

# Visqueen GX Geomembrane

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- **Low Permeability to Hydrocarbon substances and vapours.**
- **High quality single layer HDPE.**
- **Excellent puncture and tear resistance.**
- **Complies with current codes of practice.**
- **Also acts as a DPM.**

#### Description

Visqueen GX Geomembrane is a high quality single layer HDPE membrane and is suitable for use as a barrier membrane on brownfield sites that require protection from dangerous contaminants such as hydrocarbons and methane. Due to the membrane's high puncture and impact resistance the Visqueen GX Geomembrane generally requires no protective screed or boarding when laying reinforced concrete above it. The Visqueen GX Geomembrane is also suitable as a high performance damp proof membrane and is available in two thicknesses, 1mm and 1.5mm.

#### Application

Visqueen GX Geomembrane offers a safe solution for the protection of buildings and occupiers against all levels of hydrocarbons, methane, carbon dioxide and radon ingress. Typically these are sites previously used as petrol stations, coalfields, landfill sites or are contaminated industrial sites.

#### Technical Support

Due to the wide variety of hydrocarbon contaminants found, we strongly recommend the use of the Visqueen Building Products Technical Support Team at an early design stage so that the most appropriate detailing and material specifications are adopted. A full technical datasheet is available online

[www.visqueenbuiding.co.uk/gas](http://www.visqueenbuiding.co.uk/gas)

# Visqueen GX Geomembrane

## Installation Guidelines

Visqueen GX and ancillary components must be installed in accordance with the recommendations of Building Research Establishment BRE 414 "Protective measures for housing on gas contaminated land" and CIRIA C665 "Assessing risks posed by hazardous ground gases to buildings", NHBC guidelines, Chartered Institute of Environmental Health Ground Gas Handbook and CIRIA C682 the VOC Handbook.

The Visqueen GX system is suitable where hydrostatic pressure is present, however in this application the joints must be welded and not taped. The membrane should be installed on a blinded or smooth surface allowing adequate overlap for jointing between the sheets and avoiding bridging (i.e. areas of unsupported membrane). In areas where high levels of unsupported membrane occur it is recommended that Visqueen GX Pre Applied Membrane is used. To avoid linear expansion due to temperature change the membrane should NOT be taken through any masonry wall. In order to provide a continuous barrier across the cavity Visqueen GX DPC should be taken through the blockwork and incorporated below the damp proof course cavity tray in the outer leaf.

When a welded joint system is being used, punctures to the membrane can only be repaired by welding a patch of membrane with identical thickness and lapped at least 150mm beyond the limits of the puncture. Where this is not possible and the three dimensional shapes are complex it is recommended a preformed unit is used. To avoid high linear expansion when installed in hot weather, the membrane should be covered immediately after installation with concrete or screed.

## Ventilation

When medium to high levels of ground gases are present or when the generation of gases still occurs, then an open void beneath the ground floor should be constructed as ventilation beneath the ground floor will dilute and disperse the gases to atmosphere. Open voids are normally restricted to beam and block floors or other precast concrete floor systems. An alternative for providing ventilation to in situ concrete floor slabs is to install a Visqueen Ventilation System.

## SPECIFICATION SUPPORT

The following items are available to view online or to download from [www.visqueenbuilding.co.uk](http://www.visqueenbuilding.co.uk)

- . Technical Datasheets
- . Typical installation CAD details
- . Health and Safety data

Register online for access to NBS Clauses and for information about our CPD Seminars



## TECHNICAL SUPPORT

For advice on detailing or installation call Visqueen Building Products Technical Help Line 0845 302 4758. Pricing & Availability may be obtained from our UK Network of merchant stockists. For details of these call our Sales Office on 0845 302 4758.



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# Visqueen GX Geomembrane

## TYPICAL PROPERTIES

### Dimensions

|  |  |
|--|--|
| GX Geomembrane                                 | 2.95m x 30m x 1mm<br>(88.50m <sup>2</sup> ) Standard Roll  |
| GX Geomembrane                                 | 2.95m x 25m x 1.5mm<br>(73.75m <sup>2</sup> ) Standard Roll  |
| GX Jointing System                             | Two part jointing system   |
| GX Geocomposite Venting System                 | 25mm & 50mm venting mats   |
| Preformed Top Hat Units                        | For sealing around service pipe penetrations   |
| GX DPC   | 645mm / 970mm x 30m<br>Roll A flexible reinforced DPC designed to prevent the transmission of hydrocarbon gases through the cavity |
| Preformed DPC Internal & External Corner Units | To form an effective seal at corners   |

### Technical Data

|                                 |  |
|---------------------------------|--|
| Density (ASTM D1505)            | 941kg/m <sup>3</sup> +/- 1% (1mm)<br>941kg/m <sup>3</sup> +/- 1% (1.5mm) |
| Thickness (BS2782-630A)         | +/- 5% (1mm) +/- 5% (1.5mm)  |
| Melt Flow Index (ASTM D1238)    | <0.5gm/10 minutes (1mm) <0.5gm/10 minutes (1.5mm)                        |
| Unaged Tensile (MPa)            | 31.2 (1mm) 29.3 (1.5mm)  |
| Unaged Elongation (%)           | 860 (1mm) 845 (1.5mm)  |
| Unaged Instrument Impact(N)     | 2220.11 (1mm) 3357.5 (1.5mm)   |
| Tear Strength (N/mm)            | 156.8/145.6 (1mm)<br>149.1/156.5 (1.5mm)                                 |
| Petrol Permeability (g/m2/hr)   | 7.0 (1mm) 3.8 (1.5mm)  |
| Diesel Permeability (g/m2/hr)   | 14.8 (1mm) 1.7 (1.5mm)   |
| Methane Permeability (cc/m2/hr) | 3.2 (1mm) 1.95 (1.5mm)   |

The information given in this datasheet is based on data and knowledge correct at the time of printing. Statements made are of a general nature and are not intended to apply to any use or application outside any referred to in the datasheet. As conditions of usage and installation are beyond our control we do not warrant performance obtained but strongly recommend that our installation guidelines and the relevant British Standard Codes of Practice are adhered to. Please contact us if you are in any doubt as to the suitability of application.

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# VISQUEEN

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