Specialist Geomembranes

Landflex™ ZR60

0.60 Alumised Gas Membrane, Gas and Damproof Barrier

Building regulations require that proper preventative measures be taken to avoid danger to health and safety when building on contaminated land. Our gas barrier systems offer a safe solution for the protection of buildings and their occupants constructed in areas where gases are present - such as disused mines, coalfields, industrial and landfill sites.

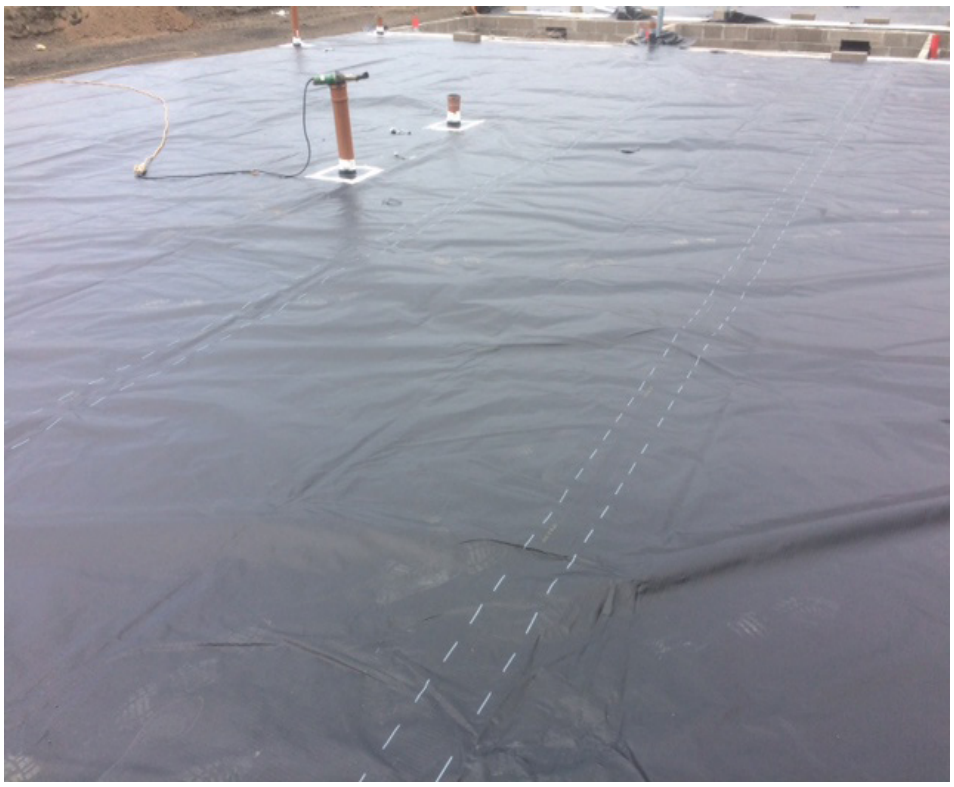
- Low permeability to Carbon Dioxide, Methane & Radon
- Approved for use in NHBC Amber 2 applications
- Manufactured in accordance with ISO 9001, ISO 14001 & SHAS 18001
- Multi layer reinforced LDPE membrane with aluminium core
- Certified by the British Board of Agrement under certificate number 20/5733
- High puncture and tear resistance

Landflex™ ZR60 is recommended for use where medium to high concentrations of radon gas occur, or where methane, carbon dioxide and other gases are present. It can also serve as a damp proof membrane in solid concrete floors to protect structures against moisture from the ground. Manufactured from multi-layer low density polyethylene (LDPE) with a multi filament polyester (1670 dtex) reinforcing grid between to provide high strength and tear resistance, the membrane also incorporates an aluminum foil core for low gas permeability.
Landflex™ ZR60 is manufactured to last the lifetime of the construction provided it is correctly installed by trained technicians and not subject to mechanical damage by other building operations. The material has high puncture resistance and will not be damaged by normal footfall or site traffic on smooth or blinded surfaces.

BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate 20/5733

CE



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Landflex™ ZR60

0.60 Alumised Gas Membrane, Gas and Damproof Barrier

A multi layer, low density polyethylene membrane, reinforced with a polypropylene reinforcing grid with an integral aluminum foil. Specially designed and manufactured to perform as a **Methane, Carbon Dioxide, Radon**, Ground Gas, VOC, Air & Moisture protection system.

Complies with the latest codes of practise as published by BRE, CIRIA and BSI (BS 8485:2019), and carries a relevant BBA certificate for use as a Gas Barrier. Suitable for use as gas protection for NHBC GREEN, AMBER 1 and AMBER 2 site characterisations.

Characteristic	Test Method	Unit	ZR60
Thickness	EN 1849-2	mm	0.6
Width	EN 1849-2	M	Various
Length	EN 1849-2	M	Various
Weight	EN 1849-2	g/m²	370
Hydraulic Properties			
Water Column	EN 20811	-	>300
Resistance to Water Penetration	EN 13967, EN 1928	-	PASS
Water Tightness	EN 1296, EN 1367, EN 1928	-	PASS
Mechanical Properties			
Resistance to Static Load	EN 12730-B	Kg	20
Tensile Strength (MD)	EN 12311-1	N/50mm	600
Tensile Strength (CMD)	EN 12311-1	N/50mm	480
Tensile Elongation (MD)	EN 12311-1	%	20
Tensile Elongation (CMD)	EN 12311-1	%	20
Puncture Resistance	EN 12236	kN	1.25
Resistance to Tearing (nail shank) MD	EN 12310-1	N	330
Resistance to Tearing (nail shank) CMD	EN 12310-1	N	400
Durability and Chemical Resistance			
Transmission rate of Volatile Liquids - Diesel	ISO 6179:2010 (B)	g/m²/h	0.246
Transmission rate of Volatile Liquids - Xylene	ISO 6179:2010 (B)	g/m²/h	0.571
Transmission rate of Volatile Liquids - Toluene	ISO 6179:2010 (B)	g/m²/h	0.583
Transmission rate of Volatile Liquids - Petrol	ISO 6179:2010 (B)	g/m²/h	0.135
Gas Permeability			
Methane Permeability	BS EN ISO 15105-1	ml/m²/day/atm	<0.09
Carbon Dioxide Permeability	BS EN ISO 15105-1	ml/m²/day/atm	<0.09
Radon Permeability	K124/02/95	m²/s	8.0×10^{-15}
Compliance and Certification			
CE Mark - EN13967:2012	NHBC Standards Compliant		
BS 8485:2015 Compliant	BBA Cert No. 20/5733		



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BBA APPROVAL INSPECTION TESTING CERTIFICATION
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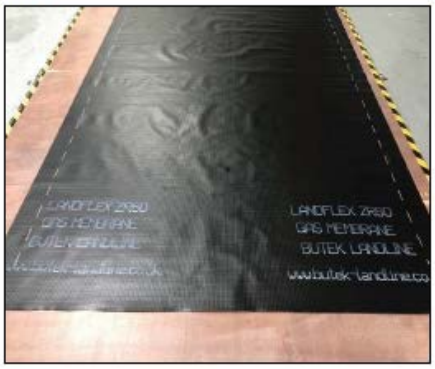
Agrément Certificate
20/5733
Product Sheet 1

BUTEK LANDLINE LANDFLEX ZR60

LANDFLEX ZR60

This Agrément Certificate Product Sheet[1] relates to Landflex ZR60, for use as a low-density polyethylene (LDPE) gas barrier and damp-proof membrane in concrete ground floors, above and below the slab not subject to hydrostatic pressure, to protect the building against moisture, radon, methane and carbon dioxide from the ground.

(1) Hereinafter referred to as 'Certificate'.



CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Resistance to water and water vapour — the membrane provides an effective barrier to the passage of liquid water and water vapour from the ground (see section 6).

Resistance to underground gases — the membrane is capable of restricting the ingress of radon, methane and carbon dioxide into the building (see section 7).

Resistance to puncture — the membrane has a high resistance to puncture and on a smooth or blinded surface will not be damaged by foot or site traffic (see section 8).

Durability — under normal service conditions, the membrane will remain effective against the ingress of water and water vapour, and will restrict the ingress of radon, methane and carbon dioxide during the lifetime of the flooring construction in which it is installed (see section 12).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 3 April 2020

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.
The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk
Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.
Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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