

## QUADPROOF ULTRA MEMBRANE

Pre-applied membrane

A pre-applied fully bonded waterproofing gas barrier membrane combined with a heavy-duty virgin polypropylene geotextile providing a fully concrete bonded system in basement and below ground structures.



### APPLICATION

- Designed to Integrate with the subsequently placed fresh concrete to give strong mechanical bond effect without adhesive, primers, heat or open flames
- Applied prior to fixing steel reinforcement
- Applied in a vertical and/or horizontal to blindside or under slab applications
- Used to create an integral seal between the concrete and the waterproofing membrane
- Specifically developed for use on construction sites contaminated by Volatile Organic Compounds, Hydrocarbons, and other ground gasses such as Methane, Radon and CO<sup>2</sup>

### PRODUCT FEATURE & BENEFITS

- Ensures a fully bonded waterproofing barrier
- Membrane bond is continuous
- Supplied single-wound to achieve a lay flat surface
- Exceptionally high resistance to ground gas and VOC's
- Used for gas/waterproofing and tanking of underground structures
- Impedes lateral migration of water between the membrane and concrete structure
- Waterproofing barrier Type A
- Easily folded on site
- CE marked for water proofing to harmonised standard EN 13967:2012+A1:2017
- Conforms to BS8102:2022
- Conforms with BS8485:2015+A1:2019 (Table 7)
- Incorporates guidance outlined in CIRIA C748
- Conforms to the specification required of NHBC Amber 1 & 2 applications.
- Suitable for all Characteristic Gas Situations (CS) ground gas regimes
- Excellent welding characteristics
- Two layers of Ethylene Vinyl Alcohol Co-Polymer (EVOH)
- Advanced 14-layer membrane barrier
- Preformed accessories available
- Taped system for easy cold applied installation

# TECHNICAL DATASHEET

## MATERIAL

- Material - PE/EVOH membrane & Non-woven polypropylene geotextile fleece
- Colour – Purple/Grey
- Thickness - 1.9mm
- Roll sizes – 1.65m x 30mtr

Material Properties		Test Method	Value
Thickness	Overall	Nominal	1.9mm
Thickness	Membrane	DIN EN 1849-2	0.4mm
Material		Polyethylene/ Ethylene Vinyl Alcohol	PE/EVOH
Thickness	Geotextile	EN ISO 9863/1	1.70mm +-20%
Material		Non-woven polypropylene geotextile fleece	PP

## TECHNICAL BACKGROUND

The Quadproof ultra pre-applied fully bonded waterproofing gas barrier membrane incorporates a sealing layer of the Evolution BS8485 compliant gas membrane that is a hydrostatic resistant waterproofing layer combined with a bonding mechanism layer made up of a heavy-duty virgin polypropylene geotextile providing a fully concrete bonded system.

The membrane is 14 layers and contains 2 layers of gas barrier polymer (EVOH) to offer exceptional performance and prevent the ingress of dangerous gasses and water into buildings. It is manufactured using the latest high specification co-extrusion, multi-layer technology and cannot delaminate. Specifically developed for use as building protection on construction sites contaminated by ground gasses such as Methane, Radon and CO<sub>2</sub>, Volatile Organic Compounds and Hydrocarbons. The product is CE compliant to act as a damp-proof membrane (DPM).



Pre-applied waterproofing membranes are applied prior to the concrete pour. The product can be applied in a vertical or horizontal fashion, also known as blindside or underslab application.

Bonded systems are distinguished according to their timeline of installation into pre- and post-applied systems. Pre-applied bonded systems are installed before the concrete works on substrate, formwork and later form a bond with the subsequently placed fresh concrete.



# QUADPROOF ULTRA MEMBRANE

Colours	Membrane/fleece		Purple/Grey	
	Joint strip/accessories		Silver	
Width	DIN EN 1848-2		1650mm	
Length	DIN EN 1848-2		30m	
Area/roll	1.65m x 30m		49.5m <sup>2</sup>	
Mass (combined)	DIN EN 1849-2/ISO 9864		515g.m <sup>2</sup>	
Packaged roll weight			28.65kg	
Reaction to fire	DIN EN ISO 11925-2/EN 13501-1		E	
Peel resistance (180°peel)	EN ISO 8510-2		49.1 N/50mm	
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	
Tensile strength	MD	CMD	DIN EN 12311-2/DIN EN ISO 291-23/50-2	665 N/50mm 749 N/50mm
Elongation	MD	CMD	DIN EN12311-2/DIN EN ISO 291-23/50-2	748% 710%
Tear resistance -nail shank	MD	CMD	DIN EN 12310-1/DIN EN ISO 291-23/50-2	678 N 671 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/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

# TECHNICAL DATASHEET

## TECHNICAL DATA

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

• C748:2014 – Chemical immersion resistance testing

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

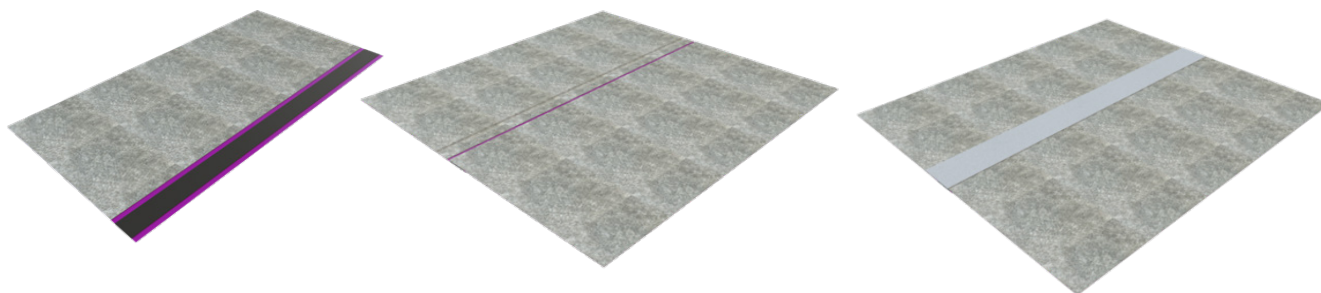
Material Properties	Test Method	Tensile Strength retained		Result
		MD	CMD	
Benzene	EN ISO 14414	101%	97%	Pass
Toluene	EN ISO 14414	103%	100%	Pass
Ethyl Benzene	EN ISO 14414	104%	102%	Pass
Xylene	EN ISO 14414	104%	98%	Pass
Hexane	EN ISO 14414	104%	100%	Pass
Tetrachloroethene (PCE)	EN ISO 14414	105%	102%	Pass
Trichloroethylene (TCE)	EN ISO 14414	102%	99%	Pass
Naphthalene	EN ISO 14414	102%	98%	Pass



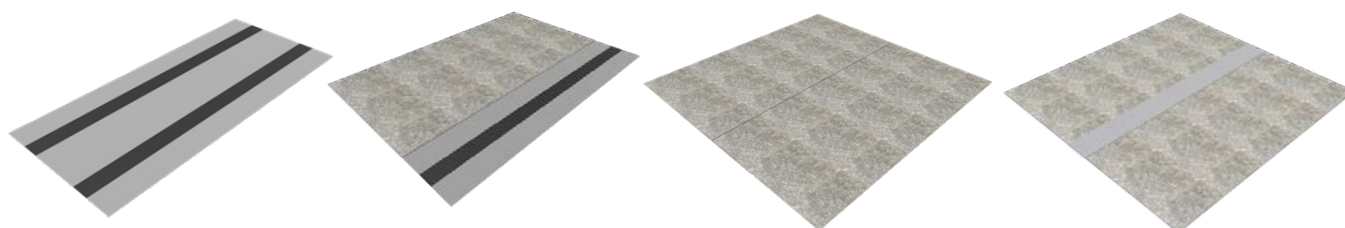
# QUADPROOF ULTRA MEMBRANE

## INSTALLATION GUIDE

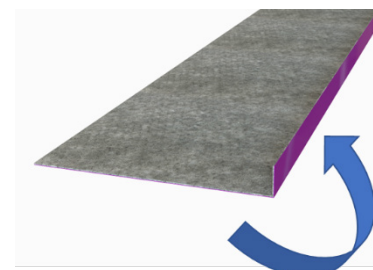
- Prior to installation the application surface needs to be cleaned from sharpe and protruding objects to reduce risk of damage, for some applications soft sand blinding may be required.
- The product to be rolled out with the grey textile fleece surface laid to receive the concrete when poured.
- All lap joints to be completed as works proceed using selvedge on roll or by forming lap edges with additional edge strip.
- Apply double sided tape to selvedge and then overlap membrane to seal.



- Additional over taping required to joint, applied over geotextile surface with reinforced fleece tape.



- Vertical and horizontal edges can easily be formed by folding the pre applied membrane or by using additional edge strip.
- Junctions and service penetrations can be formed with accessories, including corners, top hats, and pile collars.



## PRODUCT RANGE ACCESSORIES

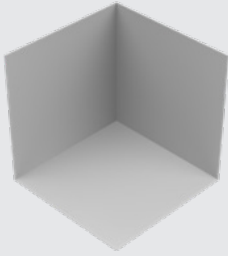
Our Technical Department is available to advise on individual projects and to prepare or assist in the preparation of schedules and issue drawings.

Description	Roll width	Length	Thickness	M <sup>2</sup> /roll
Pre-Applied fully bonded gas barrier	1.65m	30m	1.9mm	49.5
Pre-Applied edge strip	412mm	20m	0.4mm	8.24
Pre-Applied reinforced fleece tape	100mm	10m		
LT Jointstrip double sided tape	50mm	40m		
Pre-Applied top hat pipe collar 110mm				
Pre-Applied top hat pipe collar 135mm				
Pre-Applied top hat pipe collar 160mm				
Pre-Applied flanged corner 90 degree - 200/200				
Pre-Applied boxed corner 90 degree - 200/200				
Pre-Applied pile head collars - various sizes Ø				
Pre-Applied joist liners, 100mm flange x various sizes LxWxD				

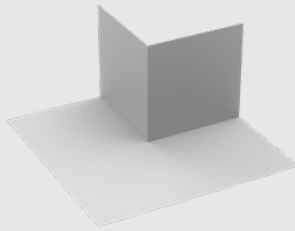
# TECHNICAL DATASHEET

## PRODUCT RANGE ACCESSORIES

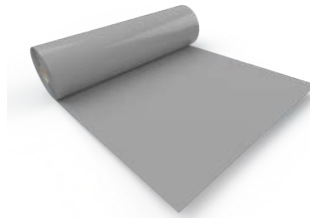
Pre Applied corners units – for use to return corners and reduce risk of unsealed edges.



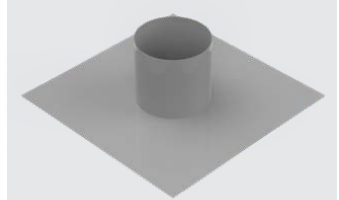
BOXED CORNER



FLANGED CORNER



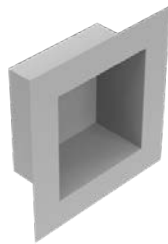
PRE-APPLIED EDGE STRIP



PRE-APPLIED TOP HAT  
PIPE COLLAR



PRE-APPLIED PILE HEAD  
COLLARS - VARIOUS  
SIZES Ø



PRE-APPLIED JOIST  
LINERS, 100MM FLANGE  
X VARIOUS SIZES LXWXD



LT JOINSTRIIP DOUBLE  
SIDED TAPE - FOR  
SEALING LAPPED JOINTS



PRE-APPLIED REINFORCED  
FLEECE TAPE – OVERLAP  
TAPE TO PROTECT  
FLEECE JOINT SEAL

## HEALTH AND SAFETY

No specific hazards are likely to arise while using any Wykamol Waterproofing Membranes or ancillaries; neither are classified as hazardous in respect to CHIP II Regulations 1999.

However, general precaution should be exercised in the use of drill etc. taking particular note of the special risk associated with working in confined spaces (basements) with restricted access/egress.

The Wykamol Group always advise the use of appropriate PPE, including gloves, hard hat, goggles, high visibility jackets and steel toe cap boots. For further information and advice, please contact the Wykamol Group Technical Department.

## STORAGE & SHELF LIFE

Store in an upright position, under cover and away from high temperatures and open flames. Shelf life is the lifetime of the structure, when stored and installed in line with the datasheet recommendations.

Boran Court, Network 65 Business Park, Hapton,  
Burnley Lancashire BB11 5TH  
t: +44 (0)1282 473 100 e: info@wykamol.com  
www.wykamol.com

Unit 3-5 Crayford Commercial Centre,  
Greyhound Way, Kent, DA1 4HF  
t: +44 (0)1322 318 830 e: info@tritonsystems.co.uk  
www.tritonsystems.co.uk

The information in this technical datasheet is given in good faith and was correct at the time of publication, but does not purport to be all inclusive. We reserve the right to update this information at any time without prior notice. All data is obtained through extensive testing in stringent laboratory conditions, however as we have no control over site conditions or work executed we accept no liability for incidental and/or consequential property damage arising out of the use of this product. The Wykamol Group's standard terms and conditions of sale apply.