

Solshield High Performance Damp Proof Membrane

Description:

Solshield High Performance DPM is a multi-layer low density reinforced polyethylene membrane, reinforced with a polypropylene reinforcing grid. Solshield HP DPM is designed to be suitable for use as a low permeability gas membrane, in areas where low levels of radon and carbon dioxide are present, and can be used as an air / moisture protection system.

- **BBA Cert 20/5737.**
- **Compliant to NHBC Standards 2019, Chapter 5.1.**
- **CE Marking Standard EN13967:2012.**
- **Complies with relevant codes of practice as published by CIRIA.**
- **Suitable for low levels of Radon & Carbon Dioxide.**
- **High strength and resistance to puncture.**
- **Compliant to NHBC Amber 1, where low levels of CO² are present.**
- **Suitable for use with the Solco DPC System Accessories.**

This membrane is particularly suited for applications where heavy duty foundations and steel reinforced slabs are to be installed, and where a durable, robust and high puncture-resistant membrane is better suited.

Solshield High Performance DPM is fully compliant with the standards for damp proof membranes as required by the UK building regulations. Solshield HP DPM provides a barrier for moisture, usually used within building foundations. It can also be used for a range of other damp proofing applications. Solshield HP DPM is suitable for use in concrete floors in domestic and commercial (schools, hospitals leisure, shopping centres, etc.) applications, in accordance with Clause 11 of CP 102:1973, where there may be capillary rise of moisture but not where it may be subject to hydrostatic pressure.

Solshield HP DPM should be jointed using welding for the most demanding installations or jointed using the range of Solco Tapes and ancillary items for all other instances (as shown below).

Solco can also produce DPM in a range of sizes and specifications to meet your specific needs.

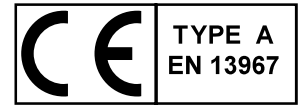
General:

Solshield HP DPM should not be installed at temperatures below 5°C, to prevent the risk of surface condensation. The membrane must be installed and fixed in accordance with the relevant clauses in BRE Report BR 211:2015.

The membrane should be installed on a sand blinding layer, Solshield P30 protection fleece, or a smooth concrete float finish. In order to provide a continuous barrier across the cavity, Solshield HP DPM should be taken through the blockwork and incorporated below the damp proof course cavity tray in the outer leaf.

SOLSHIELD HP DPM is suitable for installation with block & beam floor application with 150mm clear void, reinforced raft foundation and in situ suspended slab.

Long periods of exposure to ultraviolet light will reduce the effectiveness of the membrane.



Technical Data:

| Property | Test Method | Value |
|---|----------------------------|---|
| Thickness | EN 1849-2 | 0.50mm |
| Thickness - Between Scrim | Micrometer | 0.30mm |
| Width | EN 1849-2 | 2.0m |
| Length | EN 1849-2 | 50m |
| Weight | EN 1849-2 | 370g/m ² |
| Hydraulic Properties | | |
| Water Column Test | EN 20811 | Pass |
| Resistance to Water Penetration | EN 13967, EN 1928 | Pass |
| Durability of Watertightness against Ageing | EN 1296, EN 13967, EN 1928 | Pass |
| Mechanical Properties | | |
| Resistance to Static Load | EN 12730 B | 20kg |
| Tensile Strength (MD) | EN 12311 - 1 | 500N/mm |
| Tensile Strength (CMD) | EN 12311 - 1 | 470N/mm |
| Tensile Elongation (MD) | EN 12310 - 1 | 15% |
| Tensile Elongation (CMD) | EN 12310 - 1 | 20% |
| Puncture Resistance (CBR) | EN 12236 | 1.04kN |
| Resistance to Tearing (Nail Shank) (MD) | EN 12310 - 1 | 400N |
| Resistance to Tearing (Nail Shank) (CMD) | EN 12310 - 1 | 350N |
| Durability and Chemical Resistance | | |
| Radon Permeability | K124/02/95 | 4.3x10 ⁻¹² m ² /s |
| Carbon Dioxide Permeability | BS EN ISO 15015 - 1 | <514 ml/m ² /day/atm |
| Methane Permeability | BS EN ISO 15015 - 1 | <514 ml/m ² /day/atm |

Storage and Handling on Site:

Solshield HP DPM is classified as non-hazardous (code of practice CP102 1973).

Rolls should be stored on a flat surface, kept under cover, and protected from sunlight and mechanical damage.

The product is chemically inert and any acids or alkalis present in the subsoil will not affect the membrane.

Do not use when exposed to sunlight and general outdoor weather conditions for long periods of time.

Quality control during the laying of the membrane is extremely important. The membrane should be protected either through the use of temporary protection over its whole area or the immediate laying of the concrete slab.

Care should be taken when handling building materials over the exposed surface.

Solco, Unit 51, Portmanmoor Road Industrial Estate, Ocean Park, Cardiff, CF24 5HB

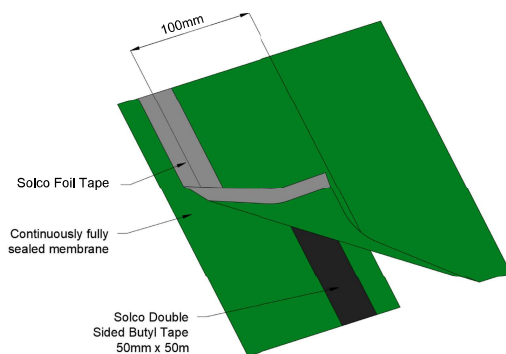
Installation:

1. The membrane must only be applied to surfaces that have a smooth finish - free from voids, projections, and mortar deposits. Surfaces should be dry and free from dust and frost. In order to provide a continuous barrier across the cavity, Solshield HP DPM should be taken through the blockwork and incorporated below the damp proof course cavity in the outer leaf.
2. Concrete surfaces should be dense. Vertical surfaces of brickwork and blockwork must be dry and rendered to provide an even surface. Brickwork or blockwork not rendered must be flush pointed to give a smooth surface without sudden changes in level.
3. Solshield HP DPM is rolled out with the coloured side up, ensuring that it is properly aligned. All end and side overlaps should be a minimum of 100mm and prepared.
4. When the membrane is laid below the concrete slab, it should be loose-laid to accommodate any small movements.
5. All surfaces must be dried thoroughly prior to joining. Roll edges can be welded or taped.
6. The continuity of the damp proofing must extend over the footprint of the building, and the membrane must be sealed to a damp-proof course where required.
7. The membrane should be covered by a screed or other protective layer, such as Solco Protection Fleece, as soon as possible after installation. If blockwork protection is used, care must be taken to avoid damage to the membrane during construction. Care should be taken when handling building materials over the exposed surface.

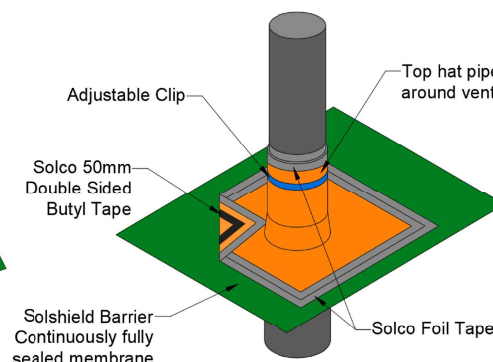
Jointing Detail:

1. Apply Solco Double Sided Butyl Tape around 50mm from the membrane edge, leaving the backing paper on.
2. Lay the next membrane, overlapping the first by a minimum of 100mm.
3. Remove the backing paper from the double sided butyl tape and join the top sheet to the bottom sheet, by applying pressure with a hand roller.
4. Where the membranes overlap, apply Solco Single Sided Foil Tape, equidistant on both membranes (see detail). All service entry points must have airtight seals. Top hats and corner pre-forms must be sealed using double sided butyl tape.

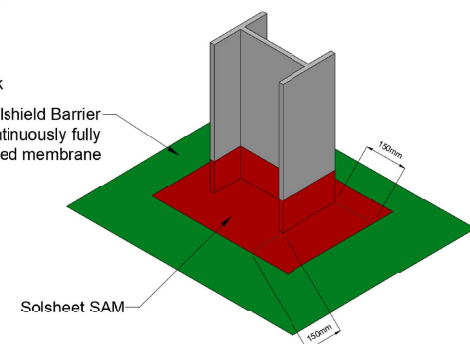
Typical Jointing Details for Solshield HP DPM



Typical Lap Detail



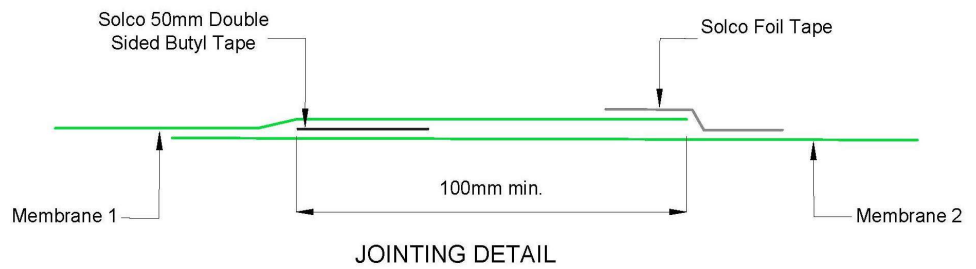
Typical Penetration Detail



Typical Column Detail

Note:

All service entry points must have airtight seals. Top hats and corner pre-forms must be sealed using double sided butyl tape.



Ancillary Products

| | | | | |
|----------------------------------|--|----------------|--|-----------|
| Solco Foil Backed Jointing Tape | Single Sided Tape | 75mm x 50mm | Securing laps & joints | Rolls |
| Solco Double Sided Butyl Tape | Butyl Adhesive Tape | 50mm x 10m | Securing joints and laps | Rolls |
| Solco Top Hats | Polymeric | Various | For sealing around penetrations through gas membrane | Each |
| Solcourse HP DPC | A flexible bitumen free polymeric damp proof course | 300mm - 1000mm | DPC | 20m Rolls |
| Solco Int / Ext Corner Cloaks | Prefabricated corner details | | | |
| Solco P30 Protection Fleece | To form a protective layer to prevent damage to the membrane | 2m x 50m | Protection Fleece | Rolls |
| Solco HP Emulsion / Primer | Used to provide adhesion to bitumen enhanced geomembranes | 5L & 25L | Primer | Drums |
| Solseal Flexible Liquid Membrane | A flexible and elastomeric membrane | 5L & 25L | Liquid Membrane | Drums |

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