Dampstop® ML

Concrete Underlay, Waterproofing Membrane

Product Description

A multi-layer waterproofing membrane manufactured from virgin resin flexible polyethylene. Dampstop ML has excellent tear and puncture resistance. It has an elongation of 900% in both directions. Dampstop ML is highly resistance to acid and base chemicals.

Scope

Dampstop ML is recommended as superior damp proofing membrane. When used in accordance with installation instructions it may be used as follows: under concrete slabs at grade or below grade level; lining against earth fill for retaining walls and basement walls; under foundation footings and grade beams; vapour barrier retarder lining; roof deck underlay; crawl space lining; lining against contaminated soils.

Physical Properties

Property	Unit	Test Method	Value	Value	Value	Value
Thickness	mm		0.30	0.5	0.75	1.0
Tensile strength at break	MPa	ASTM D 6693	25/20	25/20	27/25	27/25
Elongation at break	%	ASTM D 6693	1000/1000	1000/1000	1000/1000	1000/1000
Tear resistance	N	ASTM D 1004	25	35	52	84
Puncture resistance	N	ASTM D 4833	100	120	180	240
Water vapour flow transmission	g/ m/ 24 hr	ASTM E 96-E	1.88	1.14	0.75	0.58

This product meets the requirements of the New Zealand Building Code having a water vapour flow resistance of no less than 90MNs/g as tested in accordance to ASTM E96.

Durability

Dampstop ML has a minimum life of 50 years and an expected indefinite lifespan under the following conditions:

1 Free from tear, puncture or damage during installation
2 Storage away from direct sunlight prior to installation
3 No exposure to corrosive or petrochemical agents
4 The concrete remains unbroken
5 The building maintaining structural integrity

Lining of contaminated site prior to concrete

Standards

Dampstop ML exceeds the requirements of NZS 3604 and AS 2870. Dampstop ML complies with NZS 1900:6.1.7 and USA building codes HUD, FHA, VA, MPS as follows: Waterproofing section 4900. 1-607-2 1 a,b,c,d. Damproofing section 4900. 1-607-2.2 a(1), b(2). 603-7.4 a,b,c. Vapour Retarders Sect. 4900. 1-607-2.4 a,b,c,d,e. Slabs Below Grade (Continuous Membrane) Sect. 4900. 1-603-7.4c. Flashing (General) Sect. 4900.1-607-4.1 e. Jamb Flashing Sect. 4900. 1-607-4.3 (FS UU-B.790). Basement Walls Sect 4900.1-601-16.4 f.

Availability

Dampstop ML is supplied in (multi folded) roll form 6m x 100m and 8m x 100m. Dampstop ML can be site welded using a wedge welder or overlapped using Vulcanseal G-25 tape.

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Permathene New Zealand
404 Rosebank Rd, Avondale, Auckland 1348
Tel: (09) 968 8888
www.permathene.com

Permathene Australia
8/20 Ricketty St, Sydney, Mascot, NSW 2020
Tel: (02) 8338 8879
www.permathene.com.au

Installation of Gas, Moisture & Vapour Barrier/ DPC

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.

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 PVC tape, polyethylene tape or Vulcanseal G-25 (single sided) tape overlap panels a minimum 150 mm. Additionally 48 mm (min.) wide Vulcanseal 609 (double sided) tape sealant or other approved non-stretch polyisobutylene tape can be used allowing for a 75 mm overlap. This in combination with Vulcanseal G-25 will provide a superior seal should on-site fusion welding not be available in critical conditions. All surfaces must be clean, dry and free from oil and grease. Fold back overlap and apply Vulcanseal 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.

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 Vulcanseal 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 ML, Permaliner Flexible Polypropylene, Permaflex Flexible Polyethylene, HDPE. Approved products for use as gas proofing membranes include 1mm Permaliner Flexible Polypropylene, 1mm Permaflex Flexible Polyethylene, 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 Permathene 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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