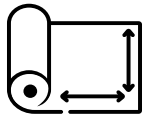
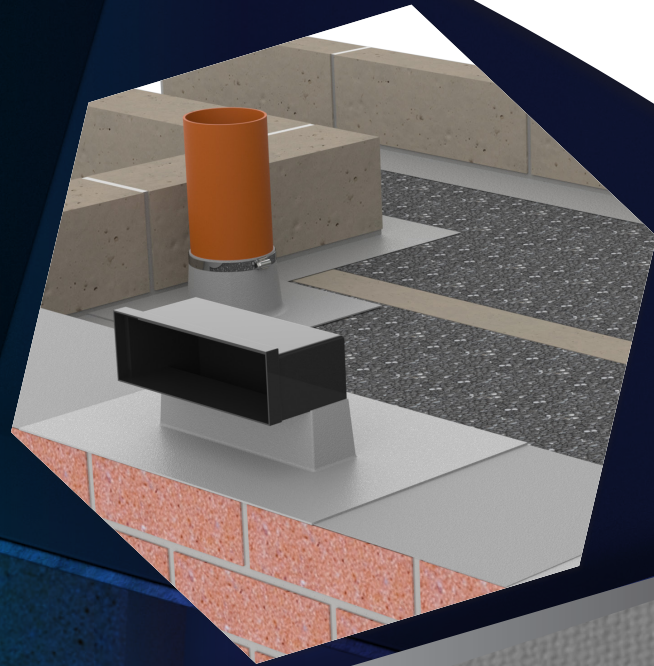


# RHINOPLAST EVOLUTION

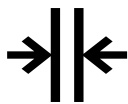
## GAS DPC

GAS/VOC DAMP PROOF COURSE



Roll Length: 20m

Roll Widths: From 300mm - 1200mm

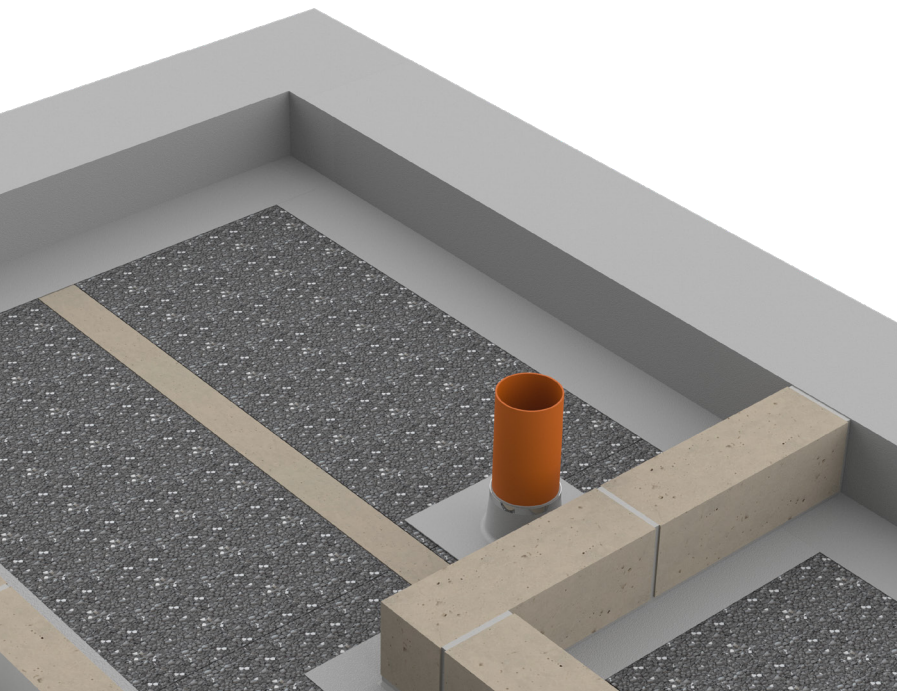


500µm Thickness



Grey Colour

Rhinoplast Evolution GAS DPC is a high specification embossed multi-layer damp proof course (DPC) specifically developed for use on brownfield and contaminated construction sites. Designed to be sufficiently durable to build into perimeter cavity and load bearing walls as part of a gas barrier membrane system to resist moisture and ground gasses, including Volatile Organic Compounds (VOC's), Hydrocarbons and others, such as Methane, Radon and CO<sup>2</sup>.



### FEATURES & BENEFITS

- Advanced Fourteen Layer DPC
- Contains no hazardous pitch or bitumen
- Will not extrude under load
- Two layers of Ethylene Vinyl Alcohol Co-Polymer (EVOH)
- Embossed surface finish
- Flexible and easy to install on site
- Provides protection against radon, carbon dioxide, methane, Hydrocarbons and VOCs
- Lap joints can be taped or heat sealed/ welded
- CE Mark to EN 14909:2012 type A
- Meets guidance and all recommendations set out in BS8485:2015 + A1:2019 (Table 7)
- Incorporates guidance outlined in CIRIA C748 for VOC protection
- Suitable for all characteristic Gas Situation (CS) ground gas regimes
- Conforms to the specification requirements of NHBC Amber 1 & Amber 2 applications.
- Preformed Components and Tapes available

Web: [www.pbpltd.co.uk](http://www.pbpltd.co.uk) | Tel: 01709728150

Principal Building Products Ltd, Barbot Hall Ind Est. Mangham Road, Rotherham. S614RJ

# Technical Data

Material Properties			Test Method	Value	
Thickness				0.5mm	
Material			Polyethylene/ Ethylene Vinyl Alcohol	PE/EVOH	
Colours				Grey	
Width (Various)			300mm, 450mm, 550mm 600mm, 650mm, 750mm, 900mm, 1200mm NB. Other sizes on request.		
Length				20m	
Mass				483g.m <sup>2</sup>	
Reaction to fire			EN ISO 11925-2/EN 13501-1	E	
Water tightness @ 60kPa 24h & 500kPa 72h			EN 1928 – Method B	Watertight	
Resistance to impact			EN 12691 – 350mm drop	Watertight	
Resistance to static loading			EN 12730	20kg (Pass)	
Durability against thermal ageing @ 60kPa			EN 1296/DIN EN1928	Watertight	
Durability against chemicals @ 60kPa			EN 1847/DIN EN 1928	Watertight	
Durability against alkaline environment @ @ 60kPa			EN 1847/DIN EN 1928	Watertight	
Durability against sulphurous acid @ 60kPa			EN 1847/DIN EN 1928	Watertight	
Compatibility with bitumen @ 60kPa			EN 1548/DIN EN 1928	Watertight	
3mm Puncture Force			ASTM D2582	72 N	
3mm Puncture Deflection			ASTM D2582	7mm	
Tensile strength	MD	CMD	ASTM d638-03	20.9 N/mm <sup>2</sup>	23 N/mm <sup>2</sup>
Elongation	MD	CMD	ASTM D882-02	739%	1078%
Trouser Tear	MD	CMD	EN 12310-1/DIN EN ISO 291-23/50-2	198 N	192 N
Shear resistance of tapped joint seam – 50mm double sided			EN 12317-2	228 N/50mm	166 N/50mm
Water vapour transmission			EN 1931 – Method B	0.767g/m <sup>2</sup> /day	
Oxygen transmission rate			ASTM F 1927, 20°C 60% RH	<0.75cc/m <sup>2</sup> /day	
Methane permeability			ISO 15105-1	≤0.09 ml/m <sup>2</sup> /day.atm	
Radon permeability			SP Method 3873	<1.2·10 <sup>-12</sup> m <sup>2</sup> /s	
Carbon Dioxide transmission			ISO 15105-1	0.37ml/m <sup>2</sup> ·d·atm	



EN 14909:2012

## C748:2014 - Permeation vapour tests – 100% concentration

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

\*Measurement stopped after 83 days of testing

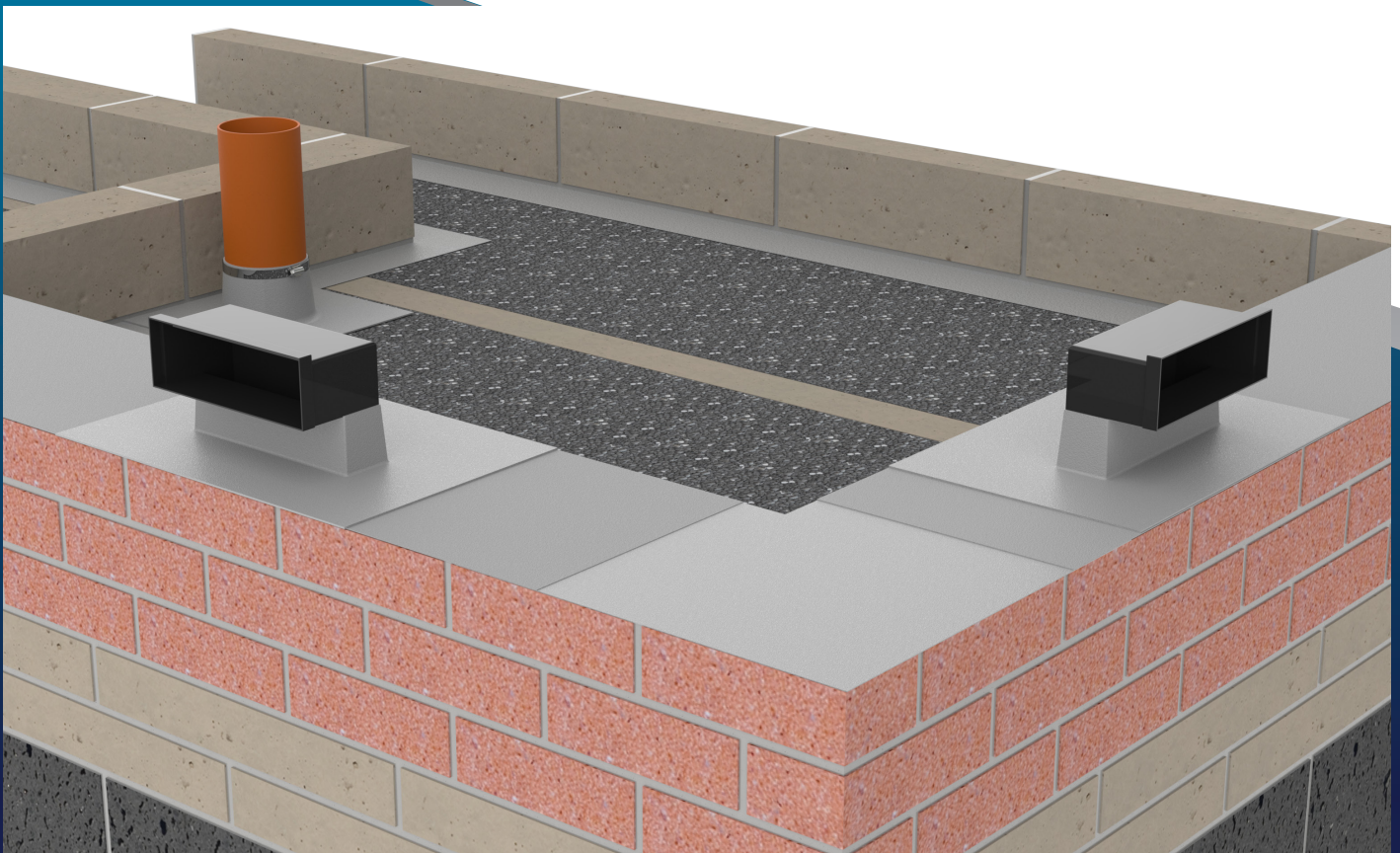
## C748:2014 – Chemical immersion resistance testing

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
Sulfuric 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

# Technical Background

The Evolution Gas Damp Proof Course was developed for all masonry wall construction types and is manufactured at 0.5mm thick using latest co-extrusion technology to produce a flexible 14-layer combination of high-performance engineering polymers that cannot de-laminate containing 2 independent layers of gas resistant polymer (EVOH) to offer exceptional gas protection and moisture resistance into buildings.

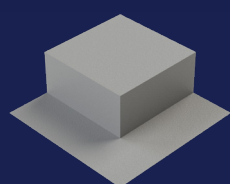
The Evolution GAS DPC provides gas resistance, robustness, and exceptional strength without the requirement for reinforcement or containing aluminium layers and will maintain maximum durability in application. It is supplied in 20mtr rolls and in standard widths 300mm, 450mm, 550mm, 600mm, 650mm, 750mm, 900mm and 1200mm. The system incorporates an extensive range of preformed components to maintain the integrity of the system to be installed in accordance with the relevant sections of BS 8215:1991, PD6697:2019 and BS 8000-3:2020 and joined using sealing tapes or easily heat sealed/welded for VOC applications.



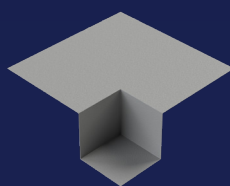
# Product Range Accessories

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

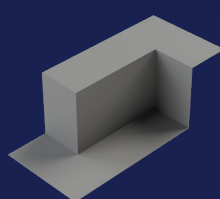
Description	Roll width	Length	Thickness	M <sup>2</sup> /roll
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	300mm	20m	0.5mm	6m <sup>2</sup>
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	450mm	20m	0.5mm	9m <sup>2</sup>
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	550mm	20m	0.5mm	11m <sup>2</sup>
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	600mm	20m	0.5mm	12m <sup>2</sup>
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	650mm	20m	0.5mm	13m <sup>2</sup>
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	750mm	20m	0.5mm	15m <sup>2</sup>
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	900mm	20m	0.5mm	18m <sup>2</sup>
Rhinoplast Evolution GAS DPC - GAS/VOC Damp Proof Course	1200mm	20m	0.5mm	24m <sup>2</sup>
Rhinoplast Evolution GAS BARRIER	1.65m	61m	0.4mm	100m <sup>2</sup>
Rhinoplast Single Sided Gas Resistant Detail Strip	75mm	20m		
Butyl jointing tape	10mm	15m		
LT Jointstrip Double Sided Tape	50mm	15m		
Gas Resistant Detailing Strip	300mm	20m		
Top Hat Pipe Collar	Ø110mm	Ø135mm	Ø160mm	
Overall Cavity Wall (Options – 300mm/325mm/350mm/375mm)	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	425mm x 375mm (trim to size)			
Telescopic Vent T/Frame	75mm	150mm	225mm	
Load Bearing Wall (Options – 100mm/150mm)	Size variation - Rise			
Gas Barrier Load Bearing Wall Corner	75mm	150mm	225mm	
Gas Barrier Load Bearing Wall T Junction (300mm-375mm)	75mm	150mm	225mm	
Gas Barrier Load Bearing Wall End Cap	75mm	150mm	225mm	
Wall Junction T Junctions	Cavity wall	L/Bearing wall	Drop	



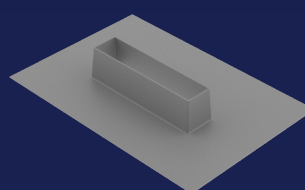
External Corner



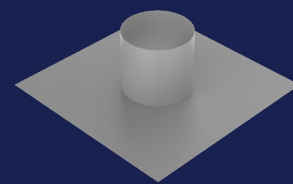
Internal Corner



Step Door Cloak



Telescopic Vent Top hat



Soil Pipe Top Hat