BUILDING TRUST

PRODUCT DATA SHEET

Sikaplan®-1651 Loose VOC Gas Barrier

A loose laid, multi-layer, polyethylene membrane for ground level water-proofing and gas protection

PRODUCT DESCRIPTION

Sikaplan®-1651 Loose VOC Gas Barrier is specifically designed, manufactured, tested and certified to perform as a methane, carbon dioxide, radon, ground gas, VOC, air and moisture and hydrocarbon protection system.

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 guarantees 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 + A1:2019 Compliant (Methane and carbon dioxide barrier)
- BBA Certified - Certificate No: 19/5681

PRODUCT INFORMATION

Packaging	2m x 50m roll Internal Corner & External Corner - 495mm x 495mm - 10 pc/box		
Shelf Life	Indefinite		
Storage Conditions	Must be stored horizontally, indoors in original packaging.		
Overall Thickness	Thickness	0.5 mm	(EN 1849-2)
	Width	2 m	
	Length	50 m	
	Weight	500 G/M²	

TECHNICAL INFORMATION

Resistance to Impact	650mm	(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/50mm	(EN 12311-1)
	CMD	> 400 N/50mm	
Resistance to Tearing (nail shank)	MD	> 300%	(EN 12310-1)
	CMD	> 300%	
Water Tightness	Watertightness (60 kPa)	PASS	(EN 1928)
	Watertightness (196 kPa - 20m Water Head) (Basement application)	PASS	
Water Vapour Transimission	0.93-0.95 G/M²/DAY		(EN 1931)
Chemical Resistance	PASS		(EN 1847/EN 1928)

Vapour Permeability 100% Concentration

Transmission rate of Benzene	2250 mg/m²/day	(EN ISO 15105-2)
Transmission rate of Toluene	2370 mg/m²/day	
Transmission rate of Ethyl Benzene	400 mg/m²/day	
Transmission rate of Xylene (M,P,O)	690 mg/m²/day	
Transmission rate of Hexane	0.58 mg/m²/day	
Transmission rate of Vinyl Chloride	0.112 mg/m²/day	
Transmission rate of Trichloroethene (TCE)	54.67 mg/m²/day	
Transmission rate of Terachloroethene (PCE)	25.91 mg/m²/day	
Transmission rate of Naphthalene	0.00057 mg/m²/day	
Transmission rate of CIS-1,2-Dichloroethene	3.09 mg/m²/day	

Gas Permeability

Methane Permeability	0.13 ml/m²/day/atm	(EN ISO 15105-1)
Methane Permeability (jointed)	1.00 ml/m²/day/atm	
Carbon Dioxide Permeability	3.01 ml/m²/day/atm	
Transmission rate of Vinyl Chloride Gas	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

Reaction to Fire	Class E	(EN 133501-1)

VALUE BASE

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.

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®-1651 Loose VOC Gas Barrier should be installed in accordance with the product installation guidelines, and in accordance with BS 8485:2015 + A1:2019 and Ciria C748.

JOINTING AND SEALING

Sikaplan®-1651 Loose 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 + A1:2019. Sikaplan®-1651 Loose 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.

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

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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