

Visqueen Ultimate Hydrocarbon Urban Drainage Geomembrane

Features and benefits

- Multi functional geomembrane for demanding situations - suitable for use in stormwater attenuation systems and as an impermeable membrane in permeable paving systems
- Barrier technology - excellent VOC resistance and satisfies the testing requirements of the 9 challenge chemicals in CIRIA C748.
- Robust - resistant to on site damage and puncture under high compressive loads
- Flexible - easy to detail and install on site
- Dual jointing methods - lap joints can be taped or heat welded

Product description

Visqueen Ultimate Hydrocarbon Urban Drainage Geomembrane (UDG) is manufactured from virgin polymers consisting of a gas barrier core.

The barrier is coloured grey on the upper surface and black on the reverse. It is to be installed grey side up. The product is supplied in single wound rolls (not folded), 2.44m x 41m.

Approvals and standards

- Conforms to the SUDS specification requirements of Appendix C of CIRIA C697 and C753
- Suitable for use as an impermeable membrane in a permeable paving systems to BS 7533-13:2009 (System C - no infiltration)
- Quality Management System ISO 9001:2015
- Occupational Health and Safety System ISO 18001:2007
- Environmental Management System ISO 14001:2015

Usage

Visqueen Ultimate Hydrocarbon Urban Drainage Geomembrane is a robust flexible chemically inert geomembrane suitable for a variety of geomembrane applications where harmful levels of volatile organic compounds (VOCs) exist.

Applications include the wrapping of underground stormwater attenuation crates in heavy duty situations (high water table), and as an impermeable membrane placed on top of the sub grade formation level and to the sides of the sub-base within a permeable paving system.

System components

- Urban Drainage Gemomembrane (UDG) Double Sided Jointing Tape, 100mm x 15m
- Visqueen Ultimate GR Lap Tape, 150mm x 10m
- Visqueen Ultimate Top Hat Units
- Visqueen TreadGUARD 300, 2m x 75m
- Visqueen Ultimate Top Hat Units

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Visqueen Ultimate Hydrocarbon Urban Drainage Geomembrane

Storage and handling

Visqueen Ultimate Hydrocarbon Urban Drainage Geomembrane should be stored horizontally, under cover in its original packaging.

Care should be taken when handling the product in line with current manual handling regulations.

Preparation

Visqueen Ultimate Hydrocarbon Urban Drainage Geomembrane can be cut with a sharp retractable safety knife or robust scissors.

Installation

Visqueen Ultimate Hydrocarbon Urban Drainage Geomembrane should be clean and dry at the time of jointing. The membrane exhibits superior welding properties making it ideal for on-site welding of joints and this method should be employed whenever possible. In certain applications the sealing of laps can be achieved using tapes. When taping joints, overlap by at least 150mm and bond with Visqueen UDG Double Sided Jointing Tape and seal lap joints with Visqueen Ultimate GR Lap Tape. All lap joints should be pressed and rolled to ensure a completely sealed joint is achieved.

Where the geomembrane lap joints are being welded, pipe penetrations should be sealed with welded geomembrane. Alternatively Visqueen Pro Detailing Strip can be used to seal pipe penetrations.

Where the geomembrane lap joints are being taped, Visqueen Ultimate Preformed Top Hat Units should be used for sealing pipe penetrations. The base of the top hat and the upstand should be bonded using Visqueen UDG Double Sided Jointing Tape and sealed with Visqueen Ultimate GR Lap Tape. The upstand should be secured with the supplied jubilee clip. Alternatively Visqueen Pro Detailing Strip can be used to seal pipe penetrations.

If the geomembrane is punctured or perforated a patch of the same material should be lapped at least 150mm beyond the limits of the puncture and bonded using the same technique as employed for the geomembrane lap joints. Alternatively a patch can be formed using Visqueen Pro Detailing Strip and lapped at least 150mm beyond the extents of the puncture.

When used as a liner for stormwater attenuation crates, ensure that the base of the trench is level and free from voids or protrusions. Blind the substrate with minimum 100mm sand blinding, level and compact. When installing the geomembrane, it should be protected on the external face with Visqueen TreadGuard 300 protection layer and Visqueen UDG Corner Units should be positioned at the external corners of the crate system. Due to the robust nature of the geomembrane, in normal service conditions it does not require covering with a protective layer on the internal face, however care should still be taken to ensure that it is not punctured, stretched or displaced when positioning the crates.

When used in a System C permeable paving application, the geomembrane should be laid on a smooth continuous blinded subgrade free from irregularities such as voids or protrusions, or alternatively the blinding can be replaced with a layer of Visqueen TreadGuard 300 protection.

Usable temperature range

It is recommended that Visqueen High Performance Urban Drainage Geomembrane and all associated system components should not be used below 5°C.

Additional information

For additional detailing information, contact Visqueen Technical Services +44 (0) 333 202 6800.

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Property	Test method	Units	Compliance criteria	Result
Colour			~3 1 2 1 23	Grey & Black
Length	EN 1848-2	m	-0/+10%	41
Width	EN 1848-2	m	-0/+10%	2.44
Thickness	EN 1849-2	mm	+/-10%	1
Weight		kg		97
Methane permeability	ISO 15105-1	ml/m ² /d/atm	MDV	<40
Puncture	BS EN ISO 12236:2006	N	MDV	2850
Impact resistance Method A hard surface	EN12691	mm	MDV	750
Impact resistance Method B soft surface	EN12691	mm	MDV	>2000
Watertightness - 60kPa	EN 1928	-	Pass/Fail	Pass
Tensiles yield strength MD	ASTM D4885-01	kN/m	MDV	11.9
Tensiles yield strength CD	ASTM D4885-01	kN/m	MDV	12.7
Elongation @ break MD	ASTM D4885-01	%	MDV	>500
Elongation @ break CD	ASTM D4885-01	%	MDV	>501
Tear resistance - trouser method A - MD	BS ISO 34-1	kN/m	MDV	79.6
Tear resistance - trouser method A - CD	BS ISO 34-1	kN/m	MDV	75.8
Tear resistance - angle method B - MD	BS ISO 34-1	N	MDV	128.3
Tear resistance - angle method B - CD	BS ISO 34-1	N	MDV	126.9
benzene	ISO 15105-2	ml/m ² /d	MDV	<1
toluene	ISO 15105-2	ml/m ² /d	MDV	<1
ethyl benzene	ISO 15105-2	ml/m ² /d	MDV	<1
m,p xylene	ISO 15105-2	ml/m ² /d	MDV	<1
hexane	ISO 15105-2	ml/m ² /d	MDV	<1
vinyl chloride	ISO 15105-2	ml/m ² /d	MDV	<1
tetrachloroethene (PCE)	ISO 15105-2	ml/m ² /d	MDV	<1
trichloroethene (TCE)	ISO 15105-2	ml/m ² /d	MDV	<1
naphthalene	ISO 15105-2	ml/m ² /d	MDV	<1

Health and safety information

Care must be taken when lifting this product as the products is heavy and weighs 97kg.

Please refer to material safety datasheet (MSDS).

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About Visqueen

The Visqueen name has long been recognised as one of the leading manufacturers of high quality advanced membrane technologies and design based solutions by specifiers, distributors, builders merchants and contractors throughout the UK and Europe.

For further guidance on the Visqueen services shown below, please refer to the relevant section of the Visqueen website (www.visqueen.com) or contact Visqueen Technical Services on +44 (0) 333 202 6800 or enquiries@visqueen.com

Complete Range, Complete Solution



Structural Waterproofing



Gas Protection



Damp Proof Membrane



Tapes



Damp Proof Course



Stormwater



Vapour Control

Visqueen Technical Support

Visqueen combine an extensive product portfolio with industry leading levels of service and support which includes guidance over the phone, bespoke CAD drawings to help with complex detailing, electronic NBS specifications and access to a dedicated team of highly knowledgeable and experienced field based Technical Support Managers.

Visqueen Technical Support is available to all our customers including architects, specifiers, distributors, builders merchants, contractors and end users. All of our technical team have been awarded the industry recognised qualification Certificated Surveyor in Structural Waterproofing (CSSW).

Visqueen CPD Seminars

The Visqueen Continuing Professional Development (CPD) Seminars provide up-to-date information on changes within Building Regulations/Building Standards and nationally recognised industry guidance affecting damp proofing, water vapour control, hazardous ground gas protection and below ground structural waterproofing.

The one hour seminars have been produced for design specialists within the construction sector and are delivered by our team of Technical Support Managers.

Visqueen PI designs and special projects

From initial design to the completed project, Visqueen are with you every step of the way. Whether it be hazardous ground gas protection and/or below ground waterproofing protection employing barrier, structurally integral or drained systems, Visqueen can offer professional indemnity (PI) insurance for bespoke Visqueen design solutions.

Visqueen Technical Support Managers work with all stakeholders to provide cost effective Visqueen solutions offering complete peace of mind throughout the construction phase and beyond.

Visqueen Training Academy

Based at our manufacturing facility in Derbyshire, the Visqueen Training Academy is available to support Visqueen customers throughout the UK by providing a wide range of both theory and practical skills related training.

Courses include one day product awareness training for our distributors and builders merchants to help them in their day-to-day jobs, through to intensive three day courses giving detailed hands-on training in the practical skills required for safe and robust product installation.

