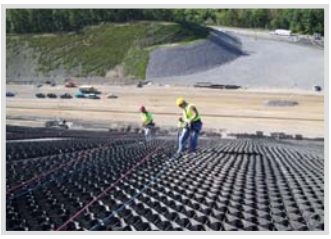
PRESTO GEOSYSTEMS®

smart earth solutions

POROUS PAVEMENTS • SOIL STABILIZATION • PORTABLE MATS



GEOSYSTEMS®

PRESTO GEOSYSTEMS® leads the stormwater and site development industry with eco-friendly, custom-tailored solutions to meet the most demanding soil and water problems.

PRESTO GEOSYSTEMS LEADS

- Innovative Solutions
- First in Class Quality Products
- Proven Design Methodologies
- Customized Design Solutions
- World Class Research & Testing
- Reduced Cost Alternatives
- Global Distribution Network

The quality management system of Presto's products is certified to ISO 9001:2008 Quality Standards.

PRESTO'S SOLUTIONS PORTFOLIO

SOIL STABILIZATION

Presto is the original inventor of the geocell technology with the US Army Corps of Engineers.

Presto's high-quality, **Genuine GEOWEB® system** continues to improve:

- textured surface and perforations
- ATRA® load transfer clips & tendons
- ATRA® connection keys, ATRA® anchors, and ATRA® drivers.

POROUS PAVEMENTS

Presto's quality solutions create grass and aggregate porous pavements for pedestrian and vehicular traffic use. The permeable systems deliver structural support for traffic loads and provide stormwater drainage benefits.

- **GEOBLOCK® system** protects turf for occasional-use pavements.
- **GEOPAVE® system** stabilizes open-graded aggregate pavements.
- **GEOWEB® system** stabilizes aggregate or aggregate/topsoil mix for economical aggregate and vegetated pavements.

PORTABLE MATS

Two mat types are available to support construction traffic.

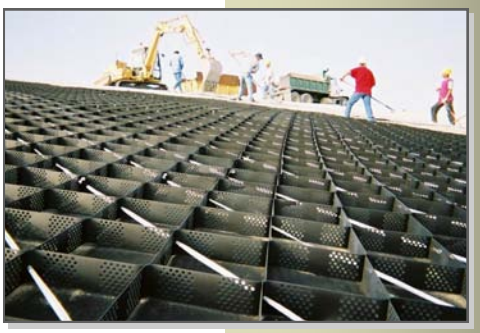
- **GEOTERRA® mats** are extremely strong, light-weight, and economical for use over soft subgrades.
- **GEORUNNER® mats** protect turf from concentrated pedestrian traffic or light-weight construction vehicles and equipment. They are also ideal for scour protection applications.

Soil Stabilization

GEOWEB®

THE HIGHEST QUALITY ORIGINAL GEOCELL

The GEOWEB® cellular confinement system is the original geocell developed by Presto Geosystems and the US Army Corps of Engineers more than 30 years ago for solving challenging soil stabilization problems.



Infill type varies from vegetation to aggregate and hard-armored concrete.

HIGH QUALITY STANDARDS

The Genuine **GEOWEB® system** has always been manufactured in the USA from high-quality, high-strength polyethylene so quality and performance are always dependable. The manufacturing process adheres to stringent ISO and CE quality standards.

GEOWEB oval wall slots are designed for quick section connection with **ATRA® Keys** and for threading of tendons.

GEOWEB® KEY APPLICATIONS

LOAD SUPPORT:

Solves roadway, parking, and yard surface problems using less costly infill and less base allowing for reduced infill and base material costs.

SLOPE PROTECTION:

Creates a stable environment for vegetation and long-term sustainability of embankment material. Provides 3-dimensional lasting slope protection.

CHANNEL PROTECTION:

Ensures stability and protection of vegetated, aggregate and concrete-lined channels exposed to both slope and channel flow erosion.

VEGETATED RETAINING WALLS:

Creates economical, vegetated retaining walls that thrive and last even in settling conditions.

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GEOWEB®

LOAD SUPPORT SYSTEM

The **GEOWEB® Load Support System** is a proven, economical solution for challenging soil stability problems. The 3D structural system delivers benefits where soft soils are present, where inexpensive quality infill is unavailable or where traditional reinforcement methods are difficult to construct.

Soil Stabilization

THE 3D GEOWEB STRUCTURE ADVANTAGES

- Confines and stabilizes infill material and controls shear, lateral and vertical movement
- Increases the effective structural number, allowing fill requirements and costs to be cut in half.
- May allow use of lesser-quality, less costly on-site infill materials
- With permeable infill, is a **Porous Pavement** that reduces stormwater runoff and minimizes environmental impact.

GEOWEB® KEY APPLICATIONS

- Load Distribution System over Weak Soils
- Base Stabilization for Paved Surfaces
- Rutting Control for Unpaved Surfaces
- Maintenance Reduction
- Decreased Rolling Resistance

RESEARCH RESULTS

The GEOWEB Load Support System:

- reduces the thickness and weight of structural support element by **50% or more.**
- allows subgrade materials to withstand more than **10 times** the number of cyclic-load applications before accumulating permanent deflection.
- provides over **30% stress reduction** when used as a supporting layer under pavement.
- distributes load between pilings reducing intersoil stress by 40%.

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GEOWEB®

SLOPE PROTECTION SYSTEM

The GEOWEB® Slope Protection System offers solutions for solving challenging slope stability problems. The 3D structure creates a stable environment for embankment infill materials, preventing severe erosion problems and offering deep earth solutions not delivered by surface treatments.

SUSTAINABLE SLOPE STABILITY

The benefits of 3D confinement are long-term vegetated sustainability, reinforcement of the upper soil layer, and resistance to erosive conditions and sliding forces.

The GEOWEB system is the ideal long-term solution for:

- Sustainable vegetation
- Permeable aggregate
- Hard-armored concrete

GEOWEB® KEY APPLICATIONS

- Vegetated & Permeable Embankments
- Geomembrane Protection
- Stormwater Basins & Wastewater Lagoons
- Shoreline Revetments
- Dikes & Levees
- Abutment Protection
- Landfill Linings & Covers
- Dam Faces & Spillways

Soil Stabilization

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GEOWEB®

SHORELINE PROTECTION SYSTEM

The **GEOWEB® Shoreline Protection System** stabilizes soils on shoreline embankments, creating a structurally-stable environment for infill. The system minimizes erosion problems caused by water contact, surface flow and small scale wave action.

SUSTAINABLE SHORELINE STABILITY

The GEOWEB system can be designed to provide long-term stability with sustainable vegetation, permeable aggregate or hard-armored concrete.

BENEFITS OF THE 3D STRUCTURE:

- confines and reinforces the upper soil layer.
- provides resistance to erosive conditions and slip forces.
- may be integrated with a turf reinforcement mat for higher protection for vegetation.
- protects geomembranes on ponds, or stormwater/wastewater containment basins.

GEOWEB® KEY APPLICATIONS

- Shoreline Revetments & Embankment Protection
- Shoreline Restoration & Bioengineered Solutions
- Geomembrane Protection
- Stormwater or Wastewater Containment Basins
- Seawalls

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Soil Stabilization

GEOWEB®

CHANNEL PROTECTION SYSTEM

The **GEOWEB® Channel Protection System** stabilizes and protects channels exposed to erosive conditions of all types and can be designed with appropriate infill types to withstand even the highest velocities.

CHANNEL OPTIONS:

Vegetated Protection: Replaces costly, higher-maintenance rip-rap with lower-maintenance, less expensive, stabilized vegetation. Effective in low-flow channels and when low-to-high intermittent flows occur.

Combined with a TRM, the vegetated Geoweb system can withstand velocities as high as 30 ft/sec (9m/sec). Ideal for drainage ditches, swales and stormwater channels.

Aggregate Protection: Aggregate confined in the GEOWEB system is far more stable than when unconfined. As a result, rather than using large, difficult to handle rip-rap, smaller and less expensive infill can be used in low-to-challenging flow conditions.

Concrete Hard-Armor Protection: Concrete-filled GEOWEB structures are ideal for channels exposed to severe hydraulic stresses. Concrete is poured in the structure on-site, creating an easy-to-install, flexible yet hard-armored system that is less costly than pre-formed concrete systems.

Multi-Layered Protection: Geoweb multi-layered, vegetated channels create natural living retaining walls that can withstand high flows for short durations. They tolerate differential settlement while maintaining their structural integrity, and are quicker and easier to install than typical block systems.

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GEOWEB®

VEGETATED RETAINING WALL SYSTEM

Multi-layered **GEOWEB® Retaining Wall Systems** are designed for natural aesthetics and its beneficial advantages are realized with site constraints and less-than-ideal site conditions.

STRUCTURAL BENEFITS

The GEOWEB system creates economical and structurally-sound retaining walls that perform well when exposed to differential settlement in soft-soil environments.

ENVIRONMENTAL BENEFITS

The GEOWEB retaining wall system's open-celled horizontal terraces create a natural environment for sustainable vegetation. The vegetated system allows rain water to collect through the wall fascia, minimizing runoff.

ECONOMIC BENEFITS

- Use of less expensive on-site infill materials saves cost.
- Construction productivity improvements speeds up project completion.
- Compact and light-weight sections are easier to handle, transport and construct even in difficult-access or remote locations.

TYPICAL WALL STRUCTURES

- Steepened Slopes
- Geocomposite Retaining Walls
- Gravity Walls
- Multi-layered Channel Systems

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Soil Stabilization

geoblock®
POROUS PAVEMENT SYSTEM



GEOBLOCK®

POROUS PAVEMENT SYSTEM

Porous Pavements

EXCEPTIONAL TURF PROTECTION

The **GEOBLOCK® Porous Pavement System** is the ultimate turf protection system for occasional pedestrian and vehicular traffic. It's a green solution that offers exceptional aesthetics, load support and permeability. The system contributes to green building goals and LEED® credits.

Two GEOBLOCK styles address all loading and stormwater requirements.

TURF PROTECTION & LOAD SUPPORT

Large paving units are designed for maximum load transfer and support, resistance to traffic stresses and maximum turf protection.

- Rigid design has industry's highest flexural modulus.
- Maximizes load transfer and distribution of vehicle loads to 80,000 lbs. through large rigid surface area and strong interlocking connections.
- Reduces overall installation costs by requiring less base depth than lighter-weight or rolled pavement systems.
- High resistance to movement or breakage from vehicle turning stresses and torsional loads.
- Deeper cells protect from topsoil compaction and vegetative damage caused by repeated loadings.

GEOBLOCK® KEY APPLICATIONS

- Emergency & Utility Access Lanes
- Auxiliary Parking Areas
- Trail & Trail-hardening
- Pedestrian Walkways & Barrier-Free ADA Access
- Golf Cart Pathways, Medians,

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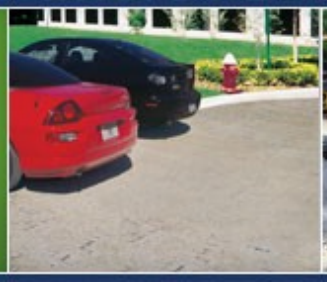

GEOPAVE®

POROUS PAVEMENT SYSTEM

STABILIZED AGGREGATE PAVEMENTS

The **GEOPAVE® Porous Pavement System** offers an economical way to confine and stabilize open-graded aggregate for highly-porous pavements. This system reduces stormwater runoff, stores stormwater on-site naturally and is a low-cost, durable option with low-maintenance.

STRUCTURAL FRAMEWORK

GEOPAVE units hold open-graded base coarse (OGBC) in place through an attractive, unique herringbone cell pattern and monolithic mesh bottom. Using beam discontinuity through use of the herringbone pattern and unique "mouse holes", the GeoPave system was developed specifically for gravel infill and is proven not to lift up like other aggregate paver systems.

GEOPAVE ADVANTAGES

GEOPAVE pavements are designed for maximum load transfer and support, resistance to traffic stresses, maximum infill stabilization and stormwater storage.

- Performs to an H-20 loading with minimal base.
- Reduces overall installation costs by requiring far less depth of base than lighter-weight or rolled systems.
- Resists movement or breakage from vehicle turning stresses and torsional loads.

GEOPAVE® KEY APPLICATIONS

- Emergency & Utility Access Lanes
- Porous Roadways & Parking Areas
- Road Shoulders
- Trails & Pedestrian Walkways
    - Golf Cart Pathways, Medians, Shoulders
        - Barrier-Free ADA Access




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georunner®
FLOW PROTECTION MATS



GEORUNNER®

SURFACE FLOW PROTECTION

Portable Mats

RESISTANCE TO SCOUR

GEORUNNER® Flow Protection Mats are a low-cost solution for protecting embankments from scour and the erosive effects caused by water flow. The series of light-weight, durable mats protect surfaces from intermittent and concentrated surface flows, water fluctuations and light wave action.

GEORUNNER® ADVANTAGES

- Effective in areas where erosion control blankets and turf reinforcement mats alone are not sufficient.
- Open mesh design promotes dense grass growth, increases system stability, reduces visibility and blends naturally with its environment.
- The mats are fully secured unit-to-unit, creating a fully integrated, flush surface, versus shingling found in other products.
- Anchored with industry-standard components to resist pull-out caused from saturated soils.

GEORUNNER® KEY APPLICATIONS

- Culvert Outfalls
- Stormwater Channels & Containment Ponds
- Swales and Drainage Ditches
- Shoreline Embankments
- Spillways, Down Chutes and Drop Structures
- Parking Lot Point Discharges

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geoterra®
STRUCTURAL MAT SYSTEM


GEOTERRA®

PORTABLE CONSTRUCTION MATS

Portable Mats

PORTABLE AND REUSABLE ACCESS MATS

GEOTERRA® Construction Mats offer contractors a better way to access sites with less cost. The mats are durable and reusable and eliminate the installation safety hazards and expense associated with classic timber or heavy mat systems. They have a high flexural strength, are light-weight, easy to transport, and "lock" together to form any layout requirement.

ECONOMICAL FOR HEAVY LOAD SUPPORT

GEOTERRA mats create an economical ground surface-reinforcement layer that supports vehicle and equipment loads.

- durable access over sand or soft ground
- **low life-cycle cost** through the ability to disassemble, remove and reuse the mats several times.

GEOTERRA® KEY APPLICATIONS

- Construction Access Roads
- Oil Drilling Platforms & Roadways
- Wind Farm Roadways & Staging Areas
- Temporary Access for Construction Equipment
- Heavy Vehicle & Equipment Storage
- Tower Construction using Heavy Cranes
- Utility & Cemetery Access

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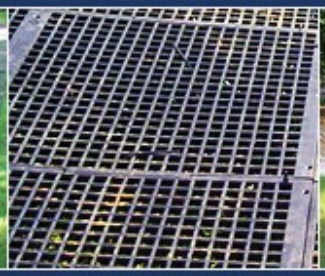
georunner®
SURFACE PROTECTION SYSTEM


Portable Mats

GEORUNNER®

SURFACE PROTECTION MATS

BENEFICIAL GROUND PROTECTION

GEORUNNER® Surface Protection Mats are portable, economical and drivable construction mats. Their light-weight (8 lbs.) and easy-to-handle size makes them ideally-suited for transporting and placement upon construction sites.

GEORUNNER® ADVANTAGES

- Minimizes turf damage and soil compaction caused by light-to-medium loads from pedestrians, equipment and vehicles.
- Preferred over plywood because they can be quickly removed from sites, cleaned, stored and reused many times. Will not wet or dry rot.
- When left in place, supports dense, stabilizing grass growth through the open design.

GEORUNNER® KEY APPLICATIONS

- Light-weight temporary or permanent applications
- Construction Vehicles & Landscape Equipment Access over Turf or Sandy Areas
- Barrier Free Access
- Concentrated Foot Traffic
- Sports Fields Sidelines
- Storage Pads for Boats and Trailers

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GEOSYSTEMS

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