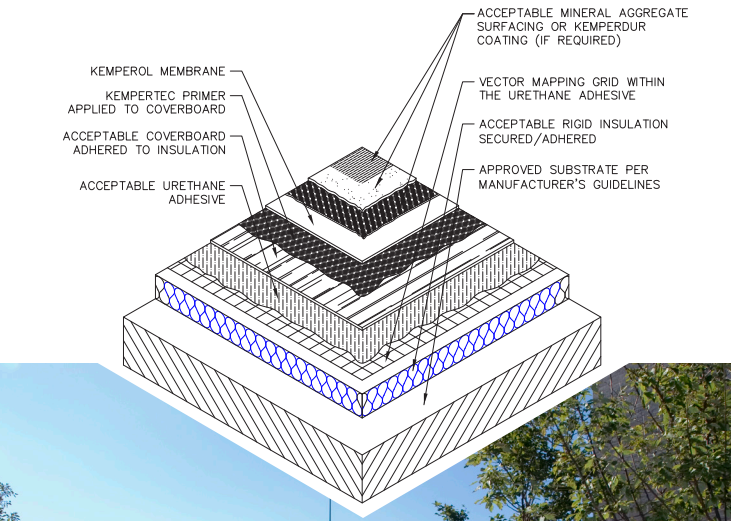
VECTOR MAPPING GRID™ (VMG™)

A welded stainless steel mesh which can be utilized with cold liquid-applied systems. This mesh is a non-corrosive material that prevents aging deterioration within the roofing system.

The conductive mediums are placed under the waterproofing (see below image) material and connect to a contact plate, via a prefabricated cable to the contact box. The Vector-9 conductor wire on top of the membrane delivers direct current tension to the surface. Even in the case of minimal contact with moisture, the system closes the electrical circuit. Moisture penetration can be located quickly and then be cost-effectively repaired.



ADVANTAGES OF EFVM® TESTING

- Pinpoint accurate quality control testing method
- Non-destructive integrity and troubleshooting testing
- Ability to test sloped decks & vertical walls
- Defects can be repaired and retested the same day
- Limited use of water required to conduct test
- Inclement Weather will not hinder the test – prefer wet conditions for electricity to flow
- Overburden installed immediately after the EFVM® test
- Eliminates unnecessary removal of overburden to locate a breach when doing a visual inspection*

*contact Kemper System for further information

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Kemper System America, Inc and International Leak Detection (ILD ®) Partnership Program

KEMPER SYSTEM

ILD international leak detection

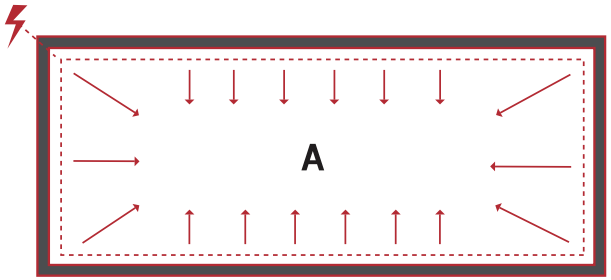
ILD® IS THE WORLD LEADER IN INTEGRITY TESTING TECHNOLOGY

Kemper System America, Inc and International Leak Detection (ILD®) USA have partnered up to provide the Owner, Designer, and Contractor an extra level of comfort when installing the premium Kemperol® membrane system. When you select the Kemper System cold-liquid applied reinforced membrane system that solves your roofing, waterproofing and surfacing challenges you want to ensure that it is not only installed properly, but that it is also not damaged by other trades during the hectic construction schedules.

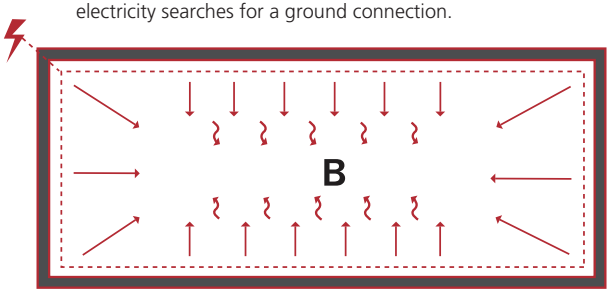
When Kemper System issues its world class warranties on completed projects, that application has been thoroughly inspected by the Technical Field Services department to ensure that membrane has been applied to meet our stringent guidelines. However, as multiple trades operate on a building, the membrane may become susceptible to damage. It is therefore always a good practice to check the integrity of the membrane prior to the application of any heavy overburden, such as concrete, greenroofs, and insulated paver systems.

Kemper System is now offering a unique opportunity to test the installed membrane prior to any overburden installation. Simply contact your local Kemper System representative for additional information and pricing. We will then facilitate an ILD® inspector who will accommodate the project schedule and test a partial or completed installation and even a post-overburden installation with an Electric Field Vector Mapping (EFVM®) system to ensure that the integrity has not been compromised.

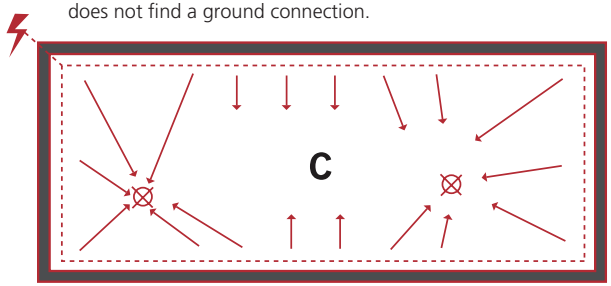
HOW DOES EFVM® FIND LEAKS?



A. Small electrical pulses are directed onto the membrane. The electricity searches for a ground connection.



B. If the membrane is watertight, the electricity is isolated and does not find a ground connection.



C. If the membrane is not watertight, the electricity makes a ground connection and is pulled toward positive poles.

The EFVM® equipment delivers a low voltage pulsating electrical charge between the non-conductive waterproofing membrane and the conductive structural deck. A watertight membrane will isolate the potential difference, while breaches in the membrane will cause an electrical connection to occur. ILD® trained and certified inspectors read the directional flow of the current with a potentiometer to locate the point of entry with pinpoint accuracy.

The EFVM® technicians then complete the EFVM® test by conducting a visual inspection of all wall junctions, perimeter details, and membrane penetrations. All breaches are numbered to allow for repairs by the waterproofers onsite and are retested to confirm watertightness. A report follows with picture documentation of every breach and a detailed drawing noting the wire placement and breach locations.

WHY INTEGRITY TESTING IS SO IMPORTANT

Small punctures or mechanical damage to waterproofing membrane may result in wet insulation, mold, and costly interior damage. Leaks may go unnoticed and the water exit location may not correspond with the point of entry.

In the past, lengthy and costly leak investigations were necessary to locate a membrane breach, especially in protected roof membrane assemblies, garden roofs or parking and plaza decks.

By applying water on the surface of the membrane and utilizing the water as a conductive medium, an electric field is created and a breach in the membrane creates a “vector” (ground fault connection) which is measured by an ILD® technician.

The EFVM® technician reads the electrical flow traveling across the membrane, mapping the “vectors” with pinpoint accuracy.

What better way to get peace of mind when it comes to quality control testing?

EFVM® is unique in its ability to test the integrity of waterproofing membranes with overburden or ballast. This non-destructive method is important for green roofing systems because the EFVM® test is able to read through the overburden and ballast, while still providing perfectly accurate results.

CONDUCTIVE MEDIUMS

Developed by the ILD® team through years of research and field installation, the Vector Mapping Conductive mediums were created to test non-conductive substrates. Conductive mediums allow for accurate EFVM® testing results.