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# Monarflex® RMB 400

## Gas Protection Systems

### Introduction

Monarflex® RMB 400 is part of the Necoflex RAM™ - Radon, Air and Moisture Protection System, and when correctly installed and detailed in the floor construction protects the structure and occupants by providing an effective barrier to the passage of radon gas, air and moisture into the building from the underlying soil.

It is a loose-laid membrane and may be installed below or above a ground-bearing slab, or on top of a suspended concrete floor. Monarflex® RMB 400 is also suitable for use as a damp-proof membrane.

### Standard

Monarflex® RMB 400 has been independently site and laboratory tested by the National Standards Authority of Ireland and awarded certificate number 09/0328.



### Description

Monarflex® RMB 400 is manufactured from three layers of virgin low-density polyethylene (LDPE) with a 9 x 12mm multi-filament polyester (1670 dtex) reinforcing grid between to give high strength and tear resistance. The membrane is coloured red on both sides.

### Intended Use

Monarflex® RMB 400 is intended for use as a loose-laid gas, air and damp-proof membrane in solid concrete ground floors not subject to hydrostatic pressure, to protect buildings against moisture from the ground.

### Considerations

Installation of Monarflex® radon resisting membranes must be in accordance with the recommendations of 'IS 325: Part 2:1995' and 'BS 8102: 1990'. Additional guidance on the use of damp proof membrane materials is given in 'BS 8000: Part 4:1989 Workmanship on building sites – Code of practice for waterproofing'.

The integrity of a radon resisting membrane must be maintained during installation. Monarflex® RMB 400 is one of several Monarflex® Radon Resisting Membranes available. They have varying degrees of resistance to puncture and tearing. Specific guidance on membrane selection is contained in NSAI Agrément Certificate 09/0328.

### Properties

Roll Width	2.0 m ; 4.0 m
Roll Length	25 m
Colour	Red
Weight/unit area	409 g·m <sup>-2</sup>
Membrane Thickness	0.40 mm
Water Vapour Resistance	1024 MN·s·g <sup>-1</sup>
Equivalent air thickness	S <sub>d</sub> = 176 m

### Durability

Monarflex® RMB 400 is manufactured to last the lifetime of the construction provided it is correctly installed and not damaged by subsequent building operations.

### Compatibility

Monarflex® RMB 400 membranes are fully compatible with the range of Icopal damp-proof courses and membranes.

### Jointing

To form joints between adjacent sheets of Monarflex® RMB 400 lap the membrane by a minimum of 150mm and seal with a strip of 30 mm wide Monobond RT™ tape.

### Installation Details

**Ground Bearing Slabs:** Monarflex® RMB 400 may be laid over or beneath the concrete slab. When laid below slab Monarflex® RMB 400 should be placed on top of a gas permeable layer, such as hardcore blinded with well compacted sand. When placed above slab, the surface should be smooth and free from any projections which may damage the membrane. Monarflex® RMB 400 should then be covered with a screed or other suitable protective layer.

**Suspended Floors:** Monarflex® RMB 400 should be laid over the floor slab and then covered with a screed or other suitable protective layer.

Monarflex® RMB 400 should be installed and fixed in accordance with the manufacturer's instructions.

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### Application

Where service ducts or pipes penetrate the membrane, joints are effected using Monobond RT™ sealant tape and top hat units with retention clips. Alternatively, the Easi-Pour™ self-leveling liquid sealant may be utilised.

Complex junctions around penetrations such as, steel stanchions and concrete columns may be detailed and sealed by using a fully bonded membrane such as Xtra-Load® GRM or Easi-Flash™ self adhesive, bituminous membranes with an overlap of 150mm on each surface.

Detailing work should ideally be completed first to limit foot traffic across the membrane. Once completed, Monarflex® RMB 400 may be laid and overlapped and sealed with Monobond RT™ sealant tape. The membrane should be rolled down firmly to ensure an effective bond and seal.

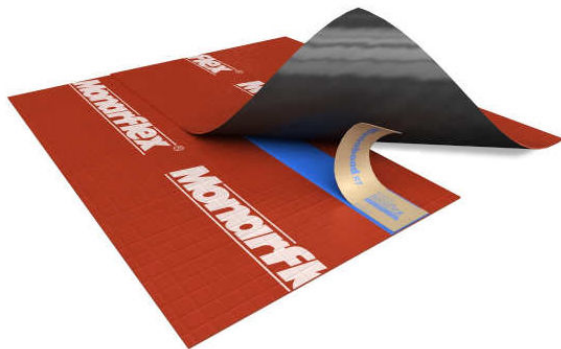
Steel, concrete and masonry surfaces should be primed with Xtra-Seal® QD Bitumen Primer prior to the application of the fully bonded membrane.

### Repair

Any damage must be repaired using patches of Monarflex® RMB 400, extending a minimum 150mm from the puncture and continuously sealed with Monobond RT™ tape.

### Typical Specification

The gas/damp-proof membrane to be Monarflex® RMB 400, as supplied by Necoflex Ltd. Unit 3, Orion Business Campus, Northwest Business Park, Blanchardstown, Dublin 15. Tel: +353 (0) 1 8023333; Fax: +353 (0) 1 8036060. The membrane is to be installed and sealed in accordance to the manufacturer's instructions.



NOTE: This information is given in good faith being based on the latest knowledge known to Icopal Limited. Whilst every effort has been made to ensure the contents of the publication are current while going to press, customers are advised that products, techniques and Codes of Practice are under constant review and liable to change without notice. Up to date information is available from our Technical Services Department on request.

Responsibility cannot be accepted for the application of products, and no claims can be considered, where the manufacturer's instructions have not been followed. The user should not assume, based on information provided in this sheet, that the product is suitable for any abnormal use.

All products are sold subject to our standard conditions of sale, available on request.

### NBS Specification

Monarflex® RMB 400 is specified using the following:

**Clause:** J40/140

**Product:** Monarflex RMB 400

**Supplier:** Necoflex Ltd. Unit 3, Orion Business Campus, Northwest Business Park, Blanchardstown, Dublin 15.



### Quality Assurance

Monarflex® RMB 400 membranes are supplied under a Quality Management System approved to ISO 9001: 2000 by BSI Quality Assurance.



QMS: Q5556

### Delivery and Storage

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.

### Health and Safety

Health and safety data sheets are available for all materials. Please contact Necoflex Limited for further information.

### Technical Services

Specialist advice and design guidance on all matters relating to Monarflex® RMB 400 is freely available from Necoflex at the address below.

### Availability

Item Code	Description	Roll Size
3002978	Monarflex RMB 400	2 m x 25 m
3002979	Monarflex RMB 400	4 m x 25 m