Technical Support: 0845 302 4758
LAST UPDATED: 10.7.2014

Visqueen GX Flexi Hydrocarbon Barrier

CE Mark to EN 13967

- **Independently tested against various hydrocarbons**
- **High puncture, flexibility and tear resistance**
- **Minimal linear expansion**
- **Complies with current codes of practice**
- **Manufactured in the UK**

QUALITY ASSURANCE
Visqueen's products are manufactured under a Quality Management System approved to ISO 9001:2000 by Knight International.

ENVIRONMENTALLY ACCREDITED
Our sites are approved by Knight International Quality Assurance to the Environmental Management System standard ISO 14001:2004.

CE

Description

Visqueen GX Flexi Hydrocarbon Barrier is an enhanced polymer modified flexible membrane designed to comply with current guidance on Hydrocarbons. Manufactured using the latest extrusion technology and drawing on our extensive knowledge and expertise in gas protection, Visqueen has developed a new flexible barrier membrane suitable in brownfield applications that are affected by Hydrocarbons.
The product is available in Single Wound Sheeting (SWS) roll format, 1.4mx 50m, and in 2 colours; white to reduce linear expansion in hot weather or grey.

Application

Visqueen GX Flexi Hydrocarbon Barrier 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. The membrane also acts as a damp-proof membrane. Due to the polymeric structure Visqueen GX Flexi Hydrocarbon Barrier also provides a flexible membrane suitable for various applications unlike rigid HDPE rich membranes.

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.

Testing for Chemical Resistance (EN 14414 and EN 14415)

The membrane has been tested against various harmful gases and dangerous contaminants such as hydrocarbons. In addition to this, the membrane has been subjected to accelerated life immersion tests. EN 14414 and EN 14415 - Chemical resistance to leachates and aggressive chemicals - are designed to stress the membrane at a higher level of chemical concentration and temperature than it would experience in normal use. Changes in weight, volume, tensile strength and visual degradation are recorded to obtain the membrane's suitability to the challenge chemical.
These results are published below and assist designers and engineers in the suitability of Visqueen GX Flexi Hydrocarbon in various applications.

VISQUEEN BUILDING PRODUCTS

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Installation Guidelines
Visqueen GX Flexi Hydrocarbon Barrier and ancillary components must be installed in accordance with the recommendations of 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.

Visqueen GX Flexi Hydrocarbon Barrier 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).

For taped joints, overlap the membranes by at least 150mm and bond together using Visqueen GX Double Sided Jointing tape. Secure the lap using Visqueen Gas Resistant Lap Tape.

In areas where high levels of unsupported membrane occur it is recommended that Visqueen Pre Applied Membrane is used.

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. The membrane has been designed to perform in circumstances where linear expansion could occur, however in high temperatures the membrane should be covered immediately after installation.

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.

System Components:

- Visqueen GX Double Sided Bonding Tape
- Visqueen Gas Resistant Lap Tape
- Visqueen Surface DPC Fixing System
- Visqueen GX DPC

Storage and Handling
Visqueen GX Flexi Hydrocarbon Barrier is classified as nonhazardous when used in accordance with the relevant British Standards. The product is chemically inert and is not affected by acids and alkalis that may be present in the sub-soils. The product should be stored in a warm dry environment and not exposed to long periods of sunlight.

SPECIFICATION SUPPORT

The following items are available to view online or to download from 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.

VISQUEEN BUILDING PRODUCTS

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Technical Data and CE Mark

Visqueen GX Flexi Hydrocarbon Barrier complies with the requirements and clauses of EN 13967 - Flexible sheets for waterproofing - Plastic and rubber damp proof sheets including plastic rubber basement tanking sheet - Definitions and characteristics.

British Board of Agrement performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control, and issued the certificate of constancy of conformity of the factory production control. 0836–CPD – 13/F028 applies.

Product Data

Characteristic	Test method	Units	Compliance criteria	Value or Statement
Colour				Grey or White
Length	EN 1848-2	m	-0/+10%	50
Width	EN 1848-2	m	-0/+10%	1.4
Thickness	EN 1849-2	mm	+/-20%	1
Mass	EN 1849-2	g/m^2	-12%/+12%	974
Tensile Strength - MD	EN EN12311	N/mm2	>MLV	22
Tensile Strength - CD	EN EN12311	N/mm2	>MLV	20
Tensile Elongation - MD	EN EN12311	%	>MLV	799
Tensile Elongation - CD	EN EN12311	%	>MLV	848
Joint Strength	EN12317-2	N	>MLV	515
Watertightness - 2kPa	EN 1928	-	Pass/Fail	Pass
Resistance to impact	EN 12691	mm	>=MLV	600
Resistance to static loading	EN 12730	kg	MLV	Pass-20
Resistance to Nail tear - MD	EN 12310-1	N	>=MLV	705
Resistance to Nail tear - CD	EN 12310-1	N	>=MLV	745
Durability-Heat ageing	EN 1296	-	Pass/Fail	Pass
Durability-Chemical resistance	EN 1847	-	Pass/Fail	Pass
Resistance to Low temperature	EN 495-5		MDV	Pass at - 40oC
Water vapour transmission - resistance	EN 1931	MNs/g	MDV	1171
Water vapour permeability	EN 1932	$g/m^2/day$	MDV	0.11
Reaction to Fire	EN 13501-1	Class	MDV	F
Methane Permeability	ISO2782	$ml/m^2/dy/bar$	MDV	0.198
Diesel Permeability	ISO 6179	$ml/m^2/dy/bar$	MDV	0.4

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Petrol Permeability	ISO 6179	g/m^2h	MDV	8.6
Xylene Permeability	ISO 6179	g/m^2h	MDV	14.6
Toluene Permeability	ISO 6179	g/m^2h	MDV	23
Chemical Resistance - Acids	EN 14414-A	-	Pass/Fail	Pass
Chemical Resistance - Alkalies	EN 14414-B	-	Pass/Fail	Pass
Chemical Resistance - Organic Solvents	EN 14414-C	-	Pass/Fail	Pass
Chemical Resistance - Visual Defects	EN 14414	-	Pass/Fail	Pass
Resistance to Leaching - Hot Water	EN 14415-A	-	Pass/Fail	Pass
Resistance to Leaching - Aqueous alkaline liquids	EN 14415-B	-	Pass/Fail	Pass
Resistance to Leaching - Organic alcohols	EN 14415-C	-	Pass/Fail	Pass
Resistance to Leaching - Visual Defects	EN 14415-A	-	Yes/No	No