BUILDING TRUST

PRODUCT DATA SHEET

Sikaplan®-1653 Adhered VOC Gas Barrier

A post applied, multi-layer, polyethylene membrane for below ground waterproofing and gas protection

DESCRIPTION

Sikaplan®-1653 Adhered VOC Gas Barrier is a self-adhesive version of Sikaplan®-1651 Loose VOC Gas Barrier; composed of self adhesive with an upper surface finish of Sikaplan®-1651 Loose VOC Gas Barrier and a lower surface finish of siliconised polypropylene release film. Sikaplan®-1653 Adhered VOC Gas Barrier is used for the Gas/Waterproofing/Tanking of underground structures where harmful ground gases are anticipated, as a post-applied fully bonded membrane.

USES

- Suitable for use as ground gas, hydrocarbon protection and waterproofing at ground level or below ground installations.

CHARACTERISTICS / ADVANTAGES

- Quick and easy installation
- A fully welded system
- High resistance to ground gases
- Exceptional Chemical Resistance
- Manufactured to meet the most up-to-date British Standards and guidance
- Long Term Durability (performance guaranteed for the lifetime of the building)

APPROVALS / STANDARDS

- Conforms to the requirements of EN13967:2012
- NHBC Standards Compliant
- CIRIA C748 Compliant (VOC Barrier)
- BS 8485:2015 Compliant (Methane and Carbon Dioxide Barrier)
- BS 8102:2009 Compliant (Type A Waterproofing)
- BBA Certified - Certificate No: 19/5681

PRODUCT INFORMATION

Packaging	0.9m x 20m roll		
Shelf Life	24-48 months		
Storage Conditions	Must be stored vertically, indoors in protective carton.		
Length	20 m		(EN 1849-2)
Width	1 or 0.3 m		(EN 1849-2)
Thickness	Thickness	1.2 mm	(EN 1849-2)
	Weight	1350 G/M²	

TECHNICAL INFORMATION

Resistance to Impact	> 650 mm	(EN 12691-B)

Resistance to Static Load	≥ 20 Kg		(EN 12730-B)
Resistance to Static Puncture	≥ 2.0 kN		(EN 12236)
Tensile Strength	MD	> 550 N / 50 mm	(EN 12311-1)
	CMD	> 400 N / 50 mm	
Elongation	Tensile Elongation (MD)	> 550%	(EN 12310-1)
	Tensile Elongation (CMD)	> 550%	
Tear Strength	MD / CMD	> 300 N	(EN 12310-1)
Water Tightness	(60 kPa) PASS		(EN 1928)
	(196 kPa - 20m Water Head) (Basement Application) PASS		(EN 1928)
Water Vapour Transimission	0.11-0.18 G/M²/DAY		(EN 1931)
Artificial Ageing	(Resistance to) PASS		(EN 1296 / EN 1928)
Reaction to Fire	E Class		(EN 13501-1)

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER DOCUMENTS

RESISTANCE TO CHEMICALS

PASS (EN 1847/EN 1928)

Vapour Permeability 100% Concentration

Transmission rate of Benzene	<3.6 mg/m²/day	(EN ISO 15105-2)
Transmission rate of Toluene	<13.8 mg/m²/day	
Transmission rate of Ethyl Benzene	<2.7 mg/m²/day	
Transmission rate of Xylene (M,P,O)	<7.7 mg/m²/day	
Transmission rate of Hexane	<0.6 mg/m²/day	
Transmission rate of Vinyl Chloride	<0.05 mg/m²/day	
Transmission rate of Trichloroethene (TCE)	<54.7 mg/m²/day	
Transmission rate of Terachloro-ethene (PCE)	<26.2 mg/m²/day	
Transmission rate of Naphthalene	<0.0006 mg/m²/day	
Transmission rate of CIS-1,2-Dichloro-ethene	<1.1 mg/m²/day	

Gas Permeability

Methane Permeab-ility	0.13 ml/m² /day/atm	(EN ISO 15105-1)
Methane Permeab-ility (jointed)	1.00 ml/m² /day/atm	
Carbon Dioxide Per-meability	3.01 ml/m² /day/atm	
Vinyl Chloride Gas Permeability	0.04 ml/m² /day/atm	
Radon Permeability	1.0 x 10^{-12} m²/S	(K124/02/195)

FOR FULL DURABILITY AND CHEMICAL RESISTANCE INFORMATION, PLEASE CONTACT SIKA WATERPROOFING TECHNICAL

ECOLOGY HEALTH AND SAFETY

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w)

APPLICATION INSTRUCTIONS

INSTALLATION

Sikaplan®-1653 Adhered VOC Gas Barrier should be installed in accordance with the product installation guidelines, and in accordance with BS 8485:2015 and Ciria C748.
Sika® Bituseal S-115 Primer should be used prior to applying Sikaplan®-1653 Adhered VOC Gas Barrier.

JOINTING AND SEALING

Sikaplan®-1653 Adhered VOC Gas Barrier must be heat welded on all laps, with welding carried out by competent personnel with suitable qualifications in accordance with best practice, and guidance contained within BS 8485:2015. Sikaplan®-1653 Adhered VOC Gas Barrier should be overlapped by at least 50mm. Pre-formed corner pieces are available for sealing corners. A separate strip is available for detailing.

SUBSTRATE PREPARATION

A clean, uniform, smooth surface free from debris, ponding water (damp or slightly wet is acceptable), oil and grease.
Voids (> 12mm depth or width) must be filled before the installation of the membrane system
Voids can be filled with suitable sub-grade fill material, or repair mortar of the vertical walls. Method Statement Sikaplan®VOC Gas Barrier 01/09/19, Version 1.0 5/7
Where the substrate contains changes in elevation of >12mm, or particle protrusions from the substrate exceed 12mm, a protection fleece should be utilised to protect the membrane from damage from the substrate.
Consult Sika's technical team for advice as to the most appropriate grade of protection fleece.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

LEGAL NOTES

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