



POWERBASE[®] NF Series

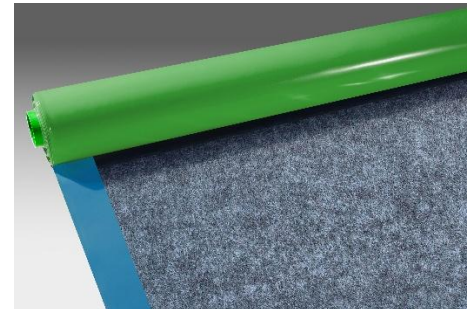
NON-FOIL GAS, HYDROCARBON AND VOC BARRIERS



protecting what matters

TECHNICAL DATA SHEET

Revision 6.6



Description

POWERBASE is a range of geosynthetic barrier membranes for effective protection against ground gases, heavy metals, hydrocarbons and volatile organic compounds (VOCs).

Application

Covered installations with low level of mechanical constraints, with no risk of puncture or abrasion.

Contaminated land, environmental protection, water resources & groundwater protection, secondary containment; tunnels & underground structures, liquid waste disposal sites, transfer stations; solid waste storage or disposal sites.

Installation

POWERBASE membranes are joined by conventional thermal (hot air/wedge) welding equipment to provide overlapped seams for optimum barrier integrity.

Alternatively, the membranes can be overlapped and joined using POWERBOND sealing and jointing self-adhesive tapes.

Design Guidance and References:

- BS 8485: Code of practice for remediation from ground gas in affected developments
- BRE BR 414: Protective measures for housing on gas-contaminated land
- EN 13967: Flexible sheets for waterproofing.

Hydrocarbon & VOC permeation calculations

For soil analyses detailing hydrocarbon concentration levels, we can provide permeation calculations to assist with risk assessments and mitigation reports.

Please contact us for further details

Major Projects



Industrial



Housing



Railways



Commercial

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	EN 13967:2012 +A1:2017	Test Method	POWERBASE®			Units
			GAS NF	VOC NF	VOC NF PREAPPLIED	
	Compliance	BS 8485	Compliant	Compliant	Compliant	
Product Selector	Protection	Radon Natural Gases Hydrocarbons VOCs	✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	
Mechanical	Colour		Black/Green	Blue/Green	Grey/Green	
	Thickness	EN 1849-2	450	500	~700	micron
	Unit Weight	EN 1849-2	410	427	625	gsm
	Tensile strength MD XD	EN 12311-1	400 420	435 430	435 430	N/50mm
	Elongation MD XD	EN 12311-1	700 700	724 717	724 717	%
	Nail tear MD XD	EN 12310-1	300 330	310 350	310 350	Newtons
	Impact resistance	EN 12691-B	2000	2300	2300	mm
	Puncture resistance	EN 12236	TBC	TBC	TBC	kN
	Static load resistance	EN 12730	20	20	20	kg
	Temperature		-30 to +70	-30 to +70	-30 to +70	°C
Hydraulic	Water tightness	EN 1928	60	60	60	kPa
	Durability against Ageing	EN 1296	60	60	60	kPa
	Durability against Chemicals	EN 1847	60	60	60	kPa
	Water Vapour transmission	DIN 53122	0.2	0.2	0.2	ml.m ⁻² d ⁻¹
Ground Gases	Radon Diffusion Coef. (D)	ISO/TS 11665-13	< 4.0 x 10 ⁻¹⁴	< 4.0 x 10 ⁻¹⁴	< 4.0 x 10 ⁻¹⁴	m ² .s ⁻¹
	Radon Resistance (R _{Rn})	(K124/02/95)	51,000	> 51,900	> 51,900	Ms/m
	Permeability CO ₂	ISO 15105-1	3.0	3.01	3.01	ml.m ⁻² d ⁻¹
	Permeability Methane	ISO 15105-1	0.14	0.14	0.14	ml.m ⁻² d ⁻¹
Hydrocarbons & VOCs	Permeability Benzene	ISO 15105-2		<0.0001	<0.0001	ml.m ⁻² d ⁻¹
	Permeability Ethyl Benzene	ISO 15105-2		<0.0001	<0.0001	ml.m ⁻² d ⁻¹
	Permeability Toluene	ISO 15105-2		0.60	0.60	ml.m ⁻² d ⁻¹
	Permeability Xylene	ISO 15105-2		<0.0001	<0.0001	ml.m ⁻² d ⁻¹
	Roll Size		2.0 x 50	2.0 x 25	1.95 x 30	m
	Roll Weight		41	22	25.5	kg

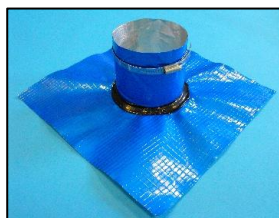
Other System Elements



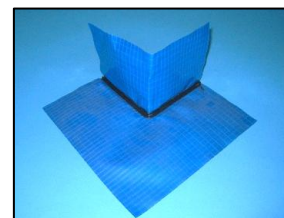
jointing tapes



sealing tapes



Top Hats



Corners

Test Results are obtained under laboratory conditions on new material and not under actual usage conditions. Test results only relate to the sample tested. Tolerances +/- 20%. No warranties or assurances of reliability, suitability or fitness for a particular purpose of specimens or data are offered. Assessment of suitability of such material and data for intended use is the sole responsibility of the customer.

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