Engineered
Geomembrane
Solutions

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Technical Data Sheet – PAG HC 500

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Hydrocarbon, Methane, Carbon Dioxide and Radon – a high performance gas barrier, suitable for most applications.

- Exceptional flexibility and puncture resistance and bi-axial performance
- Comprehensively tested
- Outstanding welding characteristics – efficient installation

Description:

Developed in the mid 2000's PAG HC 400 was the first multi-layer composite membrane using LDPE/ EVOH technology and has become one of the most popular materials for this application. PAG HC 500 uses the same technology with increased inclusion of LDPE for greater robustness particularly underground bearing slabs. It is easily joined by all thermal welding machines.

Applications:

PAG HC 500 is suitable for the following applications:

- VOC contaminated sites
- Carbon dioxide and methane affected sites in accordance with BS8485:2015+A1:2019 & NHBC
- Radon affected sites in accordance with BRE211:2023
- Damp protection in accordance with Building Regulations Part C.

Approvals & Standards:

■ ISO 15105-2 tested for resistance to Petrol, Diesel and other Hydrocarbons
■ BS8485:2015+A1:2019 – Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings. Passed the stringent methane 40ml/m /day/atm (ISO15105-1 to BS8485:2015+A1:2019 requirement) threshold and physical property requirements.
■ CE Mark EN13967 – Moisture Barrier Type A. Flexible sheets for waterproofing. Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet.

Installation :

PAG HC400 should be installed on a smooth surface, such as sand blinding or on a smooth cleaned concrete. Joints can be taped or welded, however on sites with VOC contamination joints should be welded only. Corners and penetrations should be sealed using PAG SAGR. The membrane should be immediately protected from damage post installation.

Moisture Barrier Type A – EN 13967

Technical Data:

TEST	UNIT	Tolerance	TEST METHOD
Thickness at 2kPa	mic	400 ± 5 %	
Mass per unit area	g/m^2	470	EN 1849-2
Tensile Strength at break MD	N/50mm	> 300	EN ISO 12311-2 9 (A)
Tensile Strength at break CMD	N/50mm	> 300	EN ISO 12311-2 9 (A)
Tear resistance MD	N	> 230	EN ISO 12310-1
Tear resistance CMD	N	> 230	EN ISO 12310-1
Puncture resistance	N	> 160	ASTM D4833
Reaction to fire		E	EN ISO 13501-1
Methane Permeation	$cm^3(STP)/m^2day^1atm^1$ *	< 12	ISO 15105-1
Carbon Dioxide Permeation	$cm^3(STP)/m^2day^1atm^1$ *	1.53	ISO 15105-1
Unleaded Petrol Permeation	$/mol/(m^2.s.Pa)$	3.45 x10E-13 avg	EN ISO 15105-2
Diesel Permeation	$/mol/(m^2.s.Pa)$	3.45 x10E-13 avg	EN ISO 15105-2
Benzene Permeation	$ml/m^2/day$	< 3	EN ISO 15105-2
Radon Permeation	m^2/s	1.0×10^{-12}	K124/02/95
Durability Watertightness after artificial Ageing		Pass	EN 1928
Durability Watertightness Against chemicals		Pass	EN 1928
Resistance to water penetration		Pass	EN1928 (A)
Roll Width	m	2	
Roll Length	m	50	

*a measurement in cm3/(m2.d.bar) is directly equivalent to one in ml/day/m2/atm

System Components:

- PAG SAGR - Self Adhesive Gas Resistant Membrane
- PAG Primer

NBS Specification:

PAG HC500 is specified using the following:
Clause: J40/145
Product: PAG HC 500
Supplier: PAGeoTechnical Ltd, Darwin House, Corby Gate Business Park, Corby, NN17 5JG.

Roll Sizing & Weight:

2m x 50m (100m²)
46 kg - hence appropriate care and equipment is required for unloading and handling.

Storage and Handling:

Classified as non-hazardous when used in accordance with the relevant British Standards. The product is chemically inert and is not affected by acids and alkalis that may be present in the sub-soils.
Rolls are wrapped individually in shrink-wrap polythene. Each roll bears a product description label. Rolls should be stored on their side, under cover and on a flat, level surface, and protected from mechanical damage and heat sources. During storage exposure to direct sunlight is to be avoided.

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