



PRODUCT DATA SHEET

Monarflex CO₂ Membrane

Polyethylene DPM Membrane

Application

Monarflex CO₂ membrane is part of Icopal's Monarflex gas control systems and may be used loose-laid with ground supported or suspended slabs. It is satisfactory for use as a DPM and when properly sealed and detailed to restrict the ingress of CO₂. Monarflex CO₂ membrane is recommended for use in situations where there are low concentrations of CO₂.

Description

Monarflex CO₂ membrane is a three layer membrane manufactured from virgin low-density polyethylene (LDPE) with a polyester reinforcing grid. The membrane is coloured green on the upper surface with a black-coloured underside.

Performance and Properties

Roll Length	25m
Roll Width	4m
Weight	465gm ⁻²
Thickness	0.5mm
Tensile Strength	325N/50mm
Tear Resistance	220N
Elongation	400%
Water Vapour Transmission	8,0x10 ⁻¹³
CO ₂ Diffusion Resistance (R)	283m
CO ₂ Diffusion Resistance D _{CO2}	2,53 x 10 ⁻⁷
Radon Transmittance	1.6x10 ⁻⁸ ms ⁻¹
Radon Permeability	7.9x10 ⁻¹² m ² s ⁻¹

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Installation Details

Ground Bearing Slabs:

Monarflex CO₂ membrane may be laid over or under the slab. When laid below slab Monarflex CO₂ membrane should be placed on top of a sand blinding. When placed above slab, the concrete should be dense, smooth and free from any projections which may damage the membrane. Monarflex CO₂ membrane should then be covered with a screed or other suitable protective layer.

Suspended Floors:

Monarflex CO₂ membrane should be laid over the floor slab, which should be free of debris and any projections which may damage the membrane. It should be covered with a screed or other suitable protective layer.

Monarflex CO₂ membrane should be installed and fixed in accordance with the manufacturer's instructions.

Jointing

To form joints between adjacent sheets of Monarflex CO₂ membrane lap the membrane by a minimum of 150mm and seal with a strip of 50mm wide Monobond tape.

Penetrations

Where service ducts or pipes penetrate the membrane, gas tight joints are sealed using Monobond tape, along with top hat units with retention clips.

Complex junctions around penetrations such as, steel stanchions and concrete columns may be detailed and sealed by using a fully bonded membrane such as Monarseal self adhesive gas resisting membrane with an overlap of 150mm on each surface.

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Detail work should be completed first. Once completed, Monarflex CO₂ membrane may be laid and overlapped and sealed in accordance with the manufacturer's recommendations. The membrane should be checked to ensure an effective bond and seal.

Steel, concrete and masonry surfaces should be primed with Xtra-Seal Quick Drying Primer prior to the application of the fully bonded membrane.

Quality Assurance

Monarflex CO₂ membrane is manufactured under a Quality Management System approved to ISO 9001:2000 by BSI Quality Assurance.

Test Standards & Certificates

Monarflex CO₂ membrane is manufactured and CE marked according to the EN 13967 standard.

Typical Specification

Monarflex CO₂ membrane as manufactured by Monarflex Geomembranes Ltd, PO Box 6318, Leighton Buzzard LU7 6AN. The CO₂ membrane is to be installed and sealed in accordance with the manufacturer's instructions.

NBS Specification (available separately)

Monarflex CO₂ and damp-proof membrane is specified using the following:

Clauses: J40

Product: Monarflex CO₂ membrane

Manufacturer: Monarflex Geomembranes Ltd, PO Box 6318, Leighton Buzzard LU7 6AN.

Tel: 08444 123175 Fax: 01525 384477.

Technical Services

Specialist advice and design guidance on all matters relating to Monarflex CO₂ membrane, including CAD detailing for all gas and damp-proofing requirements, is freely available from our Technical Department at the address below.