

SOLSHIELD GP TITANFLEX Gas & Hydrocarbon Barrier



GP TITANFLEX is a multi-layer, polythene membrane - specifically designed and certified to perform as a methane, carbon dioxide, radon, ground gas, VOC, air & moisture and hydrocarbon protection system.

- Complies with BS 8485:2015 & CIRIA C748.
- Quick and easy installation.
- Suitable for Ground Gas/Hydrocarbon protection to NHBC Green, Amber 1,2 & Red site characteristics.
- Good chemical resistance.
- Manufactured using the latest extrusion technology.
- Market leading performance.
- Also acts as a high performance DPM.
- Long term Durability (Guaranteed for the lifetime of a building).



SOLSHIELD - Gas Protection System

Last Issue Date May 23

Product Description

Solshield GP TITANFLEX is a multilayer polythene waterproofing membrane with a gas and VOC resistant core.

Solshield GP TITANFLEX 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, contaminated industrial sites, Fracking sites, and heavily contaminated sites. The membrane also acts as a damp-proof membrane.

Solshield GP TITANFLEX, if installed, used and maintained in accordance with SOLCO guidelines, can satisfy or contribute to satisfying the relevant requirements in relation to NHBC Standards, Chapters 4.1 Land quality – managing ground conditions and 5.1 Substructure and ground bearing floors, Clause 5.1.20 Damp-proofing concrete floors, for use below the slab and in sandwich constructions.

Solshield GP TITANFLEX is used for gas/hydrocarbon protection for a number of site characteristics.

Due to the flexible nature the GP® TITANFLEX Hydrocarbon Barrier also provides a flexible membrane suitable for various applications unlike rigid HDPE rich membranes. GP TITANFLEX is designed and tested to withstand the most aggressive environments. Testing has been completed in accordance with BS8485:2015 and Ciria C748 to determine the permeation rates for Methane, Carbon Dioxide, and a range of VOC's. Immersion testing has also been completed for Chemical Resistance to EN 14414 and EN 14415.

Handling

Roll weights are above 20kg and appropriate care and equipment is required for unloading and handling. Storage

SOLSHIELD GP TITANFLEX should be stored on stable/level ground and stacked not more than five rolls high, with no other material stacked on top. The rolls can be stored outdoors when packaged, but should be protected from exposure to UV.

Installation

SOLSHIELD GP TITANFLEX should be installed in accordance with the product installation guidelines, and in accordance with best practice.

Jointing and Sealing

Solshield GP TITANFLEX can be heat welded or taped, with jointing carried out by competent personnel with suitable qualifications in accordance with best practice. Solshield GP TITANFLEX should be overlapped by at least 100mm. If taping joints, only suitable tape must be used, ensuring application with a silicone roller to remove trapped air. Solco pre-formed details, or self adhesive gas membrane are available for sealing around protruberances.

Accessory Products

A wide range of accessories are available for use with the SOLSHIELD GP TIANFLEX.

Additional Information

For additional information or assistance, please contact SOLCO directly.

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Technical

Feature	Characteristics	Test Method	GP® TITANFLEX®
Physical Properties	Thickness	EN 1849-2	0.5 mm
	Width	EN 1849-2	2 m
	Length	EN 1849-2	50 m
	Weight	EN 1849-2	500 g/m ²
Hydraulic Press	Water Vapour Transmission Rate	EN 1931	0.11 - 0.18 g/m ² /day
	Water Tightness (60 kPa)	EN 1928	Pass
	Water Tightness (196 kPa - 20 m Water Head) (Basement Application)	EN 1928	Pass
Mechanical Properties	Resistance to Static Load	EN 12730-B	≥ 20 kg
	Puncture Resistance	EN 12236	≥ 2.0 kN
	Tensile Strength (MD)	EN 12311-1	> 550 N/50m
	Tensile Strength (CMD)	EN 12311-1	> 400 N/50m
	Tensile Elongation (MD/CMD)	EN 12310-1	> 550
	Tear Resistance (MD/CMD)	EN 12310-1	> 300
	Resistance to Impact	EN 12691-B	650 mm
	Reaction to Fire	EN 13501-1	E Class
	Resistance to Artificial Ageing	EN 1296/EN 1928	Pass
	Resistance to Chemicals	EN 1296/EN 1928	Pass
Compliance and Certification	CE Mark - EN13967:2012		
	NHBC Standards Compliant		
	CIRIA C748 Compliant		
	BS 8485:2015 Compliant		
Vapour Permeability 100% Concentration	Transmission Rate of Benzene	EN ISO 15105-2	< 3.6 mg/m ² /day
	Transmission Rate of Toluene	EN ISO 15105-2	< 13.8 mg/m ² /day
	Transmission Rate of Ethyl Benzene	EN ISO 15105-2	< 2.7 mg/m ² /day
	Transmission Rate of Xylenes (M,P,O)	EN ISO 15105-2	< 7.7 mg/m ² /day
	Transmission Rate of Hexane	EN ISO 15105-2	< 0.6 mg/m ² /day
	Transmission Rate of Vinyl Chloride	EN ISO 15105-2	< 0.05 mg/m ² /day
	Transmission Rate of Trichloroethene (TCE)	EN ISO 15105-2	< 54.7 mg/m ² /day
	Transmission Rate of Tetrachloroethene (PCE)	EN ISO 15105-2	< 26.2 mg/m ² /day
	Transmission Rate of Naphthalene	EN ISO 15105-2	< 0.0006 mg/m ² /day
	Transmission Rate of CIS-1,2-Dichloroethylene	EN ISO 15105-2	< 1.1 mg/m ² /day
Gas Permeability	Methane Permeability	EN ISO 15105-1	0.13 ml/m ² /day/atm
	Methane Permeability (Jointed)	EN ISO 15105-1	1.00 ml/m ² /day/atm
	Carbon Dioxide Permeability	EN ISO 15105-1	3.01 ml/m ² /day/atm
	Vinyl Chloride Gas Permeability	EN ISO 15105-1	0.04 ml/m ² /day/atm
	Radon Permeability	K124/02/95	1.0 x 10 ⁻¹² m ² /S

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Feature	Characteristics	Test Method	GP® TITANFLEX®
Durability and Chemical Resistance	Chemical Resistance - Sulfuric ACID (10% Solution of Sulfuric Acid (H ₂ SO ₄)) 50° For 56 Days	EN 14414-A	TENSILE STRENGTH RETAINED 100% RESULT - PASS
	Chemical Resistance - BASIC (Calcium Hydroxide Saturated Suspension) 50° For 56 Days	EN 14414-B	TENSILE STRENGTH RETAINED 100% RESULT - PASS
	Chemical Resistance - SOLVENTS (35% Diesel, 35% Paraffin, 30% Oil Hd30 (Vol)) 50° For 56 Days	EN 14414-C	TENSILE STRENGTH RETAINED >80% RESULT - PASS
	Chemical Resistance - SYNTHETIC LEACHATE (Mixture of 14 Acids, Chlorides, Sulphates & Phosphates) 50° For 56 Days	EN 14414-D	TENSILE STRENGTH RETAINED 100% RESULT - PASS
	Resistance to Leaching - HOT WATER (Deionised Water) 50° For 56 Days	EN 14415-A	TENSILE STRENGTH RETAINED 100% RESULT - PASS
	Resistance to leaching - AQUEOUS ALKALINE (Saturated Calcium Hydroxide) 50° For 56 Days	EN 14415-B	TENSILE STRENGTH RETAINED 100% RESULT - PASS
	Resistance to Leaching - ORGANIC ALCOHOL (30% Methanol, 30% Isopropanol, 40% Glycol) 50° For 56 Days	EN 14415-C	TENSILE STRENGTH RETAINED 100% RESULT - PASS
	Chemical Resistance - BENZENE - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 95% (MD), 102% (CMD) RESULT - PASS
	Chemical Resistance - TOLUENE - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 94% (MD), 91% (CMD) RESULT - PASS
	Chemical Resistance - ETHYL BENZENE - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 99% (MD), 97% (CMD) RESULT - PASS
	Chemical Resistance - XYLENES - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 91% (MD), 106% (CMD) RESULT - PASS
	Chemical Resistance - TCE - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 99% (MD), 93% (CMD) RESULT - PASS
	Chemical Resistance - PCE - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 93% (MD), 93% (CMD) RESULT - PASS
	Chemical Resistance - NAPHTHALENE - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 101% (MD), 93% (CMD) RESULT - PASS
	Chemical Resistance - HEXANE - 100% Saturated Concentration	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED 99% (MD), 104% (CMD) RESULT - PASS