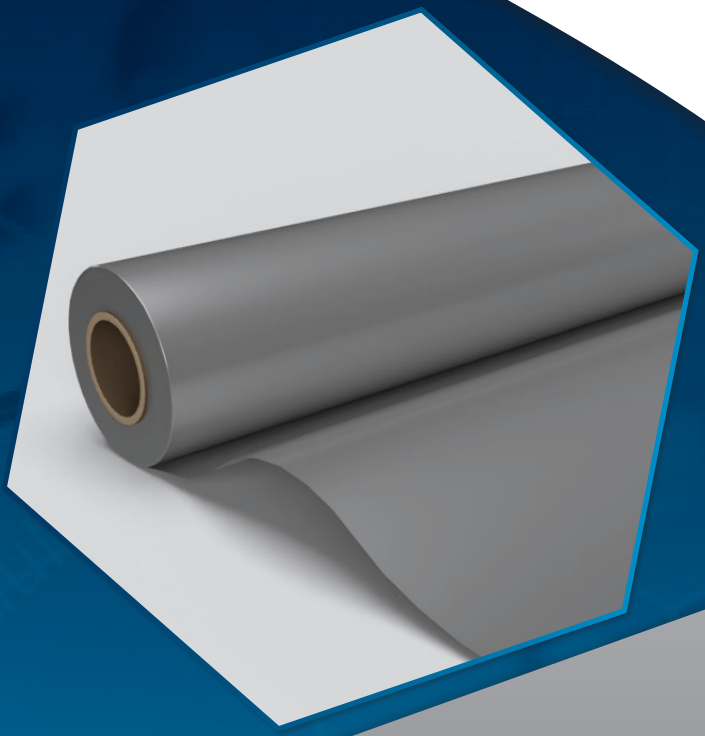
PrinciPal
BUILDING PRODUCTS

RHINOPLAST EVOLUTION

GAS BARRIER



Coverage - 100m²

400mu Thickness

Silver Colour

Rhinoplast Evolution is a high specification co-extruded multi-layer barrier specifically developed for use on construction sites contaminated by Volatile Organic Compounds, Hydrocarbons and other ground gasses such as Methane, Radon and CO2.

The membrane is a loose laid gas membrane designed for full 'line out' installation, manufactured to 14 layers containing 2 layers of gas barrier polymer (EVOH) to offer exceptional performance and prevent the ingress of dangerous gasses into buildings. It is manufactured using the latest co-extrusion technology and cannot delaminate. The product will also act as a damp-proof membrane.

The membrane is manufactured using High Performance engineering Polymers to give exceptional strength and does not require reinforcement. It can be installed by the use of sealing tapes or can easily be welded for VOC applications.

CE
EN 13967

A NEW GENERATION OF GAS BARRIER

- Advanced Fourteen Layer Barrier
- Two layers of Ethylene Vinyl Alcohol Co-Polymer (EVOH)
- Single wound to achieve a flat surface
- CE Marked for Waterproofing to EN 13967:2012+A1:2017
- Conforms with BS8485:2015 + A1:2019 (Table 7)
- Incorprates guidance outlined in CIRIA C748
- Conforms to the specification requirements of NHBC Amber 1 & Amber 2 applications
- Suitable for all characteristic Gas Situation (CS) ground gas regimes
- Excellent Welding Characteristics
- Fully Intergrated Components and Tapes available

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Technical Data

Material Properties			Test Method	Value	
Thickness			DIN EN 1849-2	0.4mm	
Material			Polyethylene/ Ethylene Vinyl Alcohol	PE/EVOH	
Colours				Silver	
Width			DIN EN 1848-2	1650mm	
Length			DIN EN 1848-2	61m	
Area/roll			1.65m x 61m	100m²	
Mass			DIN EN 1849-2/ISO 9864	385g.m²	
Reaction to fire			DIN EN ISO 11925-2/EN 13501-1	E	
Water tightness @ 60kPa 24h & 500kPa 72h			DIN EN 1928 – Method B	Watertight	
Resistance to impact			DIN EN 12691 – 350mm drop	Watertight	
Resistance to static loading			DIN EN 12730	20kg (Pass)	
Durability against thermal ageing @ 60kPa			DIN EN 1296/DIN EN1928	Watertight	
Durability against chemicals @ 60kPa			DIN EN 1847/DIN EN 1928	Watertight	
Durability against alkaline environment @ @ 60kPa			DIN EN 1847/DIN EN 1928	Watertight	
Durability against sulphurous acid @ 60kPa			DIN EN 1847/DIN EN 1928	Watertight	
Compatibility with bitumen @ 60kPa			DIN EN 1548/DIN EN 1928	Watertight	
3mm Puncture Force			ASTM D2582	36.9 N	
3mm Puncture Deflection			ASTM D2582	3.63mm	
Tensile strength	MD	CMD	DIN EN 12311-2/DIN EN ISO 291-23/50-2	20.9 N/mm²	21.5 N/mm²
Elongation	MD	CMD	DIN EN12311-2/DIN EN ISO 291-23/50-2	606%	686%
Tear resistance -nail shank	MD	CMD	DIN EN 12310-1/DIN EN ISO 291-23/50-2	428 N	404 N
Shear resistance of tapped joint seam – 50mm double sided / 75mm Reinforced fleece single sided			DIN EN 12317-2	228 N/50mm	166 N/50mm
Water vapour permeability			DIN EN 1931 – Method B	0.054g/m²/day	
Oxygen transmission rate			ASTM F 1927, 20°C 60% RH	<0.75cc/m²/day	
Methane permeability			ISO 15105-1	≤0.09 ml/m²/day.atm	
Radon permeability			SP Method 3873	$<1.2 \cdot 10^{-12}$ m²/s	
Carbon Dioxide transmission			ISO 15105-1	0.37ml/m²·d·atm	

C748:2014 - Permeation vapour tests – 100% concentration

Material Properties	Test Method	Value
Benzene transmission rate	EN ISO 15105-2	≤0.0001 ml/m²·d
Toluene transmission rate	EN ISO 15105-2	≤0.0001 ml/m²·d
Ethyl Benzene transmission rate	EN ISO 15105-2	≤0.0002 ml/m²·d
Xylene transmission rate	EN ISO 15105-2	≤0.0001 ml/m²·d
Hexane transmission rate	EN ISO 15105-2	≤0.0001 ml/m²·d
Tetrachloroethene (PCE) transmission rate	EN ISO 15105-2	≤0.0001 ml/m²·d
Trichloroethylene (TCE) transmission rate	EN ISO 15105-2	>1.29 ml/m²·d
Naphthalene transmission rate	EN ISO 15105-2	≤0.0001 ml/m²·d

C748:2014 – Chemical immersion resistance testing

Material Properties	Test Method	Tensile Strength retained		Result
		MD	CMD	
Benzene	EN ISO 14414	101%	97%	Pass
Toluene	EN ISO 14414	103%	100%	Pass
Ethyl Benzene	EN ISO 14414	104%	102%	Pass
Xylene	EN ISO 14414	104%	98%	Pass
Hexane	EN ISO 14414	104%	100%	Pass
Tetrachloroethene (PCE)	EN ISO 14414	105%	102%	Pass
Trichloroethylene (TCE)	EN ISO 14414	102%	99%	Pass
Naphthalene	EN ISO 14414	102%	98%	Pass
Sulphuric Acid (10% solution)	EN ISO 14414 A	91%	101%	Pass
Calcium Hydroxide	EN ISO 14414 B	94%	101%	Pass
Solvents (35% Diesel, 35% Paraffin, 30% Oil	EN ISO 14414 C	102%	97%	Pass
Synthetic Leachate (Acids, Chlorides, Sulphates & Phosphates)	EN ISO 14414 D	104%	102%	Pass

BS8485:2015+A1:2019

Meets all the following criteria:

- Sufficiently impervious to the gases with a methane gas transmission rate <40.0 ml/day/ m^2/atm (average) for sheet and joints (tested in accordance with BS ISO 15105-1 manometric method)
- Sufficiently durable to remain serviceable for the anticipated life of the building and duration of gas emissions
- Sufficiently strong to withstand in-service stresses (e.g settlement if placed below floor slab)
- Sufficiently strong to withstand the installation process and following trades until covered (e.g penetration from steel fibres in fibres reinforced concrete, penetration of reinforcement ties, tearing due to working above it, dropping tools, etc)
- Capable, after installation, of providing a complete barrier to the entry of the relevant gas

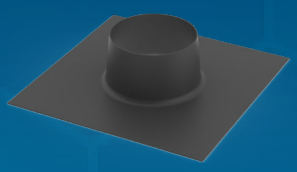
Download a copy of our Gas barrier Solutions Brochure

SCAN ME

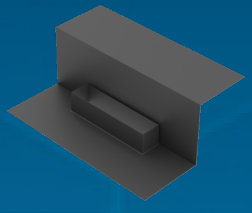
Product Range Accessories

- Our Technical Department is available to advise on individual projects and to prepare or assist in the preparation of schedules and issue drawings.

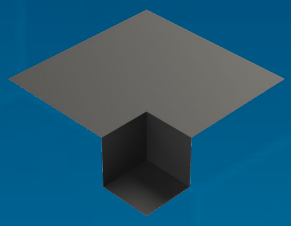
Description	Roll width	Length	Thickness	M²/roll
Rhinoplast Evolution VOC/Methane Gas Barrier	1.65m	61m	0.4mm	100m²
Rhinoplast Reinforced Single Sided Detail Strip	75mm	20m		
LT Jointstrip Double Sided Tape	50mm	15m		
Gas Resistant Detailing Wrap	300mm	20m		
	Size variation - Diameter			
Top Hat Pipe Collar	Ø110mm	Ø135mm	Ø160mm	
Overall Cavity Wall Options – 300mm/325mm/350mm	Size variation - Rise			
Gas Barrier Internal 90° Corner	75mm	150mm	225mm	
Gas Barrier External 90° Corner	75mm	150mm	225mm	
Gas Barrier Step Door Cloak Pair	75mm	150mm	225mm	
Telescopic Vent Top Hat				
Telescopic Vent T/Frame	75mm	150mm	225mm	
100mm Load Bearing Wall	Size variation - Rise			
Gas Barrier Load Bearing Wall Corner	75mm	150mm	225mm	
Gas Barrier Load Bearing Wall T Junction Single Skin	75mm	150mm	225mm	
Gas Barrier Load Bearing Wall T Junction Double Skin	75mm	150mm	225mm	
Gas Barrier Load Bearing Wall End Cap	75mm	150mm	225mm	
Separating/Compartment Wall				
Separating Wall T Junction Double Skin	Special detail			
Perimeter T/Frame Trays – various cavity options	Size variation - Rise			
Preformed Perimeter T/Frame Linear trays – 2mtr	75mm	150mm	225mm	
Gas Barrier T/Frame Internal 90° Corner	75mm	150mm	225mm	
Gas Barrier T/Frame External 90° Corner	75mm	150mm	225mm	



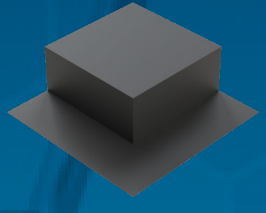
Top hat



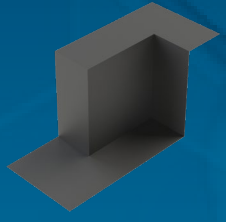
Televent Top hat



Internal Corner



External Corner



Door threshold trays