

Gas Protection - Membranes

Grace® Gasvoid PF/FF

High strength gas venting composites for use beneath Grace gas membranes as part of a passive gas ventilation system.

Description

Grace® Gasvoid is a high strength, preformed geocomposite designed specifically to remove harmful gases from beneath gas membrane systems. Grace Gasvoid consists of a HDPE (high density polyethylene) cusped core hot welded to a geotextile filter.

Grace® Gasvoid FF Venting Blanket

A high strength, preformed gas venting composite designed for use where full footprint (FF) gas venting is required beneath structures.

Grace® Gasvoid PF Venting Blanket

A high strength, preformed gas venting composite designed for use where partial (PF) gas venting is required beneath structures.

System Components

Designed to link with Grace Gas Venting kits - see separate datasheets.

Installation

- Gasvoid is supplied in rolls which are easily manhandled.
- Gasvoid is designed to be installed below the membrane with flat side of the product against the underside of the membrane.
- Carry or roll Gasvoid from the storage area to place of work. DO NOT DRAG the roll, as this will damage the product. If mechanical plant is used to carry the rolls ensure that the Gasvoid is not damaged by bucket teeth, etc.
- In choosing the commencing point and direction of laying, consider the intended access point for concreting vehicles to avoid any need to traffic over the Gasvoid.
- Gasvoid can be cut to length with a sharp knife or disc saw and may be cut to fit around pile caps and other slab penetrations. Gasvoid may also be taken under slab thickenings and around ground beams. Installation of full and partial footprint venting systems is described below
- Collected gas is discharged from the Gasvoid using standard gas venting fittings which connected directly to the Gasvoid sheet. Separate installation diagrams are supplied with gas vent fittings.
- Before concreting, gas membrane is installed on top of Gasvoid.
- Steel reinforcement can be supported off the Gasvoid and gas membrane by the usual spacers.

Full footprint/blanket application (Gasvoid FF)

1. The Gasvoid FF geotextile extends beyond the width of the dimpled HDPE core at one side to create an overlap.
2. Unroll the first roll of Gasvoid FF and turn over to leave the geotextile flap on the side of the roll facing the area where next Gasvoid FF sheet will be unrolled.
3. The next roll should be placed in a similar way to the first and such that the dimpled plastic cores butt together.
4. Continue laying further rolls in a similar manner to create gas venting blanket.
5. When the other edge of the slab is reached, the Gasvoid roll may need to be reduced in width. Cut the excess dimpled core away and fold the textile onto the top of the Gasvoid.

Partial footprint application (Gasvoid PF)

1. Gasvoid PF should be installed in strips at centres shown on drawings. A Gasvoid PF strip can be used around the perimeter to act as a collector strip connected to gas vent outlets.

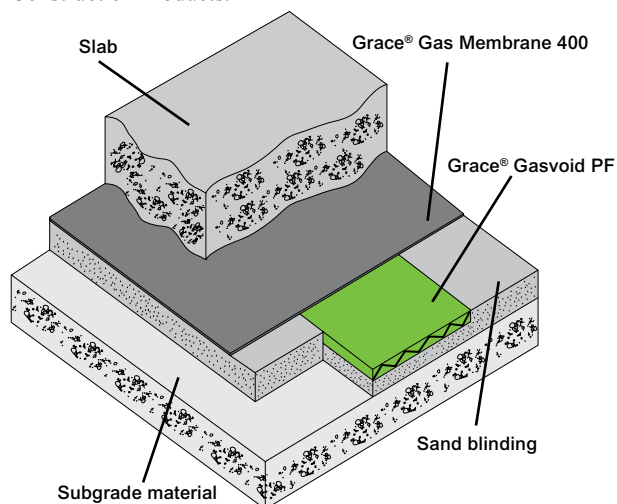
NBS Specification Clause

Refer to Clause J40/295.

Product reference: Grace Gasvoid PF/FF.

Health and Safety

There is no requirement for a Material Health and Safety Data Sheet for Grace Gasvoid. For health and safety questions on these products please contact Grace Construction Products.



Details shown are typical illustrations only and not working drawings. For assistance with working drawings and additional technical advice please contact Grace Technical Services.

Supply

Grace® Gasvoid PF	915 mm x 50 m roll
Grace® Gasvoid FF	915 mm x 50 m roll

Physical Properties

CORE	Typical Value	Test Method
Type	Single Cusped (Dimpled)	
Material	Gas resistant HDPE (High Density Polyethylene)	
Mass per unit area	1250 g/m ²	BSEN 965: 1995
Impact resistance	Excellent (even at low temperatures)	
Bacteria / Chemical resistance	Superior & highly resistant to all common chemicals	
COMPOSITE		
Intrinsic Permeability	> 1.30 x 10 ⁻⁵ m ²	DoE
Forcheimer Term	< 19.0 s/m	DoE
Porosity	Min 0.85	DoE
Thickness at 2 kPa	27 mm	BSEN 964-1:M 1995
Compressive Strength	250 kPa	ASTM D1621 (MOD)
Tensile Strength (Long/ Cross)	20 / 20 kN/m	BSEN ISO 10319: 1996
Elongation (Long/ Cross)	40 / 40 %	BSEN ISO 10319: 1996
CBR Puncture Resistance	3000 N	BSEN ISO 12236: 1996
Life Expectancy	120 years	
Working Temperature	-20°C to 80°C	
Chemical Resistance	Superior & excellent resistance to all common chemicals.	
Bacteria/ Fungi	Does not support growth	
Compatibility with Gas Membranes	Fully compatible. The composite has a flat side in contact with the gas membrane to keep long term contact stresses to a minimum.	
Health, Safety, Environment	INERT. No known health hazard. No precautions necessary.	
GEOTEXTILE		
Type	Non woven needle punched and heat treated	
Material	Polypropylene	
Mass per unit area	125 g/m ²	BSEN 965: 1995
Thickness at 2 kPa	1.2 mm	BSEN 964-1:M 1995
Tensile Strength (Long/ Cross)	9.75 / 9.75 kN/m	BSEN ISO 10319: 1996
Elongation at break (Long/ Cross)	50 / 50 %	BSEN ISO 10319: 1996
Pore Size O ₉₀	115 micron	BS 6906 (2)
Water Flow at 50 mm	115 l/m ² /s	BS 6906 (3)
Permeability at 2kPa	3.1 x 10 ⁻³ m/s	BS 6906 (3)
Breakthrough Head	0 mm	BS 6906 (3)
Puncture Resistance	1600 N	BSEN ISO 12236: 1996
Chemical Resistance	Highly resistant to all common chemicals (including leachate)	

Footnotes:

- (1) The geotextile is bonded to the core to prevent intrusion into and the blockage of the gas passageways under the action of pressure of backfill material.
- (2) The values given are indicative and correspond to nominal results obtained in our laboratories and testing institutes. The right is reserved to make changes without notice at any time.
- (3) Allowable tolerances are +/- 10% of the typical value.

All test results shown in this data sheet are determined under laboratory conditions and with the product sample taken directly from stock in its original packing without any alteration or modification of its component parts.

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