

# Installation of Moisture & Vapour Barrier/ DPC Sheeting

- Site preparation

On approved consolidated basecourse apply an even layer of sand (5 mm) to blind all sharp aggregate basecourse materials. Alternatively apply continuous woven or nonwoven separation fabric over prepared consolidated basecourse, with panels overlapped a minimum 150 mm.

As a waterproofing membrane and concrete underlay: Loose lay (colour side up where applicable) over the required area in sheet sizes that require minimum site joining. Allow 1 mm surplus each way per 1 degree C temperature drop per 10 m of membrane. Turn up all edges at walls to the level of the top of the finished concrete slab. Extend above exterior wall weep holes and under flashings. Extend a minimum 150 mm past form bulkheads to provide overlap to subsequent adjacent membrane sections.

As a moisture and vapour barrier in walls and ceilings: The membrane may be fastened to the warm side of walls and ceilings by clouts or staples to timber battens. Overlaps are as per following methods using Vulcaneal adhesive, polyethylene or PVC adhesive tape.

Ground cover in crawl spaces and sub floor cavities: Loose lay the membrane over the entire area to be covered. Overlaps and joining methods including sealing to piles and other protrusions are as per below. The membrane should extend above foundation walls to finished floor level.

- Joining

When joining films with 48 mm polyethylene or PVC tape overlap panels a minimum 150 mm. Alternatively 48 mm (min.) wide Vulcaneal tape sealant or other approved non-stretch polyisobutylene tape can be used allowing for a 75 mm overlap. All surfaces must be clean, dry and free from oil and grease. Fold back overlap and apply Vulcaneal adhesive to the entire edge of the bottom sheet of each adjacent membrane section. Peel off the backing paper approximately 1 m at a time, bringing the folded edge over the taped surface. Pressure seal the joint using a 50 mm - 100 mm wide rubber hand roller with firm support under the membrane (wooden board) shifted progressively as jointing proceeds. Avoid tape and membrane wrinkles to achieve a smooth and moisture proof seal. Full strength is achieved after 72 hours curing. In critical conditions a 48 mm polyethylene or PVC adhesive tape may be applied over sealed joint as extra protection.

- Sealing

Secure screeds and form bulkheads by an approved means to avoid penetration or any form of damage to the integrity of the membrane. Penetration of the membrane shall not be allowed except for protrusion of structural elements and permanent utilities. Coat all utilities with an approved wet applied sealant, allow to cure and apply 48 mm wide Vulcaneal around protrusion at membrane edge and seal with press roller. Care shall be taken that the membrane not be damaged by any other means and that the membrane shall be damp proof at the time concrete placement is completed. For more critical installations, see also Moldable Sealant.

Approved products for use as superior waterproofing membranes include Dampstop Reinforced, Permaliner, HDPE. Approved products for use as gas proofing membranes include 1 mm polypropylene, 1.5 mm HDPE when combined with other gas removal and detection systems.

In the use of gas proofing membrane panels are to be sealed by fusion welding or other approved means. All extrusion welds including seals around protrusions and boots require copper wire for leak detection. All welds to be tested in accordance with Permatherne QA/ QC Manual, including pressure and tensile tests for polypropylene geomembranes. See also Chemical Resistance tables and Methane resistance under different temperatures. A combination of HDPE and Polypropylene can give resistance over a greater range of temperatures and chemicals.



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