

High performance methane, radon and carbon dioxide resisting, self-adhesive waterproof membrane for basements and below ground structures

Uses

A high performance self-adhesive membrane for resisting methane, radon, and carbon dioxide, and preventing water entering buildings. Proofex 3000MR also provides a vapour and waterproof membrane to water excluding structures and protects concrete from attack by aggressive ground salts.

Advantages

- Aluminium film provides methane, radon and carbon dioxide resistance, protection against damage and gives dimensional stability.
- Solar reflective finish reduces heat gain whilst membrane is exposed during construction.
- Combines toughness with flexibility for detailing around corners, pipes, etc.
- Self-adhesive layer system makes installation quick, simple and reliable.
- Resistant to ground water, soluble sulfates, and chlorides.

Description

Proofex 3000MR is a cold applied, flexible, waterproof, ground gas resistant, high performance Type A waterproofing barrier membrane, as defined in BS8102:2022, 'Protection Of Structures Against Water From The Ground'. It incorporates an aluminium layer and a polymer modified bitumen compound on a high strength polymer backing film.

Specification clause

The waterproofing membrane shall be Proofex 3000MR, BBA Certificate 22/6063, bonded to a prepared, smooth, void free substrate, primed with Proofex Primer. Installation shall be in accordance with the manufacturer's published instructions and the installed membrane shall be protected against damage with either Proofex Protection Board or Proofex Sheetdrain 80.



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Fosroc International Limited Drayton Manor Business Park, Coleshill Road, Tamworth, B78 3XN, UK	
Proofex 3000MR	
EN 13707:2013 and EN 13969:2004 Flexible sheets for waterproofing	
Thickness (EN 1849-1)	≥ 1.2mm
Tensile Strength (EN 12311-1)	Long. 185 N/50 mm Trans. 200 N/50 mm
Elongation at Break (EN 12311-1)	Long. >10% Trans. >20%
Resistance to impact (EN12691)	Met. A ≥ 1750mm Met. B ≥ 1000mm
Static load resistance (EN 12730)	Met. A ≥15 Kg Met. B ≥20 Kg
Tear Resistance (EN 12310-1)	Long. ≥ 45 N Trans. ≥ 45 N
Watertightness (EN 1928:2000)	Method A: Pass at 6m head
Water vapour transmission rate after artificial ageing (EN1931)	μ = 3950000 ±30%
Water vapour transmission rate after artificial ageing (EN1931)	μ = 2850000 ±30%
Flexibility at low temperatures (EN 1109)	<-30°C
Peel resistance of joints (EN 12316-1)	>80 N/50mm
Shear resistance of joints (EN 12317-1)	Long. 220N/50mm Trans. 260N/50mm
Resistance to flow at elevated temperature (EN 1110)	>80°C
Resistance to flow at elevated temperature after artificial ageing (EN 1296 / EN 1110)	>85°C



Standard compliance

Compliant with the permeability requirements of:
BS8485:2015+A1:2019 Table 7 (sheet and joints)

Proofex 3000MR complies with EN 13707:2004 and EN 13969:2004.

Radon Permeability Table 3 of Building Regulations September 2004 (Ireland), Technical Guidance Document C.

Independently certified performance, BBA certificate (No.22/6063).

Independently certified for solar reflectance index to ASTM E1980.

Properties

Radon Transmission Rate	0.47 x 10 ⁻⁹ m/s
Permeability to Radon Gas	0.56 x 10 ⁻¹² m ² /s
Permeability to Methane Gas (membrane) (BS ISO 15105-1)	< 5 ml/day/m ² /atm
Permeability to Methane Gas (lapped) (BS ISO 15105-1)	< 1 ml/day/m ² /atm
Application temperature	+ 5°C / + 35°C
Service temperature	- 40°C / +80°C
Peel adhesion to primed concrete (ASTM D1000)	2.0 N/mm at 23°C
Solar Reflectance Index (ASTM E1980)	103

Application instructions

Where methane, radon or carbon dioxide is present, a comprehensive site survey must be carried out and the building constructed accordingly. Refer to BS8485:2015+A1:2019 and BR211:2023 for further information.

Proofex 3000MR should be laid in accordance with the provisions of BS 8102:2022.

Surface preparation

All concrete surfaces must be a wood float or shutter finish and free from cavities or projections.

Masonry surfaces must be flush pointed and free of voids.

Steel surfaces to be free of rust and scale and prepared to ST3 standard.

All surfaces must be clean, sufficiently dry to prevent transfer of moisture, free of standing water, contamination, ice, and frost.

Priming

Surfaces shall be primed with Proofex Primer. Ensure complete coverage and allow to dry. Only prime an area to which the Proofex 3000MR can be applied the same day. Very porous surfaces may require more than one coat of primer. For details about Proofex Primer SP supply and application, refer to the separate data sheet.

Angle and corner details

A 40mm fillet should be formed at all internal angles using Proofex LM or Renderoc Plug 20.

Where possible, a 25mm chamfer should be provided to all external angles prior to application of the reinforcing strip.

All internal and external angles should be reinforced with Proofex Detail Strip or a 300 mm wide strip of Proofex 3000MR.

Application

Application temperature range with Proofex Primer: 5°C to 35°C.

Vertical application:

Cut the Proofex 3000MR to length allowing 150 mm for end laps / 75mm for side laps and position by peeling back the release paper and applying the self-adhesive face to the prepared surface.

Start at the top of the wall and work down by progressively removing the release paper in stages. Proofex 3000MR should be applied to ensure that all end laps are weathered.

A temporary batten, or other support of the Proofex 3000MR membrane is required before backfilling.

Horizontal application:

Completely unroll the Proofex 3000MR membrane and place against a chalk line.

One half of the roll should then be rolled up to the mid-point, the release paper carefully cut, without damaging the Proofex 3000MR membrane and progressively removed from the mid-point out to the end of the roll.

This process should be repeated on the other half of the roll. The Proofex 3000MR membrane should be brushed onto the surface to ensure good bonding.

The next roll or length is aligned against the previously applied piece allowing for 75mm minimum edge laps and 150 mm end laps and applied as stated previously. The edge and end laps should be rolled to ensure complete adhesion and continuity between the layers.

For deck waterproofing applications where the lapping arrangement results in a side lap detail / end lap detail interface apply a 10mm diameter bead of Nitoseal MS60 to seal the joint.

Penetrations

Penetrations e.g. pipe entries through the Proofex 3000MR membrane require special attention to detail. Use of Proofex Top Hats is recommended and should be stuck to membrane using Proofex Total Tape and sealed to pipe with Nitoseal MS60. For more information see Fosroc Standard Drawings SAM19, 23 & 24.

Protection

Proofex 3000MR membrane should be protected from physical damage and weathering as soon as possible after application. Surfaces should be protected from damage by Proofex Protection Board.

Proofex 3000MR can also be covered with Proofex Sheetdrain to give both protection and a drainage layer.

Backfilling

Backfill must be free from any sharp objects or debris which could damage the Protection/Proofex 3000MR. It should be a well graded material, not containing any rocks or boulders larger than 50mm. Backfilling should be carried out as soon as possible after application, preferably the same day.

Ancillary products

Proofex Protection Board

Bitumen impregnated board, designed to protect membranes from damage through backfilling and trafficking.

Proofex Sheetdrain 80

Geocomposite HDPE drainage and protection membrane

Proofex LM

A two component trowellable membrane for sealing around intricate details such as pipe entries, penetrations, pile caps etc.

Renderoc Plug 20

Rapid setting, cement-based, water-stopping mortar for forming fillets at internal angles.

Nitoseal MS60

Single component gun-applied sealant.

Proofex Detail Strip

A reinforced, double sided waterproof adhesive tape for use as reinforcing at all floor and wall junctions. It consists of a strong synthetic fibre fabric impregnated and coated both sides with a butyl adhesive, which is protected by a removable siliconised paper.

Proofex Top Hat

Prefomed pipe collar for use at service penetrations.

Proofex Angle Fillet

Strips fixed at all floor and wall junctions with a 6mm bead of Nitoseal MS60

Estimating

Proofex 3000MR

Roll size:	1 m x 20 m
Roll area:	20 m ²
Edge laps:	75 mm minimum
End laps:	150 mm minimum
Roll weight:	25 kg

Proofex Primer

(Refer to separate data sheet for Proofex Primer SP)

Coverage:	6 to 8 m ² /litre
Min Application Temp	+5°C & rising
Drying time @ 20°C:	1 to 2 hours
Pack size:	5 ltr and 25 ltr drums

Proofex Detail Strip

Thickness:	1.5 mm
Roll size:	200 mm x 10 m

Proofex Top Hat

Diameter:	110mm	160mm
Flange size:	330mm x 330mm	380mm x 380mm

Proofex Protection Board

3 mm Thickness:	1000 mm x 2000 mm
Coverage:	2.0 m ²

Proofex Sheetdrain 80

Roll size:	2.4 m x 20 m
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For estimating guidance for other listed products refer to the relevant product data sheet.

Technical Datasheet

Storage

Proofex 3000MR has a shelf life of 12 months from date of manufacture and must be stored in an upright position at a temperature between 5°C and 35°C.

Proofex Primer has a shelf life of 2 years. The 25 litre tins of Proofex Primer should not be stacked more than 2 high.

Precautions

Health and safety

For information on Proofex Primer refer to Product Safety Data Sheet.

Proofex Primer is flammable. Keep away from sources of ignition. No smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.

Flash Point

Proofex Primer: >39°C

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**RR2S when used with Proofex Primer SP.



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