SOLMAX

WASTE MANAGEMENT

The World Bank conservatively estimates current global waste generation at 1.3 billion tons per year of municipal solid waste alone.

This is expected to increase to approximately 2.2 billion tons by 2025.

Waste is an ever-evolving by-product of human and industrialization activity. A growing world population and economy, new technologies, new forms of waste, increasing volumes and regulatory pressure have created challenges and opportunities for effective waste management.

Protecting the environment from waste

The regulated use of geomembranes for waste containment is increasingly becoming mandatory in both developed and developing countries.

Waste management aims to conserve natural resources and manage waste in an environmentally sound manner. Effective management of waste includes prevention, recovery, re-use, recycling, and disposal. More importantly, this requires a strategic approach to the design and build of disposal facilities.

To do so, you need a partner with the right products and solutions that you can rely on and an expert you can trust. Solmax's geosynthetic products and cover solutions are used in more regions around the world for well over 40 years.

Our experience and reach give us a clear competitive advantage, allowing you to have peace of mind that your waste management efforts are not only compliant with new waste disposal laws and government regulations but also contributes to building a sustainable future.

Solmax products are approved for use in various classes of landfills and landfill applications by national authorities around the world.

The main requirement for a municipal solid waste landfill is that it does not pollute, contaminate or degrade its environment.

Landfill cell

Municipal waste

Modern landfills are highly engineered, the safest and most economical solution for managing municipal waste. Specifically designed to prevent contamination of the environment, they are usually constructed out of numerous dimensional layers of geosynthetics and soil layers, each performing a specific function within the containment area.

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Our high-density polyethylene (**GSE**® HD) geomembranes are engineered to withstand deterioration with proven durability for long term use in both buried and UV-exposed conditions, preventing leakage into groundwater, and providing stability on steep slopes.

Our geosynthetic clay liners (**BENTOLINER**® GCLs) are installed below the geomembrane to form a composite barrier system with superior hydraulic barrier performance.

Hazardous waste

Corrosive, flammable, reactive, and poisonous materials have to be contained in specialized facilities to prevent them from damaging the environment. As such, most industrialized countries have developed regulations to dispose of these materials in a secured landfill cell that is designed with a double-lining system, which is now the standard in most countries.

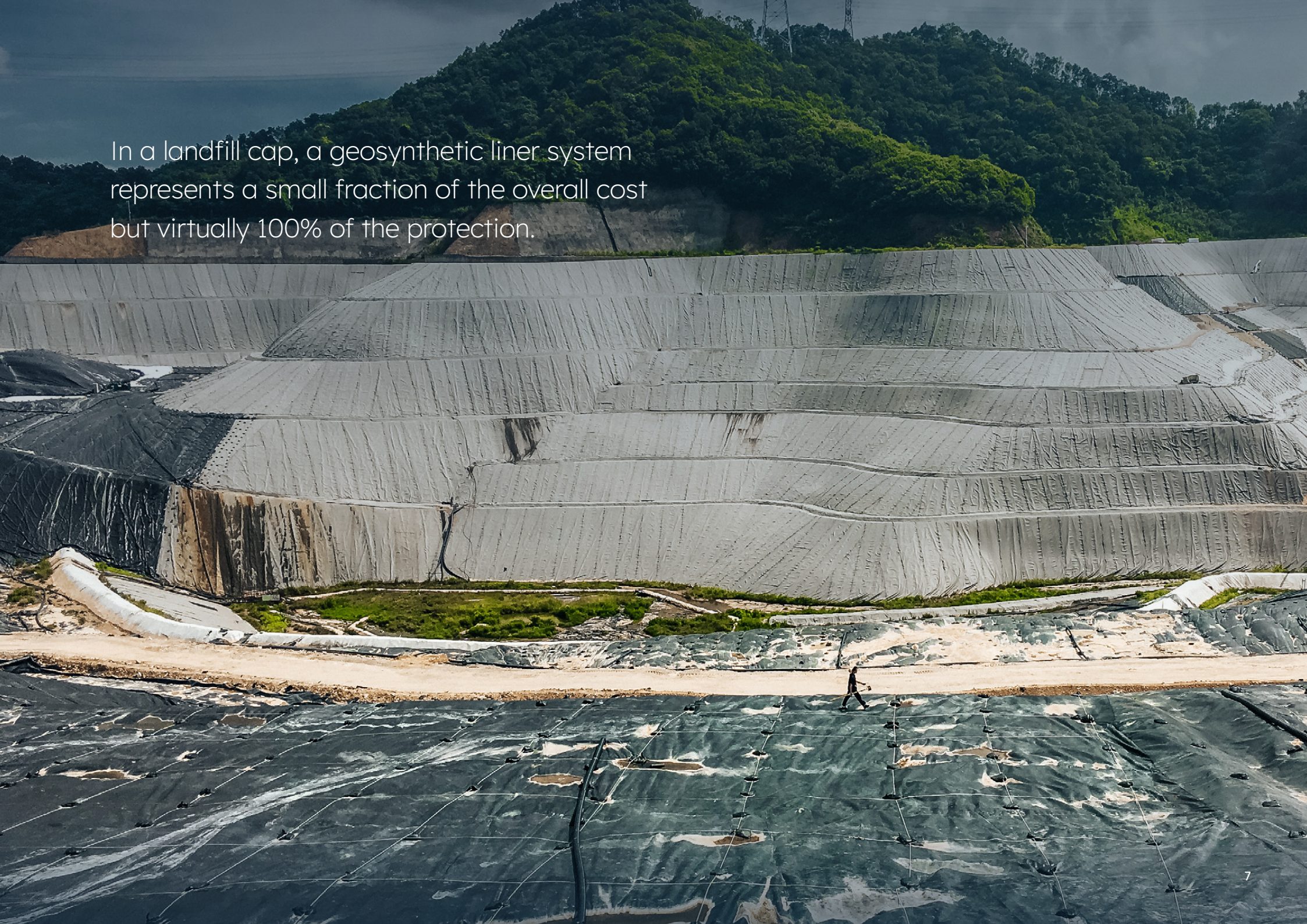
Our engineered and high-performance geomembrane and GCL solutions, combined with effective drainage geocomposites, provide a pivotal function for an effective double-lining system design. This creates an impermeable barrier lining system at the base of the facility to prevent hazardous waste and high concentrated leachate from getting into the environment.

Industrial waste

Industrial activities produce a significant amount of waste and while efforts are increasing to reuse and recycle material a large quantity still requires properly managed waste disposal. Our broad range of geomembranes and GCLs will support you in developing cost-effective long-term containment solutions.

Waste from factories, construction sites, manufacturing plants and other industries require specialized waste containment solutions.

The use of geosynthetic products help to keep your waste disposal facility compliant with health, safety and legal requirements.



In a landfill cap, a geosynthetic liner system represents a small fraction of the overall cost but virtually 100% of the protection.

Landfill capping

Major long-term concerns when capping landfills include the differential settlement due to the biodegradability of the waste, slope stability and surface erosion of the soil layer. The cap and its foundation needs careful design and choice of barrier systems. In a landfill cap, a geosynthetic liner system represents a small fraction of the overall cost but virtually 100% of the protection.

Our geosynthetic solutions have been proven to perform a multitude of functions concurrently; from accommodating differential settlement, gas venting and gas collection, to keeping moisture from entering the waste containment.

GCLs are ideally suited for use in landfill caps and closures. Used alone or in conjunction with a linear low-density polyethylene (LLDPE) geomembrane, it provides excellent resistance to the deleterious effects of differential settlements and seasonal temperature fluctuations.

Covered caps need significant design considerations and maintenance to avoid erosion of the cover. Those issues are eliminated with the fully anchored and fully synthetic grass capping system.

Leachate containment

Leachate is generated when excess water passes through waste, dissolving soluble substances. Landfill leachate collection is necessary to reduce leachate buildup in the cell. Containment and treatment ofthis leachate is therefore a key component of waste management to prevent contamination of the environment.

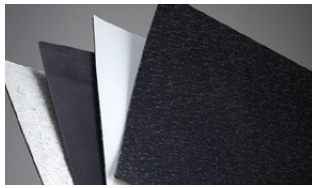
Geosynthetics can be utilized to create safe and cost-effective barrier solutions. GCLs act as a secondary or tertiary barrier, whileleak detection geomembranes are used as primary and secondary barriers. Leak detection can happen at any time when these geomembranes are combined with drainage geocomposites, addressing even the highest environmental concerns.

Remediation

Abandoned landfills are a growing environmental concern as many of these were not operated with today's regulatory standards. Capping and remediating abandoned landfills present opportunities for beneficial reuse.

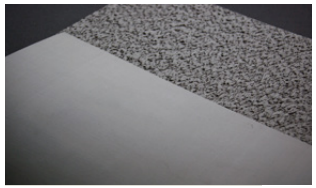
While remediation of these sites present a huge geotechnical challenge, capping and vertical barrier systems offer opportunities to address issues of erosion, gas migration, and groundwater protection.

Waste management solutions



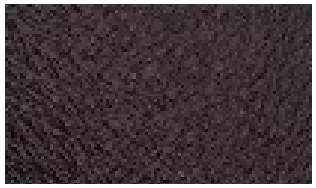
GSE HD

GSE HD Series is a high-density polyethylene geomembrane that exceeds the requirements of the international and local specification standards for **GSE** HD geomembrane liners. This series of geomembrane liners offers proven performance as a primary containment barrier in landfill applications.



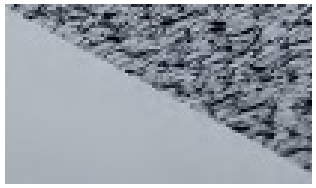
GSE LL

GSE LL Series is a linear low-density polyethylene geomembrane that exceeds the requirements of international and local specification standards for **GSE** LL geomembrane liners. The flexibility and elongation performance of this series of liners are the perfect solution for landfill cell cover design.



GSE Leak Location Conductive

GSE Leak Location Conductive is essential where you can‘t afford a leak. It is the most cost-efficient and reliable leak detection method in the industry, improving damage detection in both exposed and covered landfill applications, even after installation.

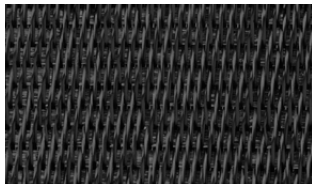


GSE White Reflective

GSE White Reflective helps to keep the liner cooler, resulting in fewer wrinkles. Fewer wrinkles mean the easier installation ofcover soil and increasing the lifespan of the liner.

BENTOLINER GCL

BENTOLINER fabric-encased geosynthetic clay liners have proven long term creep resistance and internal shear strength properties, which make them ideal for a wide range of containment lining and capping solutions.

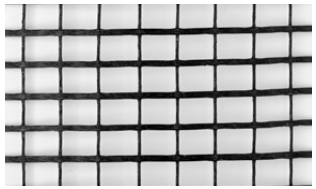


MIRAFI CR-Series

MIRAFI® CR-Series was designed specifically for the pond capping market. These high-performance products feature engineered seams to efficiently install a stable capping system. The **MIRAFI** CR-Series facilitates the complete and efficient closure of storage basins and ponds.

FABRINET drainage geocomposites and geonets

Our broad range of **FABRINET**® geosynthetic drainage geocomposites and geonets are tailored for landfills, transmit fluids and gases in various conditions and are used for leak detection and collection.



MIRAGRID XT-Series

MIRAGRID® XT-Series biaxial and uniaxial geogrids can be used to expand capacity and increase service life of a landfill. In addition to limiting strain within the existing landfill liner, geogrids reduce stress on a liner system at the side slopes of the landfill.

GEOTUBE dewatering containers

GEOTUBE® are fabricated to provide confinement of the fine solids inside the container while allowing water to permeate through the engineered textile. As the water drains, the solids continue to densify and consolidate over time.

Optimize the design of disposal facilities with our complete waste management product portfolio. Rely on our expertise and trustworthiness as your partner to access hydraulic and gas barriers, efficient drainage systems, effective leachate containment, reliable leak detection, superior filtration capabilities, and outstanding protection benefits.

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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