



Feature: Leak Location Suite

An Electrical Liner Integrity (ELI) survey applied to a conductive liner using reliable testing equipment will enable you to rapidly, precisely, and cost effectively identify liner damage, and remediate it.

Our Leak Location Liner Suite is an advanced, end-to-end offering. It comprises:

- A leak location conductive geomembrane that allows for leak detection on exposed and covered applications
- The Solmax Spark Tester S-100 to identify leaks with high accuracy on exposed liners
- A patented Iso-wedge welder that securely joins conductive liners for large applications
- A patented installation technique that allows for electrical leak surveys on covered applications

What sets this solution apart is its ability to address key industry challenges, from installation to leak detection and remediation, providing easy, fast, reliable, cost- and time effective leak risk management.

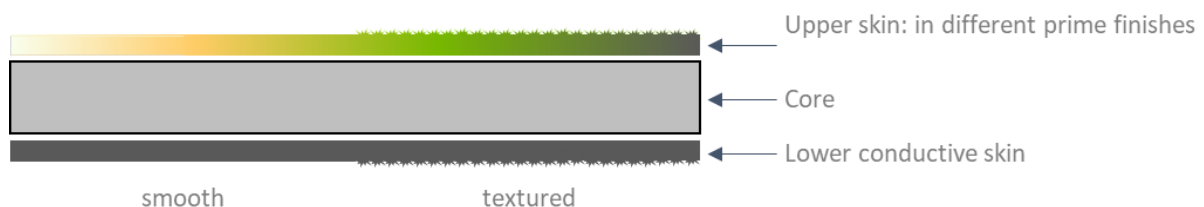
Link: <https://www.solmax.com/en/products/leak-location-suite>

Leak Location Conductive Geomembrane

Solmax's Leak Location Conductive geomembrane is a co-extruded geomembrane that features a bottom conductive layer. The conductive layer allows for a wide variety of electrical leak surveys to be performed on exposed and covered applications, with greater reliability and effectiveness.

Benefits of a Leak Location Conductive liner includes the following:

- Does not need to apply water during testing under exposed condition
- Does not rely on the conductivity of the subgrade
- Leaks can be detected on wrinkles
- Does not require a conductive medium at leak detection layer for double-lined application



Solmax Leak Location Conductive geomembrane can be tailored to the needs of the application, they are available in various Solmax's Series i.e., HDPE, LLDPE, High Performance, SEKIOA, etc. With flexibility on the primes finishes, smooth and texturing, the material can be manufactured to provide the best performance according to the project requirements.

Solmax S-100 Spark Test Equipment

Solmax developed the Spark Tester S-100 to enable fast, reliable bare electrical leak surveys on exposed Leak Location Conductive geomembranes in applications such as landfills, basins, ponds, tanks, and waste pads. The S-100 comprises a spark test box, test probe, and grounding pad. The S-100 comes with three electrodes to allow the technician greater flexibility in detecting leaks across the varying geometry of the survey surface – a cart electrode for a surface with minimum wrinkles, a brush electrode for more challenging areas that the cart cannot reach, and a seam electrode with a small brush for use underneath exposed seam flaps and hard to reach spaces.

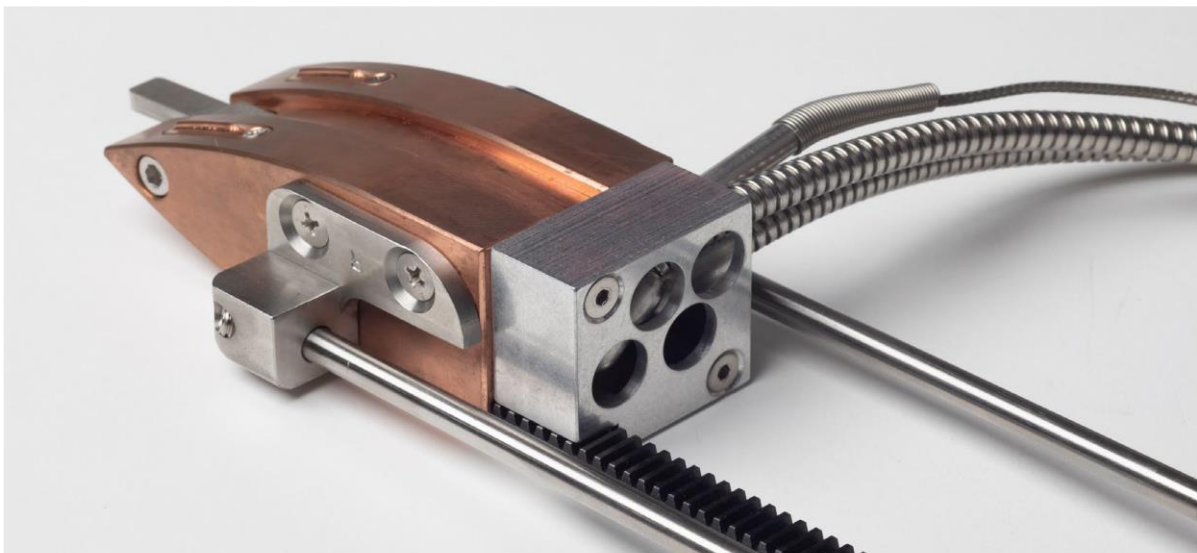


Solmax S-100 Spark Test Equipment

Solmax Patented Iso-wedge

To improve test accuracy and reliability, Solmax collaborated with industry experts to develop a revolutionary installation technique. By isolating the upper seam flap from the bottom conductive flap in a fusion-welded seam, the nuisance of false positive signals for leaks over seams, and of a complete conductivity break, is eliminated.

This technique is enabled by an innovative, easy to-use tool, the Iso-wedge, which is fitted onto a typical fusion welding machine. The Iso-wedge allows for the proper preparation and testing of the Leak Location Conductive geomembrane, by isolating the upper seam flap and eliminating false positives during the Electrical Liner Integrity (ELI) surveys.

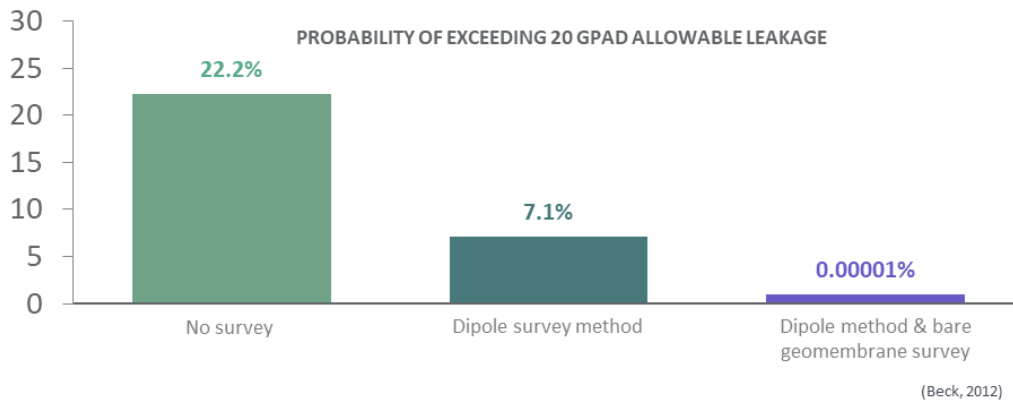


Solmax's Iso-wedge for Leak Location Conductive geomembrane

Electrical Liner Integrity (ELI) Testing

The most effective method to detect leaks in a geomembrane liner are Electrical Liner Integrity (ELI) surveys which run electric current through two conductive layers, separated by a non-conductive barrier (the liner). When the current encounters a breach in the liner the current will flow through it, enabling detection of the leak. Two ELI tests are commonly applied. The Spark Test is typically used on exposed geomembranes, while a Dipole Test on covered Geomembranes.

According to a landfill leakage and quality assurance study (Beck, 2012) if no geoelectric survey is performed, there is a 22.2% probability of exceeding the allowable leakage of a landfill cell with a 20 gpad ALR. The risk is reduced to 7.1% if Dipole method is used. If both an exposed geomembrane test (a Spark Test) and a Dipole Survey are performed, the probability of exceeding the 20 gpad ALR is reduced to 0.00001 percent. (1 gallon per acre per day, GPAD = 9.35 liter per hectare per day, LPHD)



Leak Location Conductive Geomembrane Project References

Leak Location Conductive geomembrane has been used around the globe for various applications. Especially in projects which require stringent leakage control such as mining and landfill applications, conductive geomembrane is proven to be able to reduce the leakage rate.

Solmax has supplied more than 8 million sqm of Leak Location Conductive geomembranes for various containment applications in the last 5 years.

For more information on Leak Location Suites, contact us via email address below or Solmax's representative in your respective region.

Electrical Leak Location - Webinar Series

Solmax is collaborating with TRI Environmental and hydroGEOPHYSICS on a series of Leak Location Webinar in 2021. The 1st webinar on Introduction to Electrical Leak Location Surveys was successfully carried out in January. Schedule of the subsequent webinars with the tentative month is listed below:

- Mar 2021 : Episode 2 – Covered Geomembrane Surveys
- May 2021 : Episode 3 – Soil-covered Geomembrane Surveys
- July 2021 : Episode 4 – Deeply Filled Ponds
- Sept 2021 : Episode 5 – Operator's Guide to Electrical Leak Location Site Preparation
- Nov 2021 : Episode 6 – Designing for Minimizing or Eliminating Leakage
- Jan 2022 : Episode 7 – ELL Case Studies

Follow Solmax's LinkedIn page for firsthand information on the webinars.

Link: <https://www.linkedin.com/company/solmax-international-inc/>

For any further enquiries on Solmax's products and applications, please email tsapacnews@solmax.com.