

Technical Data Sheet ISSUED OCTOBER 2023

PRODUCT DESCRIPTION

WPA Drainage Cell is a two-core drainage sheet consisting of a non-woven geotextile filter layer thermally welded to a water impermeable, recycled HDPE (High Density Polyethylene) drainage membrane. WPA Drainage Cell provides outstanding drainage and protection to the outside face of basement walls, preventing the build-up of water pressure and protecting the structure from aggressive water, chemicals and toxins.

Recommended for:

- As the drainage layer of an externally applied waterproofing system when used in conjunction with sheet applied or liquid applied external tanking membrane to BS8102.
- Protection of the structure from aggressive chemicals in the ground water
- To prevent the build-up of ground water to retaining walls

FEATURES AND BENEFITS

- Recycled and recyclable HDPE core
- Prevents water pressure from bearing against the structure
- Resistant to all chemicals normally found in the ground
- Withstands stresses and movement acting as a slip membrane as the backfill settles
- Extremely strong material, minimising the risk of damage when backfilling even when no protection board is used
- Very high compressive strength
- ECO manufactured with no production waste
- Suspended soil particles (fines) are filtered out by the geotextile layer
- Quick and easy to install with a range of ancillary fixing and installation products

NEW-BUILD WATERPROOFING DESIGN

- Build new structures to the requirements of BS8102.
- Use WPA Waterstop at construction joints as part of an effective multi-staged approach to the waterproofing.
- Carry out a geotechnical survey to evaluate soil characteristics and groundwater conditions. Great care should be taken when considering waterproofing that requires the permanent removal of the ground water to be effective. See BS8102 Section 5. for further guidance.
- The slotted or perforated drainage pipe to the base of an externally applied drainage membrane should be maintainable and graded to an open outlet below the level of the lowest slab. If risk of surcharge exists a pumped back flow protection device should be used. See BS8102 Section 6.4 for further information.

- Slotted or perforated drainage pipes should be maintainable.
- Include accessible jetting ports at regular intervals with at least one jetting port to each elevation.

INSTALLATION PROCEDURE

- Apply a WPA waterproofing membrane to walls in accordance with the product data sheets.
- WPA Drainage Cell is supplied in 2m wide sheets. If the foundation wall is less than 2m in height it is possible to fix WPA Drainage Cell horizontally with no laps. For walls over 2m fix WPA Drainage Cell in vertical sheets with the Geotextile fabric layer facing the operative and the black drainage layer against the wall being treated. Ensure that the membrane is fitted level.
- Overlap subsequent sheets of WPA Drainage Cell ensuring that the filter fabric of the next sheet overlaps the previous studded core - a section of filter fabric is separated from the drainage core for this purpose.
- Place slotted or perforated drainage pipe to the base of the foundation so that the top of the drain is below the top of the internal slab level. Place the drain within a bed of clean graded 20mm stone surrounded by a sheet of Geotextile filter fabric ensuring that enough Geotextile is available to lap to the WPA Drainage Cell to give continuity of the filter fabric.
- Ensure the slotted or perforated drainage pipe drains freely to a safe collection point. If gravity drainage is to be used ensure that the drainage terminates below the level of the internal slab so that drainage surcharge cannot prevent the removal of water from the system. If gravity drainage is not available, discharge the drainage pipe to a sump system - a full range is available with chambers of 1.2m to 4.5m depth.
- Carefully place the filter fabric to the face of the WPA Drainage Cell so that it is held in place by the back fill.
- Use Bayset Pressure Seal to the top edge of the membrane to prevent debris and back-fill from entering the cavity between the drainage core and the filter fabric.
- Carefully backfill the excavation. If graded stone is used, a protection board is not required but the stone should be placed in controlled layers of no more than 600mm to prevent slump to the membrane. If the removed soil is re-used, ensure that it does not contain sharp stones and ensure that the soil is compacted every 600mm. If sharp stones exist within the re-used soil a protection board will be required.

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Performance Data and Physical Properties @23°C & 55% RH

- Appearance Sheet
- Material Recycled HDPE
- Colour Black
- Thickness 8.5 mm
- Stud depth 8.0 mm
- Vertical water flow 2.29 l/m²/s
- Compressive strength >190kN/m²
- Life expectancy >50 years
- Service temperature -40°C / +80°C

Notes: WPA Drainage Cell is resistant to a wide range of chemicals, impervious to root penetration, rot-proof and unaffected by soil bacteria and fungi.

LIMITATIONS

Do not use WPA Drainage Cell:

- As a primary waterproofing membrane. Primary waterproofing of the structure should be achieved with a WPA membrane suitable for the waterproofing of foundation walls;
- To de-water permanently high water levels. See BS8102 for further guidance;
- As stand-alone product if water or damp and vapour control is required by the specification.

Packaging

WPA Drainage Cell is available in 2m x 20m rolls.

Coverage

One roll of WPA Drainage Cell covers 40 m².

Shelf Life

WPA Drainage Cell should be stored away from direct sunlight. Rolls should be stored in the upright position.

WARRANTY CONDITIONS

Bayset Pty Ltd trading as Waterproofing Products Australia (Bayset) offers a limited warranty in respect of this product, subject to certain terms and conditions set out in the warranty documentation which has been made available at www.bayset.com.au. Please contact Bayset directly to obtain a copy of the warranty documentation relevant to this product.

DISCLAIMER

The technical information and application advice given in this Technical Data Sheet is based on the present state of Bayset Pty Ltd's best scientific and practical knowledge and is intended to give a fair description of the product and its capabilities. As the information contained herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness, either expressed or implied, is given other than those required by law. In practice, the substrate and environmental conditions vary widely, making it essential for the user to determine the product's suitability for a particular application and that the product is not used beyond its physical limitations. The user is responsible for checking the suitability of products for their intended use.

*NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by Bayset Pty Ltd (trading as Waterproofing Products Australia) either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Waterproofing Products Australia, are responsible for carrying out procedures appropriate to a specific application. Australia either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Waterproofing Products Australia, are responsible for carrying out procedures appropriate to a specific application.

DOCUMENT CONTROL	
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Author	SR

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This is a CONTROLLED document under WPA's Quality System.