



PUDLO Membrane BW

DESCRIPTION

PUDLO Membrane BW is a waterproofing of high strength geotextiles and 4.8 kg/sqm of sodium bentonite. **PUDLO Membrane BW** is needle-punched during the manufacturing process which interlocks the two geotextile layers together. The bentonite encased within the layers maintains equal coverage and is protected from construction related damage.

USES

For all aspects of waterproofing where a Grade 2 or Grade 3 environment is required as part of a single or dual system recommended in BS8102:2009. **PUDLO Membrane BW** provides protection in either post or pre-applied situations. The membrane can be used in horizontal or vertical applications. **PUDLO Membrane BW** is suitable for basement construction including lift pits, slabs, liner walls, capping beams and service penetrations. **PUDLO Membrane BW** is also designed to be used in earth covered roofs, structural slabs, tunnels and property line construction.

BENEFITS

- **PUDLO Membrane BW** is a needle-punched high strength geotextile system.
- Full surface contact between the impregnated cover layer and the PUDLO concrete ensures that small cracks and surface imperfections are sealed.
- Forms a mechanical bond to poured concrete when cast in situ, remaining in place if settlement of the substrate occurs.
- Self-healing.
- Quick and easy installation.
- Can be installed in all weather conditions.
- Can be used in sprayed concrete applications, secant / contiguous and sheet piled design.
- BBA accredited.



TECHNICAL DATA

Bentonite

Material Properties	Test Method	Nominal Value
Bentonite Free Swell	ASTM D 5890	>24ml / 2g
Bentonite Fluid Loss	ASTM D 5891	18ml max
Bentonite Mass / Unit Area	EN 14196	4.8kg/m ²



PRODUCT DATA SHEET

Membrane Composite

Material Properties	Test Method	Nominal Value
Hydrostatic Pressure Resistance	ASTM D 5385 (mod)	70m
Peel Adhesion to Concrete	ASTM D 903 (mod)	2.6Kn / m min
Water Permeability / Hydraulic Conductivity	ASTM D 5084	1.0 x 10 ⁻⁹ cm/s
Tensile Strength (MD / CD)	EN ISO 10319	8.0 Kn/m / 8.0 Kn/m
Thickness @ 2 kPa	EN ISO 9863-1	7.0 mm (typical)
Puncture Resistance	EN ISO 12236	1.5Kn
Low Temperature Flexibility	ASTM D 1970	Unaffected @ -32°C

SURFACE PREPARATION

Installation guidelines provided in this data sheet are for cast-in concrete applications. Pre-cast, shotcrete and other applications are not covered. Please refer to the **PUDLO** technical team for installation guidelines. **PUDLO Membrane BW** should be installed in accordance with installation instructions. **PUDLO Membrane BW** is installed with the woven geotextile toward the concrete. **HDBR Waterbar** must be installed in all construction joints where **PUDLO Membrane BW** is used.

Horizontal Floor Application:

Installation of **PUDLO Membrane BW** concrete slabs requires the following ground preparation:

- 50mm blinding layer of lean concrete or sand/gravel is placed, compacted and levelled. This blinding layer should be free from dirt and debris and have a smooth surface.
- Standing water should be removed before **PUDLO Membrane BW** is unrolled on site. Alternatively, **PUDLO Membrane BW** can be laid on well-compacted hardcore, or a clay base may be suitable.
- **PUDLO Membrane BW** should be laid so the woven geotextile side is facing towards the concrete.
- To obtain a watertight seal, the edges must be overlapped a minimum of 100mm in the centre and 300mm-350mm where membrane overlaps to bridge the construction joint. All sheet ends should be staggered a minimum of 300mm. Always avoid wrinkles, folds and uneven overlaps.
- **PUDLO** modified concrete or standard concrete must be poured following the direction of each overlap of the **PUDLO Membrane BW** to minimise the chances of a break in the waterproofing membrane. All concrete must be fully compacted as per best concrete practice. Information on concrete practice can be obtained from **PUDLO** or The Concrete Society.

Vertical Wall Application:

- **PUDLO Membrane BW** must be secured and fixed to the concrete with the non-woven geotextile side facing away from the concrete.
- Floor to wall joints must be overlapped a minimum of 300-350mm whilst avoiding wrinkles, folds and uneven overlaps.
- Ensure all overlaps are aligned to not allow any **PUDLO** concrete through when poured and level of concrete is rising.
- When fixing **PUDLO Membrane BW** against secant, contiguous or sheet piling, this is held in place with soft washer fixings nailed into the membrane at 600mm centres.
- When fixing **PUDLO Membrane BW** to timber formwork the non-woven (white) side should be installed against the formwork.
- When fixing **PUDLO Membrane BW** to timber formwork, please ensure the laps face downwards and stagger adjacent roll-ends no less than 300mm.
- Where a slab 'toe' exists and **PUDLO Membrane BW** has terminated at the top of the slab, additional **PUDLO Membrane BW** will be required to ensure continuity and to link the under-slab and edge of slab together.



PRODUCT DATA SHEET

Apply a 38mm x 38mm fillet of **PUDLO Membrane Seal** or **PUDLO Membrane Granules** at the internal wall/slab corner.

- Once timber formwork is positioned as required and **PS Tie Bolt Hole Tubes** are installed (penetrating the **PUDLO Membrane BW**) normal formwork striking times apply in line with code of practice. **PUDLO Membrane BW** must remain bonded to the concrete.

Post-applied Installation:

Preferred method of installation is to pre-apply the membrane. For post-apply fixings please contact PUDLO for full instructions and to discuss project specific requirements.

Penetrations:

- Please refer to **PUDLO Membrane Seal** and **PUDLO Membrane Granules** for information.

Ground Termination:

- **PUDLO Membrane BW** is terminated 300mm below GF level and fastened with soft washer fixings.
- Overlap secondary waterproofing measure in line with manufacturer's specification (typically 150mm overlap) and up into the cavity tray. For specific details please contact **PUDLO**.

LIMITATIONS

- **PUDLO Membrane BW** is not intended for movement joints or masonry block foundation walls.
- For reinforced concrete thicknesses please contact **PUDLO** with your technical requirements.

ANCILLARY PRODUCTS

- **PUDLO Membrane Granules**
- **PUDLO Membrane Seal**
- **HDBR Waterbar**
- **PS Tie Bolt Hole Tube**
- **Soft Washer Fixings**

PACKAGING

1.1m x 5m rolls. Weight 33kg.

HEALTH & SAFETY

PUDLO Membrane BW rolls are heavy and may need mechanical lifting.

STORAGE

PUDLO Membrane BW should be kept in dry conditions.

FIRE

PUDLO Membrane BW has been independently tested and is classified as Class E in accordance with EN 13501-1. Please refer to **PUDLO Membrane BW** MSDS for information.

For further information on accessories that are used with **PUDLO Membrane BW** please contact **PUDLO** Head Office on 01954 780687 or email sales@pudlo.com