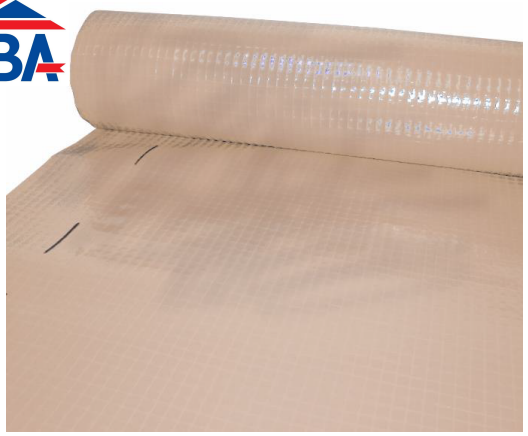
Solshield Reinforced Gas Barrier

CE TYPE A EN 13967

Description:

Solshield Reinforced Gas Barrier is a three-layer, low-density polyethylene membrane, reinforced with a polypropylene reinforcing grid. Solshield Reinforced is designed tto perform as a Radon, air & moisture protection system, as well as a low-level protection to Carbon Dioxide and Methane

The membrane is sufficiently resistant to the ingress of radon into a building, although on more heavily contaminated sites a passive or active venting system may be required to dilute the gases down to acceptable levels. Solshield Reinforced is extremely flexible for ease of installation and is robust enough to cope with site conditions. Solshield Reinforced will also protect against damp and therefore will act as a DPM and satisfy Approved Document C.



- **BBA Cert 20/5737.**
- **NHBC Compliant & CE Marked.**
- **Meets the relevant requirements in relation to NHBC Standards.**
- **High resistance to puncture.**
- **Also acts as a damp proof membrane.**
- **Restricts the ingress of radon during the lifetime of the flooring construction in which it is installed.**
- **Complies with latest codes of practice as published by the BRE and CIRIA.**

Compliance:

- NHBC Standards 2019, Chapters 4.1/5.1.
- CE Mark - EN13967:2012.
- CP 102:1973.
- BS8000-4:1989.
- BS8000-0:2014.

General:

- Solshield Reinforced Gas Membrane 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 Reinforced Gas Barrier should be taken through the blockwork and incorporated below the damp proof course cavity tray in the outer leaf.
- Solshield Reinforced is suitable for installation with beam and block floor application with 150mm clear void.
- Long periods of exposure to ultraviolet light will reduce the effectiveness of the membrane.

Venting:

- Solshield Reinforced can be used on site where passive or active ventilation is required.
- Solshield Geocomposite Drainage & Venting Mat should be used in conjunction with the relative vent connectors where required. These types of systems are designed on a bespoke site specific nature.
- Please contact us for our design advice.

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

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Technical Data:

Property	Test Method	Value
Thickness	EN 1849-2	0.60mm
Thickness - Between Scrim	Micrometer	0.40mm
Width	EN 1849-2	3.0m
Length	EN 1849-2	33m
Weight	EN 1849-2	400g/m^2
Hydraulic Properties		
Water Column Test	EN 20811	Pass
Water Vapour Transmission (Moisture Resistance Factor)	EN 1931	130m
Watertightness	EN 1928 (A)	Pass
Mechanical Properties		
Resistance to Static Load	EN 12730-B	20kg
Tensile Strength (MD)	EN 12311 - 1	600 N/50mm
Tensile Strength (CMD)	EN 12311 - 1	570 N/50mm
Tensile Elongation (MD)	EN 12310 - 1	15%
Tensile Elongation (CMD)	EN 12310 - 1	15%
Puncture Resistance (CBR)	EN 12236	1.25 kN
Resistance to Tearing (Nail Shank) (MD)	EN 12310 - 1	500 N
Resistance to Tearing (Nail Shank) (CMD)	EN 12310 - 1	500 N
Durability and Chemical Resistance		
Radon Diffusion Co-Efficient	K124/02/95	$1.7x10^{-11}$ m^2/s

Storage and Handling on Site:

- Solshield Reinforced 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.

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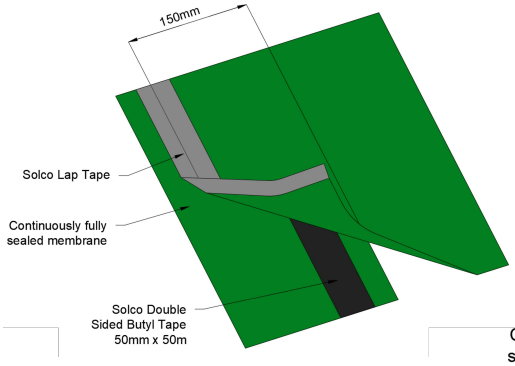
Installation:

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 Reinforced should be taken through the blockwork and incorporated below the damp proof course cavity tray 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 Reinforced is rolled out with the coloured side up, ensuring that it is properly aligned. All end and side overlaps should be a minimum of 150mm 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.

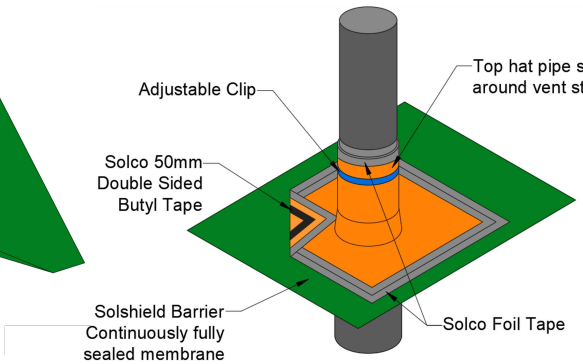
Jointing Detail:

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 150mm.
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.

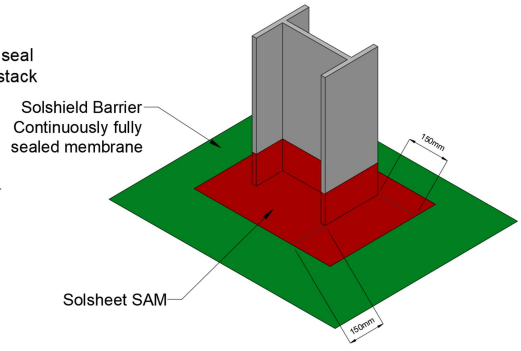
Typical Jointing Details for Solshield Reinforced



Typical Lap Detail



Typical Penetration Detail



Typical Column Detail

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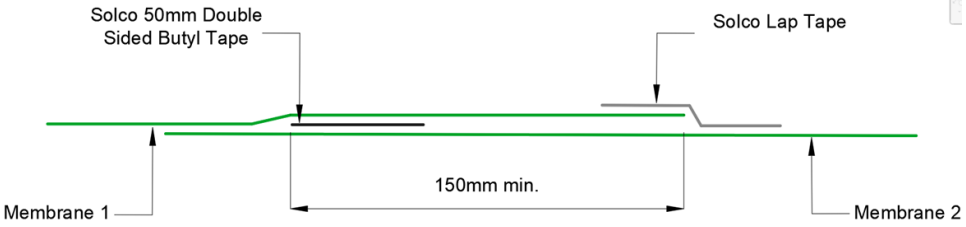
Note:

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



JOINTING DETAIL

Solshield Reinforced System Accessories

Solco Top Hats	Form an effective seal where a pipe, duct, or service penetrates Solsheet membranes.	Units
Solco Double Sided Butyl Tape	A double-sided synthetic butyl mastic tape, used for securing joints and laps in DPC's, Cavity trays & pre-formed Cloaks.	Rolls
Solco Foil Tape	A single-sided tape for securing laps & joints.	Rolls
Solco Venting Accessories	Allows the effective venting of gas from beneath a building.	Units
Solco Int / Ext Corners	Preformed units that ensure protection at corners.	Units
Solcourse HP DPC	A flexible bitumen free polymeric damp proof course that is resistant to Radon.	Rolls
Solco P30 Protection Fleece	Forms a protective layer to prevent damage to the membrane.	Rolls
Solsheet Self-Adhesive Membrane	A cold-applied bitumen self-adhesive membrane.	Rolls
Solseal HP Primer	Used to provide adhesion to bitumen enhanced geomembranes.	Tins
Solshield Venting Mat	Cuspated (HDPE) drainage mat for providing a drainage / venting channel.	Rolls
Solseal Flexible Liquid Membrane	A flexible and elastomeric membrane that provides protection to Radon when painted 2mm thick.	Tins

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