

SIGMA GPS EVOC Barrier

BS 8485-2015 Compliant VOC Barrier

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SIGMA GPS EVOC Barrier – Gas and Hydrocarbon Barrier is a multi-layer, polyethylene membrane. SIGMA GPS EVOC Barrier is specifically designed and manufactured to perform as a Methane, Carbon Dioxide, Radon, Ground Gas, VOC, air & Moisture, and Hydrocarbon protection system. SIGMA GPS EVOC complies with the latest codes of practice as published by BRE, CIRIA (C748) and BSI (BS 8485:2015).

Features and benefits:

- Can be a fully welded system.
- Exceptional chemical resistance.
- Long term durability - performance is guaranteed for the lifetime of the building.
- Conform with the latest codes of practice as published by BRE, CIRIA and BSI.
- High resistance to ground gases.

SIGMA GPS EVOC Barrier			
CHARACTERISTIC	TEST METHOD	UNIT	SIGMA GPS EVOC
PHYSICAL PROPERTIES			
THICKNESS	EN 1849-2	MM	0.5
WIDTH	EN 1849-2	M	2
LENGTH	EN 1849-2	M	50
WEIGHT	EN 1849-2	G/M2	500
HYDRAULIC PROPERTIES			
WATER VAPOUR TRANSMISSION RATE	EN 1931	G/M2/DAY	0.11-0.18
WATERTIGHTNESS (60 kPa)	EN 1928	-	PASS
WATERTIGHTNESS (196 kPa – 20m WATER HEAD) (BASEMENT APPLICATION)	EN 1928	-	PASS
MECHANICAL PROPERTIES			
RESISTANCE TO STATIC LOAD	EN 12730 - B	KG	>20
PUNCTURE RESISTANCE	EN 12236	kN	≥2.0
TENSILE STRENGTH (MD)	EN 12311-1	N/50mm	>550
TENSILE STRENGTH (CMD)	EN 12311-1	N/50mm	>400
TENSILE ELONGATION (MD/CMD)	EN 12310-1	%	>550
TEAR RESISTANCE (MD/CMD)	EN 12310-1	N	>300
RESISTANCE TO IMPACT	EN 12691-B	mm	650
REACTION TO FIRE	EN 13501-1	CLASS	E
RESISTANCE TO ARTIFICIAL AGEING	EN 1296/EN 1928	-	PASS
RESISTANCE TO CHEMICALS	EN 1847/EN 1928	-	PASS
VAPOUR PERMEABILITY 100% CONCENTRATION			
TRANSMISSION RATE OF BENZENE	EN ISO 15105-2	mg/m2/day	<3.6
TRANSMISSION RATE OF TOLUENE	EN ISO 15105-2	mg/m2/day	<13.8
TRANSMISSION RATE OF ETHYL BENZENE	EN ISO 15105-2	mg/m2/day	<2.7
TRANSMISSION RATE OF XYLENES (M,P,O)	EN ISO 15105-2	mg/m2/day	<7.7
TRANSMISSION RATE OF HEXANE	EN ISO 15105-2	mg/m2/day	<0.6
TRANSMISSION RATE OF VINYL CHLORIDE	EN ISO 15105-2	mg/m2/day	<0.05
TRANSMISSION RATE OF TRICHLOROETHENE (TCE)	EN ISO 15105-2	mg/m2/day	<54.7
TRANSMISSION RATE OF TETRACHLOROETHENE (PCE)	EN ISO 15105-2	mg/m2/day	<26.2
TRANSMISSION RATE OF NAPHTHALENE	EN ISO 15105-2	mg/m2/day	<0.0006
TRANSMISSION RATE OF CIS-1,2- DICHLOROETHYLENE	EN ISO 15105-2	mg/m2/day	<1.1

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GAS PERMEABILITY			
METHANE PERMEABILITY	EN ISO 15105-1	ml/m2/day/atm	0.13
METHANE PERMEABILITY (JOINTED)	EN ISO 15105-1	ml/m2/day/atm	1.00
CARBON DIOXIDE PERMEABILITY	BS EN ISO 15105 - 1	ML/M2/DAY/ATM	3.01
VINYL CHLORIDE GAS PERMEABILITY	EN ISO 15105-1	ml/m2/day/atm	0.04
RADON PERMEABILITY	SP METHOD 3873	M2/S	3.0 X 10-9
COMPLIANCE AND CERTIFICATION			
CE MARK - EN13967:2012			
NHBC STANDARDS COMPLIANT			
BS 8485:2015 COMPLIANT			
CIRIA C748 COMPLIANT			

DURABILITY AND CHEMICAL RESISTANCE			
CHEMICAL RESISTANCE - SULFURIC ACID (10% SOLUTION OF SULFURIC ACID (H2SO4)) 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	100%
		RESULT	PASS
CHEMICAL RESISTANCE - SYNTHETIC LEACHATE (MIXTURE OF 14 ACIDS, CHLORIDES, SULPHATES AND PHOSPHATE) 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	100%
		RESULT	PASS
CHEMICAL RESISTANCE – TOLUENE – 100% SATURATED CONCENTRATION	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED	100%
		RESULT	PASS
CHEMICAL RESISTANCE – ETHYL BENZENE – 100% SATURATED CONCENTRATION	EN 14414-D (MOD)	TENSILE STRENGTH RETAINED	100%
		RESULT	PASS

