SOLMAX

GSE GEOMEMBRANE LINING SOLUTIONS

The long-term durable containment solution

Polymeric geomembranes have been used successfully in environmental protection and civil engineering applications for decades.

Our **GSE**® geomembranes exemplify our commitment to environmental protection by securely containing hazardous materials and preventing the release of dangerous substances into water, soil, or the atmosphere. Utilizing geomembranes also conserves natural resources.

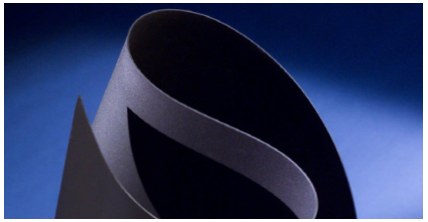
The **GSE** product line is trusted in the industry for its excellent chemical resistance, low permeability, and durability in both covered and exposed applications. HDPE geomembranes are the most commonly used products in the market.

GSE geomembranes can be customized to meet the specific requirements of your project, making them a versatile and preferred choice for clients.

Principal features of our lining products

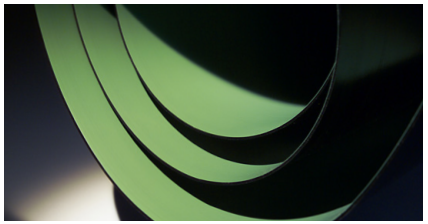
- Over five decades of outstanding durability
- Dependable quality
- Exceptional chemical resistance
- Versatility for project-specific requirements
- Superb UV resistance
- Lowest permeability among barrier products

GSE geomembrane lining solutions



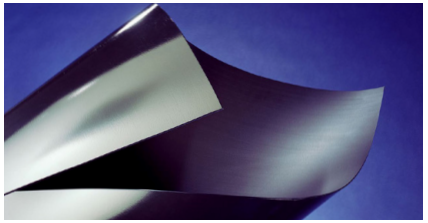
GSE HD

High-density polyethylene (HDPE) is a thermoplastic polymer renowned for its exceptional strength, chemical resistance, and cost-effectiveness. **GSE** HD geomembranes are impermeable HDPE geomembranes utilized in various civil engineering and environmental projects, offering robust mechanical properties, resistance to puncture, tear, and environmental stress cracking, making them ideal for applications such as landfill liners, containment of hazardous materials, pond liners, and agricultural water storage.



GSE LL

Linear low-density polyethylene (LLDPE) is a thermoplastic polymer renowned for its unique molecular structure, featuring linear chains with side branches. This molecular arrangement imparts **GSE** LL with exceptional mechanical properties, including high tensile strength, flexibility, puncture resistance, and impact resistance. **GSE** LL geomembranes are the preferred choice when settlement can occur, such as capping applications or in seismic areas. They provide advantages in cold climate applications, due to their molecular structure.



GSE HDH

A raised temperature polymer typically refers to a type of polymer that exhibits enhanced thermal stability and mechanical properties when exposed to elevated temperatures. These polymers are designed to withstand higher operating temperatures compared to standard polymers. **GSE** HDH geomembranes are designed to withstand prolonged exposure to temperatures above 60 C (140 F), making them ideal for containing hot liquids or extending the service life of any other application with elevated temperatures.

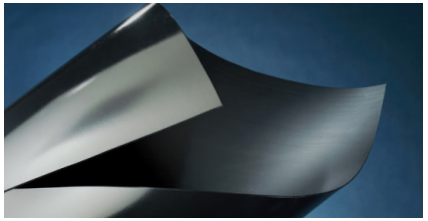
GSE TP

Flexible polypropylene (FPP) is a thermoplastic polymer derived from propylene monomers, known for its flexibility. With their ability to conform to structures and withstand stress, FPP geomembranes are widely employed in projects such as ponds, building foundations or biogas reactors.

Geomembrane surface finishes

GSE Textured

GSE HD textured is manufactured using co-extrusion technology. Texture height can be adjusted to project specific needs. Since it is an in-line manufacturing process, the availability to our customers is increased, and lead times are minimized. This product is used in applications that require increased frictional resistance and enable the construction of steeper slopes.

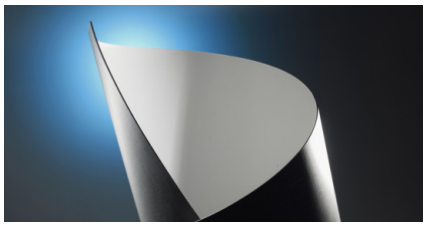


GSE smooth

GSE geomembranes are available with smooth surfaces. They have been constantly used in any project not requiring enhanced frictional properties. They provide outstanding mechanical and endurance properties.

GSE FrictionFlex

GSE FrictionFlex geomembranes are manufactured by impinging the smooth surfaces of the geomembrane with molten polyethylene mixed with hot air under high pressure and temperature, as in a welding process. As a result of this process, the geomembrane exhibits superior flatness and provides enhanced performance for the installation of subsequent layers. The ability to build steeper slopes provides cost savings, by increasing the capacity of the project. The surface structure enhances safety at work.

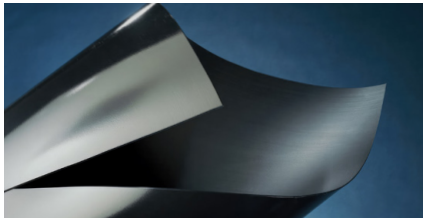


GSE white

Our white performance finish is a thin white polyethylene layer that is coextruded within any typical three-layer **GSE** geomembrane to form a monolithic material with uniform properties. The UV stabilized white surface reflects light and provides damage detection, reduces wrinkles and subgrade desiccation.

GSE colored geomembranes

The **GSE** geomembranes are available with different surface colors, which can be smooth, textured or **GSE** FrictionFlex surface finish. They are primarily used in exposed applications and improve the aesthetic values for the community.



GSE conductive geomembranes

GSE conductive geomembranes are produced with a specially formulated electro conductive layer on the bottom side that allows the detection of post installation damage. Leak detection on exposed and covered applications, accommodating both Spark and Dipole testing, significantly reduces the probability of exceeding the action leakage rate (ALR). The conductive layer being an integral part of the **GSE** geomembrane, allows leaks to be detected on wrinkles. **GSE** conductive geomembranes are also used in applications where static electricity builds up or the need for grounding is a concern.

The surface finishes are available in multiple combinations, to meet customer-specific requirements

The versatility and effectiveness of **GSE** geomembranes make them indispensable in a wide range of applications across various industries.

Advantages

- Wide width > 7.0 m
- Flat cast and blown film production technology
- Multiple thicknesses
- Multiple surface finishes
- Formulations according to project specific needs
- Global reach and production capacities
- Five decades of proven performance
- Commitment to quality

Applications

MINING

With millions of square meters installed in mining operations around the world, our **GSE** range of geomembranes has proven to be the most durable, dependable, and cost-effective containment solution in heap leach pads and tailings storage facilities.

LANDFILL

Solmax is the leader in barrier and containment systems for the effective management of solid waste, liquid waste, hazardous waste, and sludge. The geomembrane offers solutions for basal lining, for piggyback landfills, for capping systems or with lock profiles as vertical barrier.

AGRICULTURE

Irrigation, containment and the use of agricultural secondary products and erosion control measures are expected to strongly impact the global agriculture industry. **GSE** geomembranes secure water in irrigation ponds and canals, they protect soil and water against hazardous materials, and maximize biogas production and the storage of liquid manure.

ENERGY

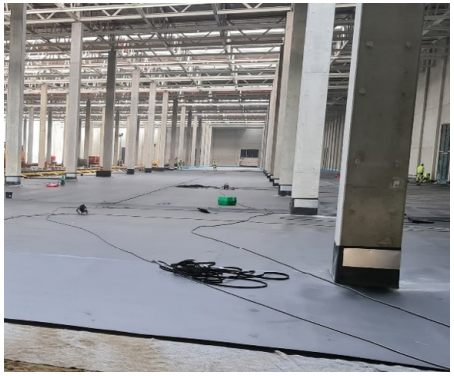
GSE geomembranes provide valuable solutions in the construction and operation of natural energy resources and energy facilities. Our sealing membranes are designed for long-term solutions in critical infrastructure projects such as thermal storage, hydroelectric reservoirs, or canals, including hydro-pumped storage ponds, thermal energy storage, hydropower canals, waste management and containment solutions.

WATER

GSE geomembranes provide cost-effective and reliable lining solutions for water containment and conveyance applications even in the harshest environments. Sustainability and national regulatory compliance is an important concern. **GSE** geomembranes enable high-performance solutions to create and protect the integrity of recreational areas, ponds, inland waterways, and canals.

SITE DEVELOPMENT

GSE geomembranes play a crucial role in site development projects by providing impermeable barriers that prevent the migration of liquids, gases, and contaminants. **GSE** geomembranes are utilized in stormwater management applications, such as detention basins and stormwater ponds, to control runoff and prevent pollution.



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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