - hence appropriate care and equipment is required for unloading and handling.

Storage and Handling:

Classified as non-hazardous when used in accordance with the relevant British Standards. The product is chemically inert and is not affected by acids and alkalis that may be present in the sub-soils.
Rolls are wrapped individually in shrink-wrap polythene. Each roll bears a product description label. Rolls should be stored on their side, under cover and on a flat, level surface, and protected from mechanical damage and heat sources. During storage exposure to direct sunlight is to be avoided.

pageo.co.uk
PAGeo Ltd. Darwin House, Corby Gate Business Park
Corby, Northants, NN17 5JG
Tel : 01536 740040 Fax : 01536 740044 e-mail : office@PAGEO.co.uk web : www.pageo.co.uk
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