

# EFVM® Membrane on Concrete (balconies, podiums)

Product Technical Statement: 106570



EFVM® is a low voltage method of Quality Assuring waterproofing membrane applications

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## Level of assurance needed to demonstrate NZ Building Code Compliance

Supporting documentation should include technical information by manufacturer and either an independent assessment or reference to an industry-based scheme



EFVM® confirms that this minimum level of assurance has been met or exceeded by the following:

International Leak Detection Ltd

[Technical Data](#)

## Technical Statement

### Product Description

#### What is EFVM®?

EFVM® is a low voltage test method that creates an electrical potential difference between a non-conductive membrane surface and a conductive substrate, which is earthed or grounded.

By applying water on the membrane surface and using the water as a conductive medium, an electric field is created and a breach in the membrane creates a vector (ground fault connection). The EFVM® technician reads the electric flow travelling across the membrane, mapping the breaches with pin point accuracy.

#### Advantages of EFVM® testing system

- Accurate pinpointing of membrane breaches
- Non-destructive to the membrane
- Can be performed on sloped substrates
- Membrane defects can be repaired and retested without delay to the construction programme
- Limited use of water required for the EFVM® test
- EFVM® can be performed during inclement weather
- Overburden installation can proceed immediately

### Scope of use

EFVM® is used to find defective workmanship and damage in the application of waterproofing membrane. This then allows the applicator to repair on the spot and handover a watertight membrane.

EFVM® is an approved testing as stated by Waterproofing Membrane Association Incorporated Torch on Code of Practise.

EFVM® tests **ALL** membranes apart from Butyl rubber membranes because of the Carbon contained in the make up of the product. (carbon absorbs electricity, not an isolator).

### New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause E2 External moisture:** Performance E2.3.7(a)

### Evidence

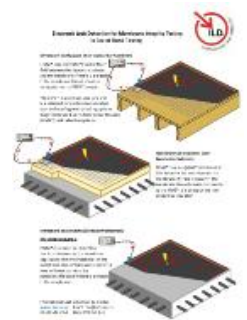
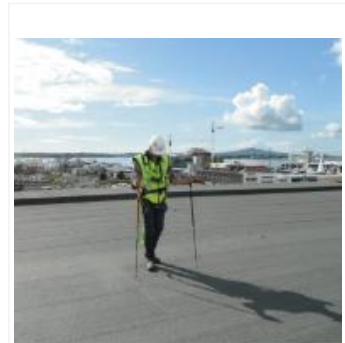
The product meets the requirements set out in the following documents, or relevant parts of cited standards within the documents:

EFVM® complies with E2 by ensuring the integrity waterproofing membrane is installed in accordance with NZBC.

### Waterproofing Membrane Association Incorporated Torch on Code of Practice

6.5 Testing There are two methods of testing the integrity of a torch-on membrane after installation, either flood testing or electronic field testing. In both cases, after the testing has been carried out a written report confirming the integrity of the membrane must be supplied to the Main Contractor.

6.5.2 Electronic Field Testing Electric field testing works by passing a controlled electric current through the membrane with either a thin water film applied over the membrane or a pre-installed non-obtrusive metal grid under the membrane being the conductive medium. Any point of electric current leakage will



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indicate the location of a fault in the membrane system. This testing must be carried out by a trained technician.

## Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

International Leak Detection Ltd

[Technical Data](#)

## Product Criteria

### Design requirements

#### Two Types of Substrate

##### Conductive - Concrete

EFVM® can be performed on the membrane application after the installation of the membrane. The concrete and reinforcing steel will allow an electrical connection if there is a breach in the membrane.

### Installation requirements

-No installation of Vector Mesh required on a Concrete substrate

## Company Product Information

### Videos

[EFVM® testing by Adam Black Chicago office](#)

[ILD Integrity Test Setup](#)



Date last validated: **03 February 2017**



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