

SOLSHIELD

Hydrocarbon Gas Barrier



SOLSHIELD Hydrocarbon Gas Barrier is a very effective gas barrier for the protection of buildings and occupiers from the ingress of gas and moisture

- Complies with relevant codes of practice such as current BRE and CIRIA
- Complies with BS8485 & ISO 15105-2:2003
- Low Permeability to latent Hydrocarbons & Methane vapours typically found in contaminated industrial sites.
- High quality robust Co-Polymer Thermoplastic Membrane.
- High resistance to puncture.



SOLSHIELD - Gas Protection Systems

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Rev B

Product Description

SOLSHIELD Hydrocarbon Gas Barrier has extremely good chemical resistance, high puncture resistance and have extremely low permeability to hydrocarbon gases, due to these excellent performance characteristics. Solshield Hydrocarbon Gas Barrier is suitable for use on contaminated sites where hydrocarbons, methane, radon and Co₂ are present.

SOLSHIELD Hydrocarbon Gas Barrier is a very effective gas barrier for the protection of buildings and occupiers from the ingress of gas and moisture. The building regulations require that proper precautions be taken to prevent danger to health and safety when building on gas contaminated land. SOLSHIELD Hydrocarbon Gas Barrier is an effective solution to the problem and can be laid with confidence.

SOLSHIELD Hydrocarbon Gas Barrier is resistant to petroleum products but when in direct contact with these products we would always recommend a minimum thickness of 1.00mm. Our chemical resistance chart highlights the many chemicals which are suitable to be in contact with the gas barrier.

Typical areas where the membrane may be used are, coalfields, contaminated industrial sites, landfill & brown field sites.

Installation

SOLSHIELD Hydrocarbon Gas Barrier must be laid in accordance with the Building Research establishment BRE No.414. "Protective measures for commercial or residential application on gas contaminated land" and can be used in most common floor constructions.

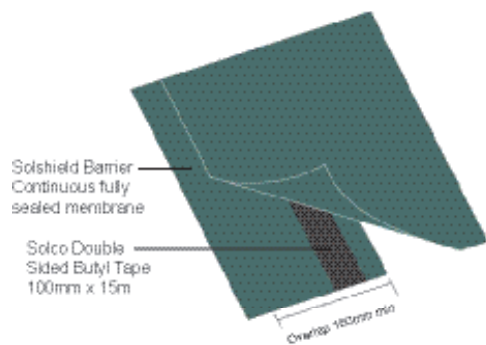
SOLSHIELD Hydrocarbon Gas Barrier is installed in a similar way to damp proof membranes, but with much greater attention to joint sealing of the gas resisting membrane, under wall sealing and workmanship. Where there is risk of hydrostatic pressure this product will also be suitable for use. The membrane should be laid on a smooth surface or sand blinding to prevent the membrane from puncture. The membrane must be free from grease and dirt. SOLSHIELD Hydrocarbon Gas Barrier should be protected as soon as possible once installed.

Jointing & Welding Solshield Hydrocarbon Gas Barrier

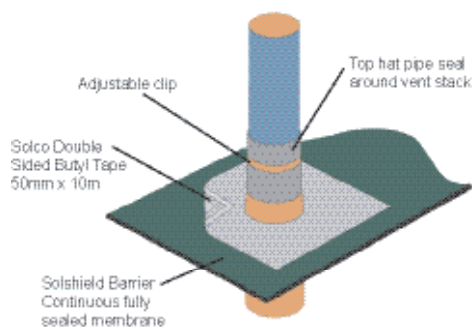
Solshield Hydrocarbon Gas Barriers have excellent welding properties, we would recommend that particularly in situations where site investigation demonstrates chemicals or harmful gases are present in significant concentrations all of our gas barriers are heat welded as opposed to being tape jointed, this ensures the integrity of the membrane at the joint location. Seam welding provides maximum performance integrity and enables installers to complete installations quickly and efficiently.

Apply the double sided butyl tape about 50mm from the edge, leaving the backing paper on. Lay the next width of membrane overlapping the first by 150mm. Remove the backing paper from the double sided butyl tape and join the top sheet to the bottom sheet, by applying pressure with a hand roller. Where the membranes overlap apply the Solco XL tape, equidistant on both membranes (see detail). All service entry points must have airtight seals Top hats and corner pre-forms must be sealed using double sided butyl tape.

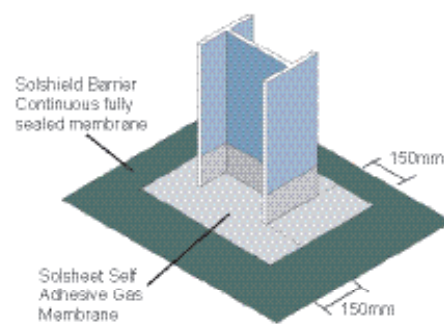
Typical Jointing Details for Solshield Hydrocarbon Gas Barrier



Typical Lap Detail



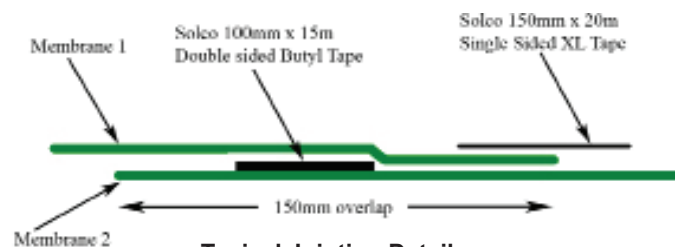
Typical Penetration Detail



Typical Column Detail

Note:

All service entry points must have airtight seals. Top hats and corner pre-forms must be sealed using double sided butyl tape.



Typical Jointing Detail

Venting

SOLSIELD Hydrocarbon Gas Barrier can be used on sites where passive or active ventilation is required. SOLSIELD Geocomposite Drainage & Venting Mat should be used in conjunction with the relative vent connectors where required. These types of systems are designed on a bespoke site specific nature, please contact us for our design advice.

Technical Data & Test Results

Characteristic	Test Method	Unit	Material Thickness	
Thickness	EN 1849 - 2	mm	1.0	1.5
Width	EN 1849 - 2	M	5.1 or 2.5	5.1 or 2.5
Length	EN 1849 - 2	M	100 or 35	100 or 25
Hydraulic Properties				
Watertightness 60 kPa	EN 1928	-	complied	complied
Water vapour transmission properties (diffusion equivalent air layer thickness sd)	EN1931	M	300	300
Mechanical Properties				
Resistance to static loading	EN 12730	KG	>20	>20
Tensile strength	EN 12310 - 2	N/50mm	>850	>1000
Elongation	EN 12310 - 2	%	>950	>950
Resistance to tearing (nail shank)	EN 12310 - 2	N/50mm	>550	>650
Resistance to impact	EN 12691	mm	>700	>700
Shear resistance of joints: weld joint butyl-rubber tape	EN 12317 - 2	N/50mm	>850	>850
Durability & Chemical Resistance				
Transmission rate of Volatile Liquid - Diesel	EN ISO 6179:2010 (Method B)	g/m ² /h	0.047	-
Transmission rate of Volatile Liquid - Xylene	EN ISO 6179:2010 (Method B)	g/m ² /h	1.886	-
Transmission rate of Volatile Liquid - Toluene	EN ISO 6179:2010 (Method B)	g/m ² /h	4.432	-
Transmission rate of Volatile Liquid - Petrol	EN ISO 6179:2010 (Method B)	g/m ² /h	2.318	-
Artificial ageing (long term exposure to elevated temperature 60 kPa)	EN 1296 + EN1928	-	complied	complied
Exposure to liquid chemicals, including water 60kPa	EN 1847 + EN 1928	-	complied	complied
Exposure to bitumen 60 kPa	EN 1548 + EN 1928	-	complied	complied
Reaction to fire	EN 13501 - 1	-	E	E
Radon diffusion coefficient	K124/02/95	m ² /s	8.5 x 10 ⁻¹²	

Storage & Handling on site



SOLSHIELD Hydrocarbon Gas Barrier is classified as non-hazardous (code of practice CP102 1973).

The product is chemically inert and any acids or alkalis present in the subsoil will not affect the membrane.

It is not recommended for use when exposed to sunlight and general outdoor weather conditions for long periods of time.

Weathering will not occur when installed.

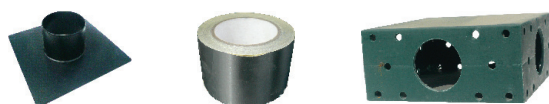
Rolls should be stored undercover.

Quality control during the laying of the membrane is extremely important the membrane should be protected either through the use of temporary protection over its whole area or the immediate laying of the concrete slab.

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Gas System Accessories



Product	Description	Sizes	Application	Supply
Solco Foil Backed Jointing Tape	Single sided tape for securing laps & joints	75mm x 50m	Securing Laps & Joints	Rolls
Solco Double sided Butyl Jointing Tape	Butyl Adhesive Tape	50mm x 10m 100mm x 15m	Butyl based double sided tape for joints and laps	Rolls
Solco Top Hat Units	Polymeric	Various	For sealing around penetrations through gas membrane	Each
Solcourse Hydrocarbon DPC	A flexible Tri-polymer DPC	300mm - 1000mm	To prevent the transmission of Radon, CO ₂ , Methane Gas & Hydrocarbons	20m Rolls
Solco Gas Sump Units	Part of the Radon Protection System	430 x 430 x 220mm	Radon Sumps are used in full protection areas, where sub floor depressurisation may be required.	Each
Solco XL Jointing Tape	Reinforcing Tape	100, 150 & 300mm wide	overband tape self-adhesive	20m Rolls
Solseal Bitumen Primer	Primer for SA Membrane	5L & 25L	Surface Primer	Drums
Solco Protection Boards	Bitumen / Polymeric	3mm thick	For heavy duty use	2m x 1m
Solco Corrugated Board	Plastic Corrugated	2mm thick	For light duty use	2m x 1m