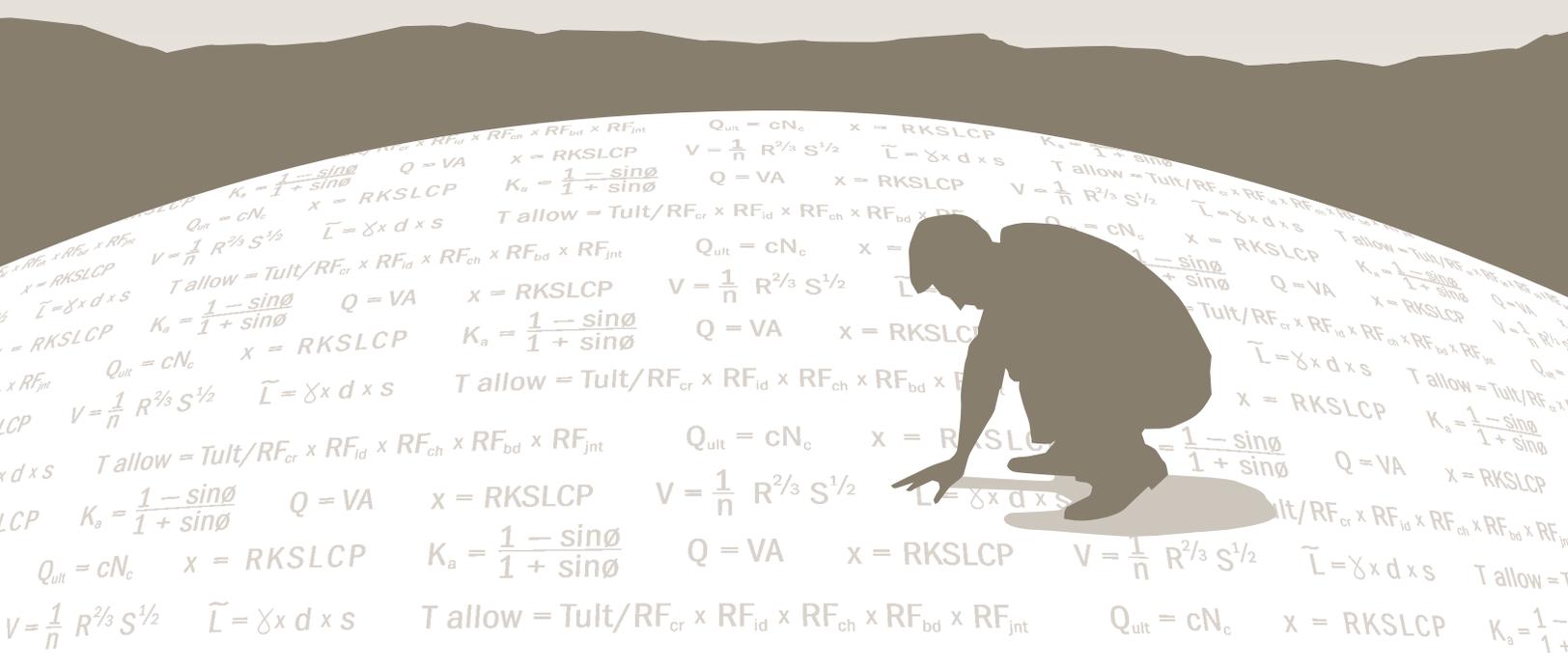


# GEOTEXTILE SOLUTIONS

**PERFORMANCE** GROUNDED IN **TECHNOLOGY**



**PROPEX**

THE ADVANTAGE CREATORS.™

GEOSYNTHETICS

OUR PASSION  
FOR CREATING  
GEOSTABILIZATION  
SOLUTIONS BEGAN  
DECADES AGO ▶







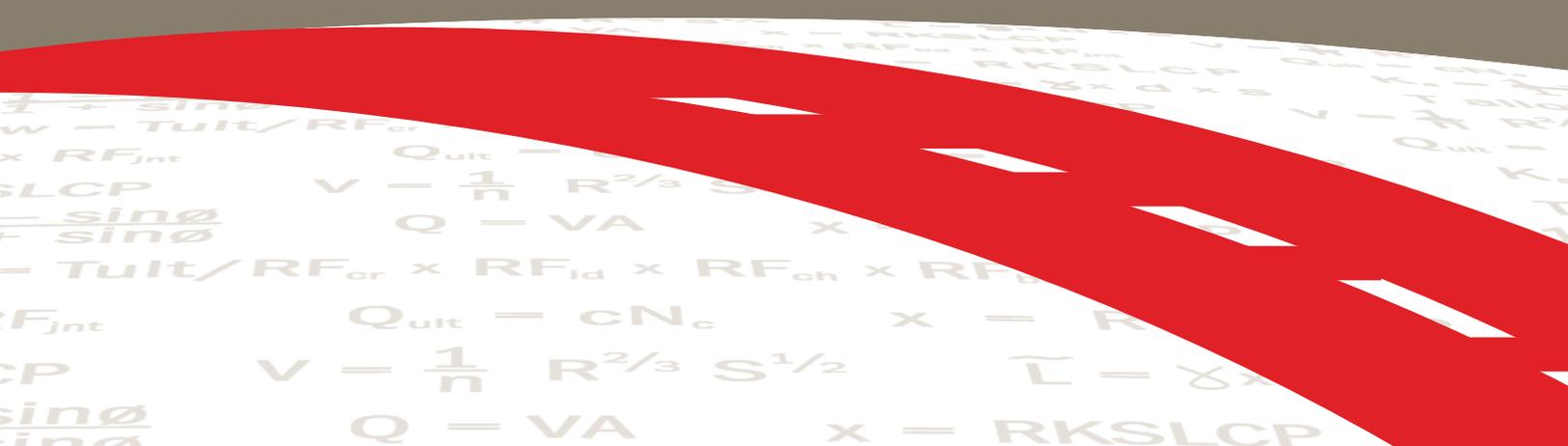
## INNOVATIONS

- ▶ Pioneered paving fabrics and the geosynthetic interlayer technology that have improved over one billion square yards of pavement
- ▶ As a leader in geotextile production and research, Propex has developed industry standards that have made geotextiles a vital and widely used engineering tool
- ▶ Introduced Roadways and Civil Engineering (R.A.C.E.) software for the design of economical new flexible pavements or unpaved roads and for pavement rehabilitation strategies



## PERFORMANCE

- ▶ Well-documented performance case studies on every product we provide, including over 35 years of performance testing for paving fabrics and a 30-year performance study on woven geotextiles
- ▶ Propex has developed the industry's widest range of geostabilization solutions for virtually any construction project
- ▶ Strict manufacturing specifications, quality control monitoring and laboratory testing ensure our products consistently meet or exceed the most demanding construction specifications



## AVAILABILITY

- ▶ Vast global network of distributors and representatives assures local product availability
- ▶ Utilizing the latest software in forecasting demand, we always have product where and when you need it: distributors have ready access to our full line of geotextiles and keep locally popular products in inventory for quick pickup or delivery to your job site



## COST EFFICIENCY

- ▶ Our geotextiles are much less costly to install than traditional geostabilization practices such as lime, soil cement or thicker layers of aggregate and pavement
- ▶ In unpaved roads, our products reduce the required aggregate by about one-third, and in paved roads, they reduce the structural section while maintaining the full section indefinitely
- ▶ Our products can be handled and installed easily

## PEOPLE

- ▶ Staff includes dedicated engineering professionals with advanced degrees who can provide you with technical expertise, research and specification information
- ▶ Maintain industry leadership in trade associations and professional societies



# GEOTEX<sup>®</sup> GEOTEXTILES ▶

## THE FABRIC OF TODAY'S SITE DEVELOPMENT, TRANSPORTATION AND WASTE CONTAINMENT INDUSTRIES.

Propex has been a leading manufacturer of geotextiles for decades with billions of square yards of nonwoven and woven geotextiles installed around the world. From geotextiles for the construction and closure of solid waste landfills to the separation, stabilization and reinforcement of roads, our geotextiles are renowned for their ability to reduce construction and life-cycle costs in a wide range of applications. In fact, Propex has the widest selection of woven and nonwoven geotextiles available, including products that are used for:

### GEOTEX<sup>®</sup> GEOTEXTILES AT A GLANCE

- ▶ Dimensionally stable woven and nonwoven solutions for everything from soil stabilization and filtration to roadway and landfill applications
- ▶ Resistant to ultraviolet (UV) degradation and to biological and chemical environments normally found in soil
- ▶ Outperforms and are more cost-effective than conventional soil methods

- ▶ Subsurface drainage
- ▶ Roadway separation/stabilization
- ▶ Railroad stabilization
- ▶ Embankment reinforcement
- ▶ Earth-retaining structures
- ▶ Silt fences
- ▶ Lagoon closures
- ▶ Geomembrane liner protection
- ▶ Landfill gas collection
- ▶ Landfill drainage systems



# GEOTEX<sup>®</sup> GEOTEXTILES ▶



## SUBSURFACE DRAINAGE ▶

During wet weather, water can penetrate a pavement surface into the road base course below. Foundation soils can also retain water that migrates up to the road's base course, causing the pavement to lose its strength, rut, heave in freezing weather and crack at the surface. While aggregate French drains help drain water away, they can become clogged with small soil particles. Nonwoven geotextiles are cost-effective, easily installed filter/separators that keep aggregate or geosynthetic drainage systems clog-free to ensure long-term performance.



## ROADWAY SEPARATION/STABILIZATION ▶

As anyone who has dug up and repaired a failed road knows, loss of roadbase support due to subgrade soil contamination is the leading cause of failure. This contamination can happen quickly over soft or wet soils, but still develops even over competent subgrades. Once some of the original road structural section is lost to contamination, the road progressively fails, due to inadequate support for the traffic loading. When placed at the subgrade/roadbase interface, Propex geotextiles provide four functions to enhance roadway performance: separation, stabilization, reinforcement and drainage. These functions help maintain the integrity and strength of the pavement foundation, which ensures long-term performance of any pavement and reduces the required aggregate section to lower project cost.



## RAILROAD STABILIZATION ▶

Maintaining track geometry is critical for efficient railroad operation. When subgrade pumps into the overlying ballast, it can destroy the track support system and create an uneven track bed. Nonwoven geotextiles prevent aggregate and ballast from punching into the subgrade and intermixing, reducing maintenance costs and ensuring long-term durability and drainability. High-strength woven geotextiles can reinforce railroad embankments over weak subgrade soils.



## EMBANKMENT REINFORCEMENT ▶

During construction of roadways over organic deposits and highly compressible soils, construction equipment often can't travel across the soil without sinking. The soil needs to be strengthened and consolidated. Woven geotextiles provide long-term reinforcement for embankments constructed over soft soil, and can be installed easily. The added reinforcement allows construction equipment to travel across the soft soil, increasing overall site safety and reducing excavation costs.

# GEOTEX<sup>®</sup> GEOTEXTILES ▶



## EARTH-RETAINING STRUCTURES ▶

Mechanically Stabilized Earth (MSE) retaining structures built with soil reinforcement fabrics are economical alternatives for designers looking to open up new land for development. Segmental Retaining Walls (SRWs), for example, are the most economical permanent retaining wall system available for fill slope construction. Reinforced steepened slopes using cost-effective high-strength geotextiles between soil lifts reinforce the slope surface and prevent deep-seated failure. In almost every case, earth-retaining structure solutions provide advantages over conventional concrete retaining structures, including:

- Increased land for development
- Installed cost savings of as much as 50% when compared to traditional concrete structures
- Quick and easy installation with reduced labor and equipment costs
- Improved aesthetics and reduced slope failures



## SILT FENCES ▶

When attached to wood or metal posts and properly trenched, silt fence fabrics contain overland flow and filter suspended soil particles from water. This not only allows the water to drain efficiently, it also prevents environmental damage to areas next to construction sites. Plus, as sediment accumulates, the fabric's high tensile strength, UV resistance and low maintenance features ensure continued performance throughout the entire life span of the project.



## LAGOON CLOSURES ▶

Woven geotextiles make it safe for the rapid deployment of soil caps over industrial sludge lagoons, allowing water to pass vertically during construction and soil separation—an application where geogrids alone can't perform adequately.



### GEOMEMBRANE LINER PROTECTION ▶

When High-Density Polyethylene (HDPE) and other liners are installed during EPA Subtitle D-mandated solid waste landfill construction, they are susceptible to puncture and gouging during and after construction. This type of damage can weaken and possibly rupture the liner if it stretches due to unexpected tension. Heavyweight nonwoven geotextiles can cushion and protect geomembranes from damage by sharp objects. These fabrics enhance puncture, impact and abrasion resistance, allowing landfill system construction and operation without fear of damaging critical liners.



### LANDFILL GAS COLLECTION ▶

Maintaining a conduit for gases to escape from landfills can be challenging. Heavyweight nonwoven geotextiles help collect and transport gases that can build up beneath the flexible geomembranes used in the closure of solid waste facilities.

Overall, these geotextiles:

- Allow gas to travel through the porous geotextile laterally across the top of the landfill until it reaches a vent
- Help prevent gas pressure build-up that could explode the liner system
- Are used in the construction of drainage geonet composites for use on more active sites



### LANDFILL DRAINAGE SYSTEMS ▶

When placed in close contact with geonet or drainage stone, medium-weight nonwoven geotextiles can filter soil and waste while allowing water and leachate to pass. In new landfill cell construction, workers install a series of liquid or leachate collection pipes or stone filters along the bottom surface. These initial collection areas transport the leachate into one primary collection pipe, which transfers the liquid to a centralized treatment center. To ensure proper leachate collection, medium-weight nonwoven and woven monofilament geotextiles line the initial collection areas.

Specifically, these fabrics:

- Allow the liquid to pass through the initial collection areas
- Prevent clogging of the collection pipe and drainage stone
- Ensure a maintenance-free collection system
- Are used in the construction of drainage geonet composites

## PAVING PRODUCTS ▶

One of the biggest contributors to roadway deterioration is the softening of subgrade soil that occurs when water infiltrates the base through cracks and pores in the pavement surface. A pavement with a base that is saturated as little as 10% of the time has just 50% of the life of a pavement protected from water infiltration. While typical road maintenance overlays or surface treatments provide only short-term relief, they do not address the real problem: moisture in the roadbase and crack-inducing stresses from the underlying pavement.

Our specialty paving fabrics and repair membranes are specifically engineered to reduce water infiltration and reflective cracking, thereby saving on costly repaving cycles. They have been proven to extend the life of highways, city streets, parking lots, and airport runways and taxiways. These versatile products are used in new asphalt concrete pavements, beneath overlays of rigid and flexible pavements and beneath chip-seal surface treatments.



### PETROMAT® PAVING FABRIC ▶

Petromat is the oldest and most widely used fabric interlayer system. This nonwoven fabric is field-saturated with an asphalt cement tack coat to become a continuous moisture barrier and a stress-absorbing interlayer in new or rehabilitated pavements. Petromat typically doubles asphalt concrete overlay life and can more than double the life of a chip-seal surface treatment. When Petromat is included, thicker overlays may also be reduced by as much as 1.5 inches in thickness without losing performance. The installed Petromat system typically costs less than 0.5 inches of asphalt concrete pavement.



### PETROTAC® STRIP MEMBRANE ▶

Petrotac is a unique “peel and stick” waterproofing membrane for effective repair of pavement cracks, joints or potholes and for sealing bridge decks. This product is a composite of Petromat nonwoven fabric coated with a rubberized asphalt adhesive mastic. The adhesive mastic easily bonds to the existing pavement surface, allowing for quick, uncomplicated product installation. A unique asphalt top coating ensures an excellent bond with the pavement overlay.

# HELP WHEN YOU NEED IT ►

## ONE MORE PROPEX ADVANTAGE

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With over 10 locations and more than 2,500 people worldwide, Propex has the resources to help you execute a plan that works. Not only do we have a complete line of products and educational programs for geotextiles, we have the expertise and tools to walk you through the process.

**Online.** A good place to start is the Propex web site—[geotextile.com](http://geotextile.com). There you'll find information about all our geotextile products as well as a complete library of downloadable technical support materials.

**Roadway design and rehabilitation software.** For help designing the newest, most economical flexible pavements or unpaved surfaces, order our Roadways and Civil Engineering (R.A.C.E.) software. Created to help you plan pavement rehabilitation strategies that will lower the cost and extend the life of your pavement repairs. To order, visit our web site at [geotextile.com](http://geotextile.com).

**Contact us.** Because we are committed to technical support during every phase of your project, Propex has on staff registered, professional engineers to aid you in your civil engineering design, geotextile selection and preparation of specifications. For help and more information, call Propex at **800-621-1273** or visit [geotextile.com](http://geotextile.com).





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