SOLMAX

FREQUENTLY ASKED QUESTIONS

GSE Leak Location Suite

Contents

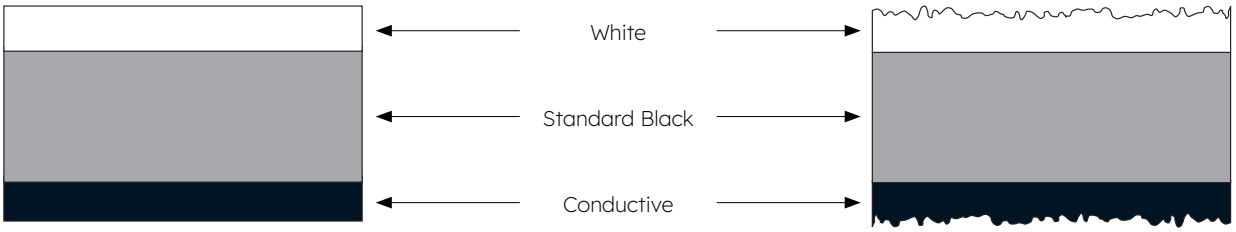
1. PRODUCT INFORMATION

1.1 What is the GSE Leak Location Suite?

This suite of products, tools and techniques bring a new level of reliability, speed and ease to electrical leak location surveys. Comprised of **GSE** Leak Location Conductive Liner, the Iso-wedge and the Solmax S-100 Spark Tester.

1.2 What is the GSE Leak Location Conductive Liner?

GSE Leak Location Conductive Liner is a co-extruded geomembrane with a unique bottom conductive surface that makes damage detection easier and more reliable in a wide variety of applications.



Example: Smooth 60 mil (1.5mmm) **GSE** White Leak Location Liner

1.3 What top surface finishes are available for GSE Leak Location Conductive Liner?

GSE Leak Location Conductive Liner is available in a wide variety of top surfaces, including white, green, and textured, each providing unique advantages.

1.4 Can the GSE Leak Location Conductive Liner also be textured on the bottom surface?

Yes, the conductive bottom layer can be textured, allowing **GSE** Leak Location Conductive Liner to be used on slopes where high interface friction is required.

1.5 Are the material properties the same as standard geomembranes?

Yes, **GSE** Leak Location Conductive Liner meets all the same performance properties as our standard geomembranes.

2. INSTALLATION

2.1 Is any additional equipment required for installation of GSE Leak Location Conductive Liner?

Yes, the proper installation of **GSE** Leak Location Conductive Liner requires an Iso-wedge, which replaces the heating wedge in your fusion welding machines. Iso-wedges are currently available for Demtech XL and VM-20 Welders, as well as the PWT wedge-It. Additional compatibility is currently under development.

2.2 How do I get an Iso-wedge for my upcoming GSE Leak Location Conductive Liner project?

The Iso-wedges will be provided free of charge on a project-by-project basis by Solmax. These Iso-wedges must be returned to Solmax upon completion of the project. For more information on obtaining an Iso-wedge for a project, please contact your Regional Technical Manager or Regional Sales Manager.

2.3 Are weld properties the same when using an Iso-wedge versus a standard wedge?

Yes, weld strengths are not affected by the use of an Iso-wedge. In addition to normal destructive testing, seams that are welded with an Iso-wedge can still be tested using the pressurized air channel.

2.4 What additional techniques are required to properly install GSE Leak Location Conductive Liner?

In addition to using the Iso-wedge in all fusion welders, small additional installation techniques must be performed in order to properly install Leak Location Conductive Liner. All of these techniques can be found in the **GSE** Leak Location Conductive Liner Installation Manual.

2.5 Does using an Iso-wedge affect the speed and temperatures that I run my welding machines at?

No, welding speed and temperature are not changed when using an Iso-wedge.
You may continue to weld at the same parameters you would with a standard wedge.

2.6 Does it matter what kind of multimeter or ohmmeter that I use for checking isolation of upper conductive flap?

Yes, you need a multimeter/ohmmeter that has a minimum of 20 megaOhms and is auto-ranging.

3. LEAK TESTING

3.1 What leak detection methods can be performed using GSE Leak Location Conductive Liner?

In exposed applications, Spark Testing (ASTM D7240) is the most efficient, but other electrical leak survey techniques such as Water Lance (ASTM D7703) or Water Puddle (ASTM D7002) can be utilized. In most applications, after cover placement, a Dipole Survey (ASTM D7007) can be performed in order to locate leaks.

3.2 Who can perform spark testing?

Spark testing is a very simple test method and is commonly performed by the installer or contractor at a rate of about 2 acres per person per day. However, sometimes a third party inspector may perform spark testing after the job is completed.

3.3 What is the recommended equipment for spark testing on the GSE Leak Location Conductive Liner?

Solmax recommends utilizing the S-100 spark tester on **GSE** Leak Location Conductive liner installations.

3.4 Who can perform a Dipole survey?

Dipole testing requires much more specialized equipment and expertise than spark testing. For this reason, it is recommended that you consult with a third-party survey company about having a Dipole Survey performed.

3.5 Will I be able to use a Dipole survey on my double lined project when using GSE Leak Location Conductive Liner?

Yes, however strict installation techniques must be followed as listed in the **GSE** Leak Location Conductive Liner Installation Manual.

3.6 What depth of cover material (water or soil) can be tested using the Dipole method?

For soil covered applications, the depth of material is highly dependent on several factors, mainly the overall size of the area to be tested. The larger the area, the deeper the cover material may be. However, it is also highly dependent on material properties and moisture contents. When covered in water, depth is generally not a limitation because equipment can be used that takes the dipole measurements at the bottom of the pond as opposed to the surface.

3.7 What is the cost of a Dipole survey?

Because of the wide range in pricing due to specific site sizes and conditions, it is recommended that you contact a third-party survey company to get an approximate cost for your upcoming project.

3.8 Why use the S-100 Spark Tester from Solmax?

It provides a fast and reliable Bare Electrical survey.

Three electrodes – a cart, brush and seam electrode – allow the technician flexibility to test any part of the leak survey surface, even wrinkles, slopes and underneath exposed seam flaps.

With a Solmax-developed Spark tester designed for testing the most challenging surfaces, we complete the package, offering a comprehensive, quality solution.

- Easy equipment set-up (fast & efficient)
- No need for water supply
- Independent of subgrade soil conductivity
- Intimate contact between conductive medium and electrically isolative **GSE** HD or **GSE** LL geomembrane hence no problem with 'wrinkles'
- Can be carried on steep slopes.

Solmax's S-100 Spark Tester utilizes a high voltage pulsed power supply to charge a capacitor formed by the underlying conductive layer, the non-conductive layer of geomembrane and the grounding pad. The geomembrane surface is swept with a test electrode to locate holes where the capacitor discharges through. This will trigger a visual and/or audible alarm, alerting the technician that a puncture has been detected.

3.9 How does one activate the S-100 Spark Tester?

Solmax developed a mobile app that is used to activate the Spark Tester Unit. The Solmax Spark Tester app can be downloaded via Android/iOS.

About Solmax

Solmax is a world leader in sustainable construction solutions, for civil and environmental infrastructure. Its pioneering products separate, contain, filter, drain and reinforce essential applications in a more sustainable way – making the world a better place. The company was founded in 1981, and has grown through the acquisition of GSE, TenCate Geosynthetics and Propex. It is now the largest geosynthetics company in the world, empowered by more than 2,000 talented people. Solmax is headquartered in the province of Quebec, Canada, with subsidiaries and operations across the globe.

Uncompromised quality

Our products are manufactured to strict international quality standards. All our products are tested and verified at our dedicated and comprehensive laboratories which maintain numerous accreditations. We offer our partners a wide scope of testing according to published standards to ensure products delivered to sites meet specified quality requirements.

Let's build infrastructure better

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