

Grace® Gas Membrane 400

Loose laid sheet membrane system designed to protect buildings against the ingress of methane, radon, carbon dioxide, hydrocarbon vapours and water vapour.

Description

Grace® Gas Membrane 400 is a high performance, reinforced polyethylene membrane incorporating a gas resistant aluminium foil. The multi-layered laminate structure gives good strength, flexibility and installation properties. The upper surface of the membrane is coloured green.

When used with other components in the Grace® Gas Membrane 400 System, a high performance gas protection system can be installed to prevent harmful gases and vapours from entering buildings.

Grace® Gas Membrane 400 also functions as a damp proof membrane and may be linked with other Grace membrane systems to form a fully engineered, continuous, water and gas resistant solution for deeper structures.

Applications

- Sites with medium to high level gas concentrations
- Sites with low to medium level hydrocarbon vapour contamination
- Ground bearing concrete slabs
- Suspended concrete slabs

Advantages

- Fully compatible with Grace Preprufe and Bituthene membrane systems to form an integrated waterproof and gas resistant protection system
- Prevents the transmission of methane, radon and carbon dioxide gases
- Resistant to hydrocarbon vapours
- Fully bonded lap system
- Robust – resistant to on-site damage
- Good puncture resistance
- High tear and tensile strength
- Flexible – can accommodate normal building movements
- Weldable

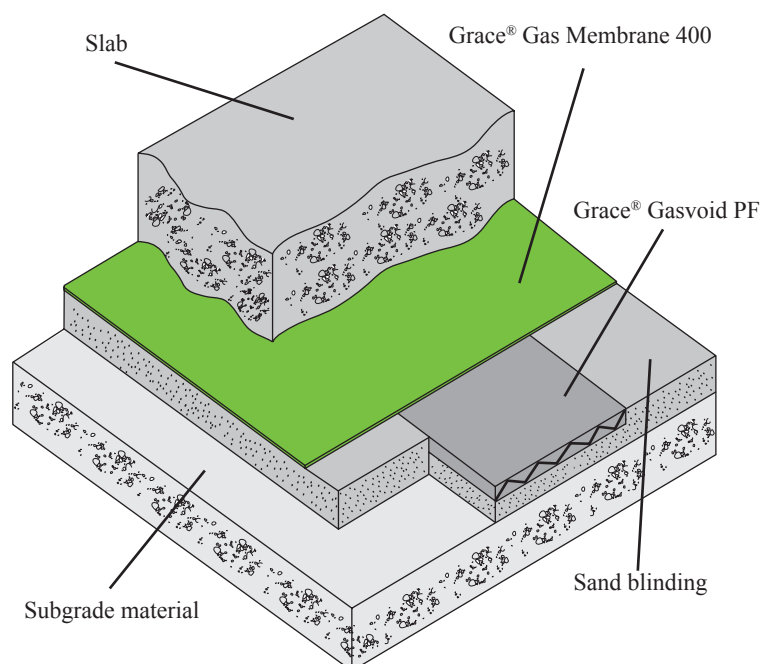
System Components

- **Grace® Gas Membrane 400**
- **Bitustik™ 4000** – bituminous tape for sealing laps
- **Bituthene® MRX*** – self adhesive gas resistant membrane
- **Bituthene® MR DPC*** – foil based gas resistant DPC
- **Grace® Servipak Board*** – 3 mm bituminous protection sheet
- **Grace® Gasvoid PF** – venting geo-composite for partial footprint venting
- **Grace® Gasvoid FF** – venting geo-composite for full footprint venting
- **Venting system components** – for venting at building perimeters

For combined gas protection and waterproofing applications, the following additional Grace products may also be used.

- **Preprufe® 300R/160R*** – pre installed waterproof and gas resistant membrane
- **Bituthene® 8000*** – self adhesive waterproof and gas resistant membrane

** see separate datasheets for product and ancillary details*



Detail shown is a typical illustration only and not a working drawing. For assistance with working drawings and additional technical advice please contact Grace Technical Services

Supply and Storage

Product	Unit Size
Grace® Gas Membrane 400	2 m x 50 m rolls
Bitustik™ 4000	75 mm x 10 m rolls
Grace Servipak Board 3 mm	1 m x 2 m boards
Grace® Gasvoid PF/FF	0.92 m x 50 m rolls
Preprufe® 300R/160R	1.2 m x 30/35 m rolls
Bituthene® 8000/MRX	1 m x 20 m rolls
Bituthene® MR DPC	300-600 mm x 30 m rolls
Venting System Components	Each (various sizes)

Store all products unopened in original packaging in cool, dry conditions out of direct sunlight. Shelf life in these conditions is 12 months from date of manufacture.

Technical Data

	Typical Value
Thickness	400 µm
Weight	360 g/m ²
Tensile Strength	>9 kN/m
Tear Resistance	>350 N
Moisture Vapour Transmission	<0.03 g/m ² /day
Radon Transmittance	<1x10 ⁻⁹ m/s
Methane Transmission	<0.005 ml/ m ² /h/atm

Note: All test results shown in this data sheet are determined under laboratory conditions, using product samples taken from inventory in original packaging, without alteration or modification.

Application

Surface Preparation:

Remove any sharp protrusions from concrete surfaces that could puncture the membrane. Ensure granular or sand sub bases are well consolidated.

Membrane Installation:

1. Grace® Gas Membrane 400 can be installed above or below ground bearing slabs. When installing below ground bearing slabs the membrane can be applied to granular fill or hardcore which should be sand blinded to a typical depth of 50 mm.
2. Where Grace® Gasvoid PF or FF is used, lay the membrane directly onto the Gasvoid product.
3. Minimum lap width is 150 mm, seal all laps by taping with Bitustik 4000 jointing tape or using heat welding equipment.
4. Any membrane integrity testing should be carried out before installation of protection boards or screed.
5. For above slab installations, temporary or permanent protection against site damage should be provided with Grace 3 mm Servipak boards or a minimum 50 mm screed.

Penetrations:

All pipe entries, stanchion bases, columns and other penetrations through Grace® Gas Membrane 400 should be sealed as per Grace typical details.

Lift Pits, Service Ducts etc:

All vertical and inclined concrete and masonry surfaces should be primed with Grace B2 primer, prior to the application of Bituthene 8000 self adhesive gas resistant membrane.

NBS Specification Clause

Clauses: J40/140, J40/145


Product reference: Grace® Gas Membrane 400

Manufacturer: Grace Construction Products Ltd, Ajax Ave, Slough, Berks, SL1 4BH

www.graceconstruction.com

Health and Safety

Before using any of the products included in this product data sheet, read the product labels and comply with all health and safety advice. Further health and safety information is available from the products Material Safety Data Sheet (MSDS) available from Grace or on line at www.graceconstruction.com.

	Grace Construction Products Ltd Ajax Avenue, Slough, Berkshire SL1 4BH United Kingdom 09
	EN 13967 Grace Gas Membrane 400 - Low density polyethylene moisture barrier covering the foundation of a building, Type A Watertightness: Pass at 2 kPa Durability against ageing: Pass Durability against chemicals: Pass

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