SIGMA GPS Total Gas Barrier

BS 8485-2015 Compliant Gas Barrier

Specialist Integrated Ground Materials & Accessories

SIGMA GPS TOTAL GAS BARRIER

Sigma GPS Total Gas Barrier is a multi-layer, low-density polyethylene membrane, reinforced with a polypropylene reinforcing grid with an integral aluminium foil.

Sigma GPS Total Gas Barrier is specifically designed and manufactured to perform as a methane, carbon dioxide, radon ground gas, volatile organic compound and air & moisture protection system.

Sigma GPS Total Gas Barrier complies with the latest codes of practice as published by BRE, CIRIA and BSI (BS 8485:2015) Suitable for use as gas protection for NHBC GREEN, AMBER 1, and AMBER 2 site characterisations.

SIGMA GPS TOTAL GAS BARRIER			
Characteristic	**Test Method**	**Unit**	**SIGMA GPS Total Gas Barrier**
Physical Properties			
Thickness	EN 1849-2	mm	0.6
Thickness - Between Scrim	**Micrometre**	**mm**	**0.4**
Width	EN 1849-2	M	Various
Length	EN 1849-2	M	Various
Weight	EN 1849-2	g/m2	370
Hydraulic Properties			
Water Column	EN 20811	-	>300
Resistance to water penetration	EN 13967, EN 1928	-	PASS
Water tightness	EN 1296, EN 1367, EN 1928	-	PASS
Mechanical Properties			
Resistance to Static Load	EN 12730 - B	Kg	20
Tensile Strength (MD)	EN 12311 -1	N/50mm	600
Tensile Strength (CMD)	EN 12311 -1	N/50mm	480
Tensile Elongation (MD)	EN 12311	-1 %	20
Tensile Elongation (CMD)	EN 12311	-1 %	20
Puncture Resistance	EN 12236	kN	1.25
Resistance to tearing (nail shank) MD	EN 12310	- 1 N	330
Resistance to tearing (nail shank) CMD	EN 12310	- 1 N	400
Durability and Chemical Resistance			
Transmission rate of volatile liquids - Diesel	ISO 6179:2010 (B)	g/m2/h	0.246
Transmission rate of volatile liquids - Xylene	ISO 6179:2010 (B)	g/m2/h	0.571
Transmission rate of volatile liquids - Toluene	ISO 6179:2010 (B)	g/m2/h	0.583
Transmission rate of volatile liquids - Petrol	ISO 6179:2010 (B)	g/m2/h	0.135
Gas Permeability			
Methane Permeability	BS EN ISO 15105 - 1	ml/m2/day/atm	<0.09
Carbon Dioxide Permeability	BS EN ISO 15105 - 1	ml/m2/day/atm	<0.09
Radon Permeability	K124/02/95	m2/s	8.0 x 10-15
Compliance and Certification			
CE Mark - EN13967:2012			
NHBC Standards Compliant			
BS 8485:2015 Compliant			

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INSTALLATION

Sigma GPS Total Gas Barrier should be installed in accordance with the product installation guidelines, and in accordance with BS 8485:2015.

For NHBC "Amber 2" and BS8485:2015 situations, the installed system will need independently validation to CIRIA C735 to comply with the latest guidance from NHBC and British Standards.

JOINTING AND SEALING

It is recommended Sigma GPS Total Gas Barrier be heat welded where possible, with welding carried out by competent personnel with suitable qualifications in accordance with best practice, and guidance contained within BS 8485:2015.
Sigma GPS Total Gas Barrier 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.
Sigma GPS pre-formed details, or Self-Adhesive Gas Membrane are available for sealing around protuberances.

SYSTEM COMPONENTS

A wide range of accessories are available for use with the GPS Total Gas Barrier, including:

- Sigma GPS GAS TAPE
- Sigma GPS GRM SELF ADHESIVE MEMBRANE
- Sigma GPS PRIME
- Sigma GPS TOP HATS AND PREFORMED CORNERS CLOAKS
- Sigma GPS PROTECTION FLEECE
- Sigma GPS GEO-VENT VOID FORMER (25/40mm)

HANDLING

Roll weights can be more than 20kg and hence appropriate care and equipment is required for unloading and handling.

STORAGE

Rolls of Sigma GPS Total Gas Barrier 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.

ADDITIONAL INFORMATION

For additional information or assistance, please contact SIGMA 360 Ltd directly.





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