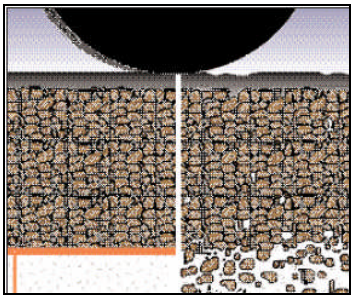
GEOPRODUCTS, INC. 2007 PRODUCT CATALOG

Geoproducts, Inc. specializes in top quality marketing and distribution of erosion control, stabilization, restoration and storm water management products. As experienced professionals, we pride ourselves on the efficient deployment of geotextile products to the greater Midwestern region, utilizing technically advanced distribution facilities in central locales.

Our warehouses consistently contain large inventories, and orders are always processed in a timely and efficient manner. The Geoproducts staff is on hand to accept product orders via phone, fax or e-mail daily. In addition, product may be picked up or shipped directly to job sites, warehouses or holding areas. Our distribution centers have extensive experience in product movement, and have access to a fleet of over 40 vehicles. From small shipments to full semis, Geoproducts has your jobsite needs covered.

Our goal is to harness the power of technology, factor it in with the specific needs of our customers, to provide a custom fit product solution. Our sales and support staffs are committed to delivering timely products, meeting specifications, and fulfilling budget requirements. Everyone at Geoproducts stands behind our products and services. We will continue to work toward our goals of being the #1 resource to the engineering community, as well as being the premier provider of geotextile products to the Midwest's construction industry.

Woven Geotextiles



Woven geotextile stabilizes the sub base while preventing aggregate from migrating into the sub grade of the roadway

Woven geotextiles are made by weaving individual slit tape yarns from polypropylene film. The process creates Geotextiles featuring high tensile strengths with low elongation. These characteristics make woven Geotextiles an excellent choice for soil separation, stabilization, and reinforcement applications.

PRODUCT SIZES

Product	Size	Sq. Yds.	Uses
A&F 200SS	12' x 300'	400 syds	Moderate stability geotextile for local roads and parking lots
Propex 2002	12.6' x 504'	700 syds	Medium stability geotextile for local roads and parking lots
Propex 2002	15' x 420'	700 syds	Medium stability geotextile for local roads and parking lots
Propex 2002	17.5' x 360'	700 syds	Medium stability geotextile for local roads and parking lots
Propex 2005	15' x 360'	600 syds	Heavy duty stabilization, separation geotextile for highway applications
Propex 2006	12.5' x 360'	500 syds	Heavy duty stabilization, separation geotextile for highway applications

High Strength Geotextile

High strength geotextile products are woven fabrics comprised of high tenacity polypropylene yarns. High strength geotextiles yield ultimate tensile strengths up to 192.6kN/m (13,200 lbs/ft) (machine direction) per ASTM D 4595. These products combine the properties of high tensile strength and modulus and high confinement with their ability to act as a filter and separator.

PRODUCT SIZES

- Propex 2016 (15' x 300')
- Propex 2044 (15' x 180')
- Mirafi HP370 (15' x 300')
- Mirafi HP570 (15' x 300')

Non Woven Geotextiles

Trench was wrapped with Mirafi 140NC, fitted with 6" ADS pipe and backfilled with stone

Nonwoven needle punched geotextiles get their name from a unique manufacturing process. Polypropylene fibers are laid into a web, then passed through thousands of needles that penetrate and orient the fibers, interlocking them together. With superior filtration and hydraulic conductivity characteristics, nonwoven needle punched Geotextiles are among the most versatile types of Geotextiles. They are available in many weights, with heavier fabrics possessing superior strength. High elongation characteristics ensure survivability in demanding installations.

PRODUCT SIZES

Product	Size	Sq. Yds.	Uses
Propex 4546	12.6' x 432'	600 syds	Drainage, joints, pipe, wrapping culverts & concrete
Propex 4553	15'x 300'	500 syds	Rip rap fabric, separation
Propex 4512	15' x 180'	300 syds	Heavy rip rap fabric, separation
Mirafi 140NC	12.6' x 360'	500 syds	Drainage, joints, pipe, wrapping culverts & concrete
	3' x 300'	100 syds	Drainage, joints, pipe, wrapping culverts & concrete
Mirafi 180N	15' x 300'	500 syds	Rip rap fabric, separation
Mirafi 1100N	15' x 300'	500 syds	Heavy rip rap fabric, separation

Spunbonded Nonwoven Geotextiles

Typar®, a versatile nonwoven spunbonded geotextile with a unique combination of high tensile strength and high permeability, is ideal for a variety of applications including; separation, stabilization, subsurface drainage and erosion control. Continuous monofilaments of extruded polypropylene are randomly spun, then rolled and heat set to create this premium nonwoven geotextile. Typar® nonwoven spunbonded Geotextiles are used in applications requiring high survivability.

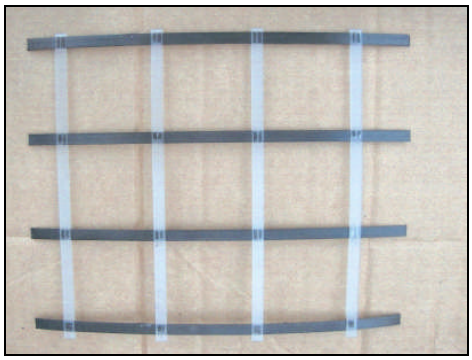
PRODUCT SIZES

Product	Size	Uses
Typar 3201	3' x 300'	Landscape fabric, Drainage & Filtration
Typar 3201	4' x 300'	Landscape fabric, Drainage & Filtration
Typar 3201	6.25' x 300'	Landscape fabric, Drainage & Filtration
Typar 3201	12.5' x 300'	Landscape fabric, Drainage & Filtration
Typar 3401	12.5' x 300'	Meets AHSHTO specifications for separation
Typar 3601	12.5' x 300'	Stabilization, MDOT separation

Soil Stabilization Geogrids

Biaxial is a term given to geogrids with relatively similar strength properties in both directions, with the length of the roll and across the roll. In soil stabilization applications, ***Biaxial Polypropylene Geogrids*** are commonly used to improve the performance of weak sub grades. By distributing dynamic loads over a wider area, pumping and shear failures are minimized, resulting in increased load bearing capacity of the sub grade. ***Biaxial Polypropylene Geogrids*** are also very effective in base reinforcement applications. The openings in the geogrid interact with base materials under compaction, confining them and preventing lateral dispersion. The result can be up to a 30% reduction in base course materials.

Enkagrid



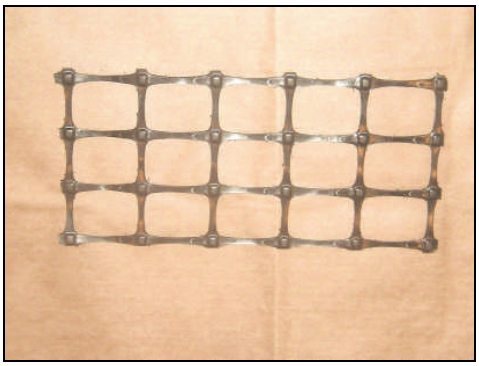
Enkagrid MAX is a rigid, biaxial geogrid of extruded polypropylene bars developed to provide a high passive bearing resistance with optimum interaction in all soil types. This unique double-weld structure provides consistent stress-strain performance throughout its matrix, making it ideal for base stabilization in permanent and temporary roadway projects. By stabilizing the base or sub base, Enkagrid MAX can significantly reduce the granular fill. Enkagrid offers the highest tensile strength grid at the most economical cost.

Enkagrid rolls are sized at 16.4' x 328'

MiraFi BasXgrid® Geogrids

- A woven polyester biaxial geogrids for base course reinforcement and subgrade stabilization applications
- Constructed of high tenacity, high molecular weight polyester to deliver increased passive bearing resistance
- Coated with a polymer coating
- Provide optimum interaction in all soil types

Tensar BX Geogrids (Not available in all locations)



Tensar BX Geogrids are created by using select grades of polypropylene or copolymers that resist high, sort-term dynamic loads over longer time periods. Their single layer, open aperture structures interlock with natural fill materials. **Tensar BX1100** and **BX1200 Geogrids** have slightly higher strength values across the roll. This can be desirable when traffic will travel in the length of the roll direction.

PRODUCT AVAILABILITY AND SIZING

- BX1100 (13.1' x 246')
- BX1200 (13.1' x 164')
- BX1300 (13.1' x 164')
- BX1500 (13.1' x 164')

Tenax MS Biaxial Geogrids

Are made from bonding multiple layers of high strength, biaxially oriented polypropylene grids. Layering the grids creates the unique array of random apertures and maximizes the number of tensile elements. The random apertures are large number of tensile elements allows for greater soil interaction with more types of soils.

PRODUCT SIZES

- MS220 (12.5' x 328')
- MS330 (12.5' x 164')
- MS500 (15' x 164')

Silt Fence

Pre-assembled fences for filtration of silt from water runoff on disturbed soil. Easy to install, silt fences control sediments surrounding construction sites, rains carry onto adjacent roads and into drainage ditches and waterways.

BENEFITS

- Designed to allow water to pass through while retaining silt on site
- Protects streams, lakes and other water ways from silt build-up
- Keeps adjoining roadways clear of mud
- Durable, lightweight, easy to use
- DOT approved
- Custom sizes and special orders available by request

See Attachment A for submittal sheet

Silt Saver

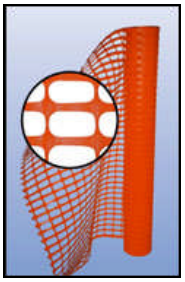
The patented Silt-Saver Frame is constructed of partially recycled, high molecular weight high-density polyethylene copolymer (HDPE) and is an inlet protection bmp that is very durable and easy to install. This HDPE material has super stress crack resistance combined with high impact strength and rigidity and it makes the Silt-Saver a reusable product. The patented Silt-Saver Filter is designed to custom fit each frame and is constructed of non-woven polyester, needle punched and heat-set to provide durability. This material was chosen for its ability to provide consistent and continuous filtration under everyday job site conditions. The woven high visibility orange filter top not only provides the visibile safety but also provides a higher flow for the unexpected rain events.

The Silt-Saver is designed to meet or exceed existing clean water regulations.

FEATURES

- Reusable HDPE Frame
- Keeps Silt Above Ground
- Fast, Easy Installation
- No Hazardous Stakes
- Creates a Safer Worksite
- Provides Maximum Filtration
- Fail-Safe Design
- Avoid: Costly Fines, Stop Work Orders and Environmental Clean-ups

Plastic Construction Fence



Heavy Duty Safety Fence

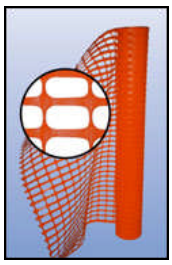
Heavy Duty Safety Fence

This type of safety fence is a heavy weight, high visibility, cost effective answer to crowd control.

APPLICATIONS

- Construction Warning Barrier
- Sporting Events
- Indoor maintenance
- Tree Protection

Economy Safety Fence



Economy Safety Fence

This type of fence is a medium weight barrier fence, a bit more economical than the heavy duty fencing, but lighter weight.

APPLICATIONS

- Construction Warning Barrier
- Sporting Events
- Indoor maintenance
- Tree Protection

Dandy Bag®

Is designed for use with flat rates, (including round) to filter sediment-laden storm water. The suspended solids are allowed to settle out of the slowed flow and are captures by the Dandy Bag® prior to entering the inlet. Fabricated from a highly recognizable orange monofilament geotextile that allows for 1109 pm flow rates. Sizes are offered to fit any inlet, including rounds.

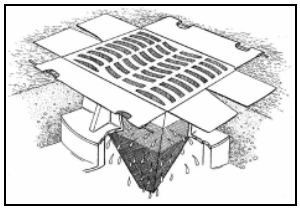
FEATURES AND BENEFITS

- Unique patented design keeps silt, sediment and debris out of storm systems
- Reduces or eliminates the need to flush or clean inlets
- Fabricated from a highly recognizable orange monofilament geotextile, Filterweave® 402
- Standard sizes to fit any inlet
- Easy to install, inspect, and re-use
- High flow rate

PROPERTIES

Properties	Test Method	Units
Grab Tensile Strength	ASTM D-4632	365 x 200 lbs.
Grab Tensile Elongation	ASTM D-4632	24 x 10%
Puncture Strength	ASTM D-4833	100 lbs.
Mullen Burst Strength	ASTM D 3786	450 P.S.I.
Trapezoid Tear Strength	ASTM D-4533	115 x 75 lbs.
% Open Area	COE – 22125-86	10%
Apparent Opening Size	ASTM D-4751	40
Permittivity	ASTM D-4491	2.14 sec.
Permeability	ASTM 4491	.142 cm/sec.
Water Flow Rate	ASTM 4491	145 Gal/Sq. Ft./Min.
Ultraviolet Resistance	ASTM D-4355	70%
Color		Orange

Siltsack®



Provides simple and economical solutions to prevent silt and sediment from contaminating stormwater catch basins. Designed to fit under the grate, this 'bag' like a like device utilizes filtration geotextiles to filter sediments out of runoff as it enters the system. Once full, they are lifted out, emptied, rinsed and reused. Siltsack® is available in regular or high flow varieties, in three (3) standard sizes, but can be made to order to fit almost any application.

PRODUCT SIZE

- Siltsack Regular Flow (2' x 2')

PROPERTIES

Properties	Test Method	Units
Grab Tensile Strength	ASTM D-4632	300lbs
Grab Tensile Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	120lbs
Mullen Burst	ASTM D-3786	800 P.S.I.
Trapezoid Tear	ASTM D-4533	120 lbs
UV Resistance	ASTM D-4355	80%
Apparent Opening Size	ASTM D-4751	40 US Sieve
Flow Rate	ASTM D-4491	40 Gal/Min/Sq. Ft.
Permittivity	ASTM D-4491	0.55 sec-1

For areas of low to moderate precipitation and run-off

PRODUCT SIZE

- Siltsack High Flow (2' x 2')

PROPERTIES

Properties	Test Method	Units
Grab Tensile Strength	ASTM D-4632	265 lbs.
Grab Tensile Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	135 lbs.
Mullen Burst	ASTM D-3786	420 P.S.I.
Trapezoid Tear	ASTM D-4533	45 lbs.
UV Resistance	ASTM D-4355	90%
Apparent Opening Size	ASTM D-4751	20 US Sieve
Flow Rate	ASTM D-4491	200 Gal/Sq. Ft./Min.
Permittivity	ASTM D-4491	1.5 sec-1

For areas of moderate to heavy precipitation and run-off

FILTER BAGS

A&F Industry's geotexile filter bags are made of a non-woven filter fabric, to meet MDOT standards. Filter bags are sized at 12.5 ft. x 15 ft., with an opening to insert a dewatering pipe.

Envirogrid

Envirogrid is a lightweight, expandable confinement system which creates an economical erosion barrier or structural foundation. This HDPE system slows down hydraulic energy, limiting forces within or under cells. Envirogrid is useful in a variety of applications that require a barrier or structural foundation.

Product	Cell Size	Panel Size
EGA 20	10.2" x 8.8"	8.4' x 21.4'
EGA 30	12.6" x 11.3"	8.4' x 27.4'
EGA 40	20" x 18.7"	8.4' x 13.72'

Envirogrid panels can be provided in cell heights of 2" (51 mm), 3" (76 mm), 4" (102 mm), 6" (152 mm) and 8" (204 mm). Standard panels are constructed of 60 strips with the dimensions shown above.

ECS1 - MDOT REGULAR STRAW BLANKET

Ideal for erosion protection and the establishment of vegetation for up to 12 months, the ECS-1 is an erosion control blanket designed for low maintenance areas such as subtle grades, swales, roadside slopes, and on slopes ranging from 4:1 to 3:1. The blanket is made from 100% agricultural straw, stitched with degradable thread to a single layer of photodegradable polypropylene netting.

PRODUCT SIZES

- 7.5' x 120' (stock and truckload quantities)
- 7.5' x 96' (in full truckload quantities only)

ECS2 - MDOT HIGH VELOCITY STRAW BLANKET

Also ideal for erosion protection and the establishment of vegetation for up to 12 months, the ECS-2 is an erosion control blanket designed for moderate flow drainage channels and on slopes ranging from 3:1 to 2:1. The blanket is made from 100% agricultural straw that is stitched with degradable thread between two layers of degradable polypropylene netting. The double netting ensures more efficient erosion protection and plant growth than the single layer of netting.

PRODUCT SIZES

- 7.5' x 120' (stock)
- 7.5' x 96' (in full truckload quantities)

ECP-2 - MDOT PERMANENT TURF REINFORCEMENT MAT

Is designed to provide erosion protection necessary for the establishment of vegetation and permanent turf reinforcement for up to 36 months. It is highly suited for use in drainage channels, lakes, ponds and other high-flow areas. ECP-2's permanent, two-layer netting structures firmly helps secure establishing roots, as well as, promote the growths of the vegetation. The netting configuration includes a layer of 100% green polypropylene fiber.

PRODUCT SIZES

- 7.5' x 96'

ECS1B - BIODEGRADEABLE SINGLE NET BLANKET

Intended for quick vegetation growth and to provide turf reinforcement for up to 12 months, the ECS-1B is a 100% biodegradable erosion control blanket designed for low maintenance areas such as subtle grades, swales, roadside slopes, and bioengineering. It provides protection in light to moderate rainfall and runoff. The blanket is made from 100% agricultural straw, stitched with biodegradable thread to a single layer of organic jute netting.

PRODUCT SIZES

- 7.5' x 96'

ECS2B - BIODEGRADEABLE DOUBLE NET BLANKET

Intended for quick vegetation growth and to degrade for up to 12 months, the ECS-2B is a 100% biodegradable erosion control blanket designed for moderate flow rainfall and runoff and on slopes ranging from 3:1 to 2:1. The blanket is made from 100% agricultural straw that is stitched with biodegradable thread between two layers of organic jute netting. The double netting ensures more efficient erosion protection and plant growth than the single layer of netting.

PRODUCT SIZES

- 7.5' x 96'

ECSC-2 - STRAW-COCONUT DOUBLE NET BLANKET

Ideal for erosion protection and the establishment of vegetation for up to 24 months, the ECSC-2 is an erosion control blanket designed for use in moderate-heavy flow drainage channels and on slopes of up to a 1:1 grade. The blanket is made from a mix of 70% agricultural straw and 30% coconut fiber, stitched with degradable thread between a layer of UV-stabilized top netting and a bottom layer of standard polypropylene netting. This blanket provides extra protection for extended vegetation growth.

PRODUCT SIZES

- 7.5' x 96'

ECSC-2B – STRAW-COCONUT DOUBLE NET BIODEGRADEABLE BLANKET

Ideal for erosion protection and the establishment of vegetation providing for up to 18-months of turf reinforcement, the ECSC-2B is a 100% biodegradable erosion control blanket designed for use in moderate to heavy flow rainfall and runoffs, on slopes of up to 1:1 grade and bioengineering. The blanket is made with a mix of 70% agricultural straw and 30% coconut fiber, stitched with biodegradable thread between 2 layers of organic jute netting. This blanket provides extra protection for extended vegetation growth.

PRODUCT SIZES

- 7.5' x 96'

ECC-2 - COCONUT DOUBLE NET BLANKET

Ideally suited for erosion protection and the establishment of vegetation for up to 36 months, the ECC-2 is an erosion control blanket designed for use on steep embankments, landfill side slopes and high-flow drainage channels with slopes up to a 1:1 grade. Made from 100% coconut fiber, the blanket is stitched with degradable thread between two layers of UV-stabilized polypropylene netting. The blanket is slow to degrade, providing the most extended temporary erosion control available.

PRODUCT SIZES

- 7.5' x 96'

ECC-2B - COCONUT DOUBLE NET BIODEGRADEABLE BLANKET

Ideally suited for erosion protection and the establishment of vegetation along with turf reinforcement for up to 24-months, the ECC-2B is a 100% biodegradable erosion control blanket designed for use on steep embankments, landfill side slopes, high-flow drainage channels with slopes exceeding a 1:1 grade and bioengineering. Made from 100% coconut fiber, the blanket is stitched with biodegradable thread between two layers of organic jute netting. The blanket is slow to degrade, providing the most extended temporary erosion control available.

PRODUCT SIZES

- 7.5' x 96'

ECC-3 - COCONUT PERMANENT TURF REINFORCEMENT MAT

ECC-3 is designed to provide erosion protection necessary for the establishment of vegetation and permanent turf reinforcement for up to 36 months. It is highly suited for use in drainage channels, lakes, ponds and other high-flow areas. Permanent, three-layer netting structures firmly helps secure establishing roots, as well as promote the growth of the vegetation. The netting configuration includes a layer of 100% coconut matrix material.

PRODUCT SIZES

- 7.5' x 96'

ECX-1 - EXCELSIOR SINGLE NET BLANKET

Ideal for erosion protection and the establishment of vegetation for up to 12 months, the ECX-1 is an erosion control blanket designed for moderate flow channels and 3:1 to 2:1 slopes. The blanket is made of 100% aspen wood fiber, stitched with degradable thread to a single layer of photodegradable polypropylene netting.

PRODUCT SIZES

- 7.5' x 96'

ECX-2 - EXCELSIOR DOUBLE NET BLANKET

Ideal for erosion control protection and the establishment of vegetation for up to 24 months, the ECX-2 is an erosion control blanket designed for moderate flow channels and 2:1 to 1.5:1 slopes. The blanket is made from 100% aspen wood fiber, stitched with degradable thread between two layers of degradable polypropylene netting.

PRODUCT SIZES

7.5' x 96'

Straw Wattle



9" Straw Wattle

The 9" straw wattle shall be made with compacted agricultural straw compressed inside tubular polypropylene netting. Both ends shall be tied shut. The sediment control product shall have a nine inch diameter (±10%). The wattle shall be in standard length of 20'-0" (±10%), with other lengths available upon request. It shall weigh approximately 68 pounds (±10%).

Wattles shall be packaged 5 per pallet. Each pallet shall be wrapped snuggly in shrink film. The wattle shall be installed with wooden or metal stakes placed 4'-0" on center. They shall be tightly adjoined.

Wood Pegs and Staples

PRODUCTS

Product	Quantity/Box	Boxes/Skid
6" Wood Pegs	1000/box	24/skid
8" Sod Pegs	500/box	24/skid
6" Metal Staples	1000/box	50/skid

Futerra®

THE ULTIMATE BLANKET FOR GROWING GRASS

Innovate Design for Superior Performance

Unlike straw and excelsior blankets, Futerra's patented, lightweight design of wood fiber and bio/photo degradable netting bonds to the soil surface to prevent under blanket washouts and seed migration. Superior technology and innovative design allow Futerra to rapidly absorb water and hold it in place for enhanced germination. Futerra is designed to provide highly effective erosion control and vegetation establishment for up to 10 months on roadside slopes, embankments, golf courses, landfill side slopes and other low maintenance areas.

PRODUCT SIZES

- 7' x 135'

ConTack®

A long-time industry favorite, this100% guar-based organic tackifier reduces the needfor reseeding and minimizes soil erosion by stabilizing mulch and straw. It also helps increase the flow and pumping properties of mulch, allowing hydraulic machinery to run efficiently during application.

ConTack®AT

A starch-based agricultural-tackifier, Con-Tack AT is an economical choice for tacking straw or hay mulch to enhance germination by holding seed in place and preventing washouts.

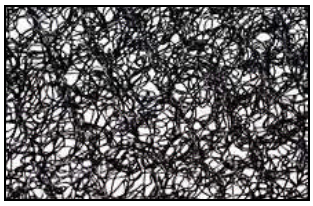
Note: Conwed Fibers® Tackfiers - Sold only by pallet or full truckloads

Conwed Fibers® Mulch Products

Ideal for a wide range of applications including turf establishment, golf courses, landfills, highway work, reclamation projects, airports and recreational areas.

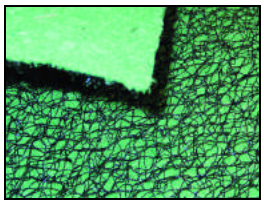
Note: ConTack® Hydraulic Mulches sold only in full truckloads.

Enkamat



Enkamat is a three-dimensional nylon Turf Reinforcement Mat (TRM) made of polyamide (nylon) filaments joined at the intersections. Ninety-five percent of the matrix is open space, supplementing nature's own erosion control system by reinforcing the plant roots to the matrix of the mat. Enkamat's tough root-reinforcing system anchors vegetation and protects against hydraulic lift and shear forces created by high-volume discharges. It can withstand velocities greater than 20 feet per second and has no buoyancy factor (specific gravity > 1).

Enkamat II



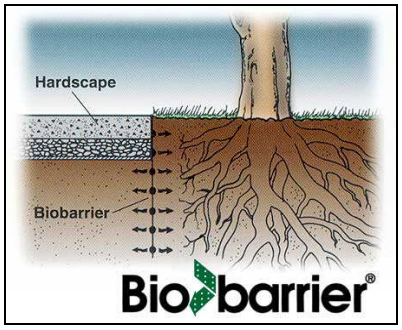
Combines the technology of Enkamat with cutting-edge developments of fiber-reinforced biodegradable materials to create a truly unique TRM. Enkamat II provides immediate erosion protection to prevent soil loss and creates the optimum micro-environment to enhance seed germination and plant emergence. Enkamat II insulates the seed bed while absorbing and retaining optimal moisture. The inclusion of Enkamat adds the best permanent protection available.

PRODUCT SIZING

Enkamat Series		**Roll Size** (width x length)	**Area/Roll**	**Rolls/TL**
7000 Series				
7003				
7003-102-0000	2W	76 in. x 500 ft.	352.0 sq. yrds.	63
7010				
7010-102-0090	2W	76 in. x 90 ft.	63.3 sq. yrds.	200
7018				
7018-102-0090	2W	76 in. x 90 ft.	63.3 sq. yrds.	112
7020				
7020-102-0090	2W	76 in. x 90 ft.	63.3 sq. yrds.	112
7500 Series				
7520				
7520-10-0150	1W	40 in. x 150 ft.	56 sq. yrds.	88
Enkamat II - 7712				
7712-102-000	2W	76 in. x 71 ft.	50.0 sq. yrds.	160

Root and Weed Control

Biobarrier

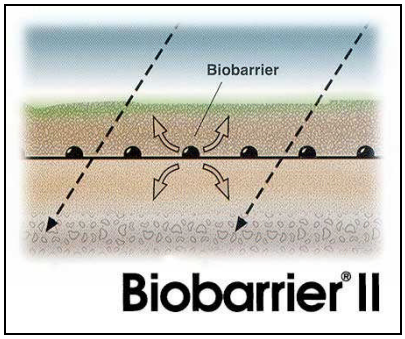


- Root control system
- Made of durable, nonwoven, polypropylene geotextile fabric with permanently attached nodules containing trifluralin
- Is porous to allow air, nutrients and water through it so that soil hydrology can continue to be healthy

PRODUCT SIZES

- Biobarrier (12” x 100’)
- Biobarrier (19.5” x 100’)
- Biobarrier (29” x 100’)
- Biobarrier (39” x 100’)
- Biobarrier (58.5” x 100’)
- Biobarrier (58.5” x 100’)

Biobarrier II



Biobarrier II Preemergence Weed Control System eliminates weed growth in a variety of situations. Used like a landscape fabric and covered with two inches of mulch, gravel or soil, Biobarrier II inhibits root growth both above and below it. It is frequently placed in areas where mechanical trimming or spraying herbicides is expensive and/or dangerous, such as landscaped beds (where ornamental shrubs have roots more than two inches below the surface), under fences, brick or gravel walkways and driveways, around the base of cellular phone towers, and under guardrails and signs on highways.

Turbidity Curtains

APPLICATIONS

- Rivers
- Streams
- Open Lakes
- Exposed shorelines with moderate current moving in one direction

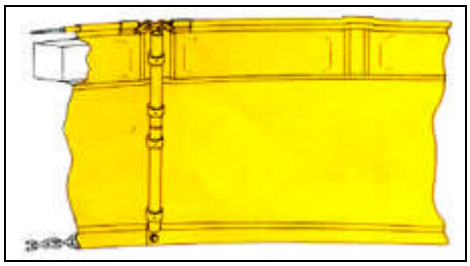
A&F Brand Turbidity Curtains

A&F Industry products are brought to you exclusively through Geoproducts Inc. Geoproducts Inc. fabricates a variety of products under the A & F Industries brand name. A & F Industry products always offer simple straight forward design making them very effective, easy to work with and extremely affordable.

Standard A&F Turbidity Curtain size is 6’ x 100’ Includes floats and chain.

National Brand Turbidity Curtains

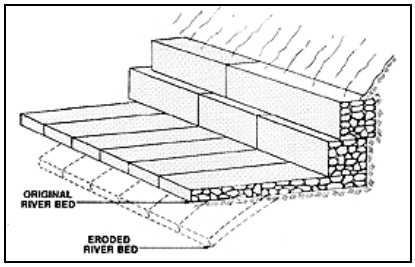
Middleweight Turbidity Curtain



SPECIFICATIONS

- Fabric - Polyester reinforced vinyl high visibility yellow 18 oz/yd2 weight
- Connector - Shackled and bolted load lines
- Flotation - 8" expanded polystyrene over 19 lbs/ft buoyancy
- Ballast Line/Ballast - 5/16" galvanized chain (1.1 lbs/ft)
- Top Load Line - 5/16" galvanized wire rope enclosed in heavy tubing

Gabions



Gabion aprons are commonly used to protect the toe of a gabion retaining wall structure from scour that could cause undermining in channel works applications. It is recommended that the gabion apron be a minimum of 9"-12" in depth. The length of the gabion apron shall extend beyond the toe of the structure a minimum of 2 times the anticipated depth of scour. This will ensure that the gabion apron reaches just beyond the outer limit of the anticipated scour hole that may form.

Gabions or reno mattresses may also be connected together filled and then placed into the water with a sling arrangement. This method is frequently used for building scour-resisting mats around bridge piers etc.

Gabions

Code-WT.	Color	Size	Galvanized Y/N	PVC Coated Y/ N
A – 41	Blue	6’ x 3’ x 3’	Y	Y
B – 58	White	9’ x 3’ x 3’	Y	Y
C – 74	Black	12’ 3’ x 3’	Y	Y
D – 29	Red	6’ x 3’ x 1.5’	Y	Y
E – 41	Green	9’ x 3’ x 1.5’	Y	Y
F – 50	Yellow	12’ x 3’ x 1.5’	Y	Y
G – 25	Blue / Red	6’ x 3’ x 1’	Y	Y
H – 35	Blue / Yellow	9’ x 3’ x 1’	Y	Y
I – 44	Blue / Green	12’ x 3’ 1’	Y	Y

Reno Mattresses

Code	Size	Galvanized Y/N	PVC Coated Y/N	Weight
Q (W/Y)	9’ x 6’ x 6”	Y	Y	48 lbs
R (W/G)	12’ x 6’ x 6”	Y	Y	49 lbs
T (R/Y)	9’ x 6’ x 9”	Y	Y	50 lbs
U (R/G)	12’ x 6’ x 9”	Y	N	52 lbs

GrassPave2

Reinforces turf for driving, parking, and fire lanes.

(A) Orange Bowl, Miami FL; Stormwater percolates into Grasspave^2 parking bays
(B) Graspave^2 System Components; sandy gravel base course at 95% compaction, Graspave^2 filed with sand, and grass seed or sod cover
(C) Westfarms Mal,West Hartford, CT; multi-use overflow parking
(D) Fire Truck Access; emergency access over high strength grass since 1982

Grasspave^2 is a structure which provides incredible load bearing strength while protecting vegetation root systems from compaction. High void spaces within the cross-section enable excellent root development, and storage capacity for rainfall from storm events. Stormwater is slowed in movement through and across Grasspave^2 surfaces, depositing suspended sediment and increasing discharge time. Suspended solids and oils are consumed by active soil bacteria, which are aided by the system's excellent oxygen exchange capacity.

APPLICATIONS

- Overflow and Employee Parking
- Handicap and On-street Parking
- Fire Lanes
- Event Parking
- Driveway
- Utility Access
- Pedestrian Access
- Emergency Access

FUNCTIONS

- Pervious Load Bearing Surface
- Stormwater Pollution Filtration and Treatment
- Airborne Dust Capture and Retention
- Reduce Heat Energy Reflection = "Cool" Surface
- Support Trees within Parking Area

Gravelpave2

(A) Grand Canyon Trust, Flagstaff a 30-car parking for employees and visitors.
(B) Gravelpave^2 System Components filter fabric backing and rings contain $^3/16^0$ minus sharp gravel with minimal "fines."
(C) Residential Drive and Walk, Savannah, GA meets ADA surface criteria.
(D) Frostburg Univ. Dorm Parking, MD eliminates pollutants from adjacent creek.

Gravelpave^2 is a structure to provide heavy load bearing support and true containment of fine gravel to provide a porous pavement surface with unlimited traffic volume and/or duration time for parking. When used with a proper porous base course material, Gravelpave^2 can provide a void space of 35% for storage volume of rainfall during rain events. Although bacteria concentrations are lower than with Grasspave^2, polluted runoff and vehicle drippings can be consumed prior to water reaching water table.

APPLIATIONS

- All Parking Aisles and Bays including Handicap
- Automobile and Truck Storage Yards
- Service and Access Drives
- Loading Dock Areas
- Trails for Multiple Uses
- Boat Ramp
- Infiltration Basin (Lumber, Steel, etc.)

BENEFITS

- Pervious Load Bearing Surface – Unlimited Traffic
- Stormwater Pollution Filtration and Treatment
- Reduce Heat Energy Reflection = "Cool" Surface
- Support Trees within Parking Areas

Rainstore3

Underground "tank" storage for storm water.

(A) Multnomah Elementary School, Los Angeles, CA storage basin to irrigate grass play area
(B) Single Layer Rainstore3 Structure 0.1 cubic meter (4003400340)stackable columns
(C) LDS Church, Boise, ID vegetated swale at low end of parking lot to store runoff and exfiltrate to soils below
(D) 2.5m (8.29) Depth Cell—H-25 load capacity allows deep storage under parking lots with up to 94% efficiency

APPLICATIONS

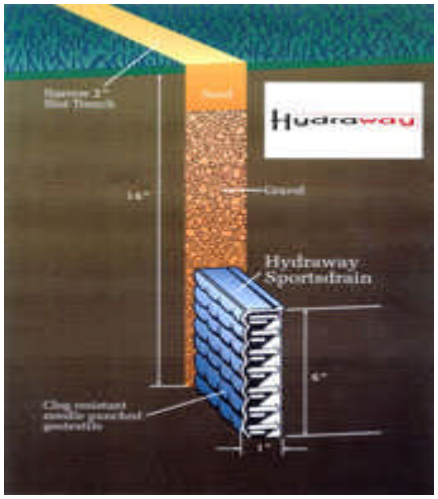
- Subsurface Water Storage; Detention, Retention
- Water Reuse and Recycling
- Potable (Treated) Water Storage
- Process Water Storage; Heating and Cooling
- Combined Water Conveyance and Storage
- Energy Dissipation at Pipe Outfall
- Septic Leach Fields and Wetlands Treatment
- Dry Wells, Wet Vaults, and Cisterns

BENEFITS

- Heavy Load Capacity Above Chamber
- Rapid Installation
- Simple and Low Cost Liner Materials
- Modular for Design Flexibility
- Maximum Excavation to
- Large Surface Area for Rapid
- Storage Efficiency Exfiltration

Rainstore3 U.S. and International Patents Pending

Hydraway 2000



Hydraway Drain 2000 is made of heavy-duty, clog resistant geotextile fabric, permanently bonded to a rugged polyethylene lattice core for strength and support. It resists the effects of hydrocarbons and offers outstanding low temperature flexibility. Specially-engineered design permits high flow rates for rapid dewatering of the pavement sub-base, while effectively preventing passage of soil particles. Relieves hydrostatic pressure by acting as a shallow underdrain. Hydraway 2000 is a superior performing and cost effective replacement for the "French" drain.

APPLICATIONS

- Artificial & Natural Turf
- Pavements, Roadways & Airport Runways
- Inlet Protection
- Golf Drainage
- Wick Drainage
- Parking Lots
- Recreation Fields

FEATURES AND BENEFITS

- Polyethylene core (vs. polystyrene) provides flexibility, light weight and chemical resistance.
- Replaces the fabric, perforated pipe and aggregate backfill required in most traditional drain systems.
- Backfill uses excavated material.
- Machine installed using conventional trenching equipment.
- Requires less labor and equipment than traditional drain systems.
- Fusion bonding (vs. gluing) the core and fabric provides fungus resistance and keeps the fabric firmly attached in high heat and humidity.
- Individually wrapped rolls and flexibility assure easy installation even at cold temperatures.

ADS Pipe


N-12® Pipe


Single Wall Pipe


ADS 3000® Triple Wall Pipe


AdvanEdge® Pipe

Since 1967, ADS has been the nation's best known name in corrugated high density polyethylene pipe. Corrugated HDPE quickly became the pipe of choice over clay and metal pipe because of durability, high resistance to corrosion and chemicals, and load carrying capabilities. In 1987, ADS introduced N-12 smooth interior pipe, which today is specified nationwide in 4" through 60" diameters for municipal storm drains and highway drainage. The distinctive ADS green stripe on our pipe ensures that you are receiving the highest quality polyethylene pipe available - drainage products that meet strict quality control from raw materials to production and which conform to ASTM and AASHTO standards.

PVC PONDLINERS AND MEMBRANES

PRODUCT SIZING

Product	Max Panel Size
20 MIL PVC	Up to 33,635 sf
30 MIL PVC	Up to 22,600 sf
40 MIL PVC	Up to 17,085 sf

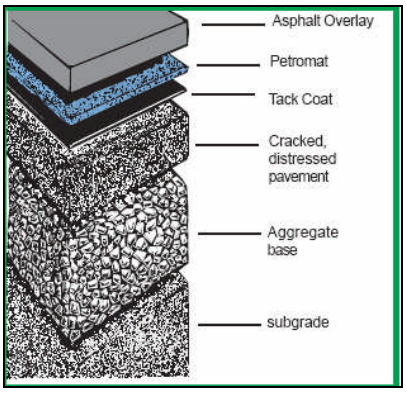
Geoproducts carries a full line of PVC, GCL and Polyethylene liners in all desired mil thicknesses.

TruPave®

TruPave® engineered paving mat from Owens Corning Trumbull is a pavement interlayer designed to create a moisture-resistant barrier, retard reflective cracking and stand up to high-temperature hot-mix designs. And at the end of the pavement's life, it's millable and recyclable. The result of these benefits? *TruPave* engineered paving mat can extend the performance of your pavement rehabilitation investment by up to 500%. Highway, parking lot, runway or driveway—*TruPave eng*ineered paving mat is designed to preserve and extend the life of any hot-mix asphalt concrete surface. It can also help reduce long-term maintenance and rehabilitation costs.

NOTE: Call today for an installed quote **313.881.1777**.

Polypropylene/Asphalt Overlay



Polypropylene paving geotextiles are non-woven fabrics, heat bonded on the surface and formulated to accept the optimum quantity of asphalt cement to provide a moisture barrier and stress relief membrane layer. Typical applications include; highways, county roads, city roads, subdivisions, parking areas, airports and chip seals.

BENEFITS

- Moisture barrier
- Delays reflective cracking
- Increased pavement bond
- Offers stress relief
- Increased fatigue life

NOTE: Call today for an installed quote **313.881.1777**.

Peel and Stick Membranes

PACKAGING
CCW-711 is sold in rolls of (one roll per box):
12" X 100' roll (100 ft2), 48 boxes per pallet
18" X 100' roll (150 ft2), 36 boxes per pallet
24" X 100' roll (200 ft2), 24 boxes per pallet
36" X 60' roll (180 ft2), 25 boxes per pallet
CCW-550 Primer and CCW-704 Mastic
5 gallon pails (45 pails per pallet)

TYPICAL USE
The CCW-711 Pre-Pave Sheet Membrane Waterproofing System is especially designed to be used as a waterproofing membrane on the structural slab of bridge decks and parking decks that are to be overlaid with asphalt paving & repaving existing roadways. CCW-711 Pre-Pave Sheet Membrane Waterproofing System will protect reflective cracking in the asphalt overlay while helping to retard structures from damage by water and deicing salts.

ISAC

ISAC is a multi-layer stress relief interlayer for the highest level of protection from reflective cracking. The bottom layer is a nonwoven, polyester paving fabric that bonds to the existing pavement layer with tack coat. The middle layer is a visceoelastic asphalt membrane that provides a flexible bond between the top and bottom layer, providing the stress absorbing interlayer. The top layer is a high stiffness, high strength open mesh grid designed to bond with the overlay.

NOTE: Call today for an installed quote **313.881.1777**.

FEATURES

- Three layer design for highest level of protection from cracking
- Bonds to the pavement and the asphalt overlay

Catalog No.	Description	Size
ISAC		
ISAC36048	ISAC Heavy-Duty Crack Repair Membrane	36” x 48'

Paveprep

Is a stress relief interlayer that retards reflective cracking in asphalt overlays. Thermal stresses that result from temperature changes as well as water penetration can cause cracks to propagate through the new pavement.

PavePrep disperses these stresses through its very dense, but flexible mastic and high-strength geotextile, as well as prevents water penetration. Paveprep is ideal for overlaying concrete joints.

NOTE: Call today for an installed quote **313.881.1777**.

FEATURES AND BENEFITS

- Reduces reflection cracking and provides stress relief.
- Easy to install with standard equipment.

Catalog No.	Description	Size
PAVEPREP		
PAVE12102	PavePrep Concrete Crack Repair Membrane	12” x 102'
PAVE20102	PavePrep Concrete Crack Repair Membrane	20” x 102'
PAVE24102	PavePrep Concrete Crack Repair Membrane	24” x 102'
PAVE36048	PavePrep Concrete Crack Repair Membrane	36” x 48'

PaveTrac

Woven steel mesh with torsioned flat-bar designed to reinforce asphalt overlays over concrete and asphalt pavements. PaveTrac contains steel mesh reinforcements for a complete pavement performance solution.

NOTE: Call today for an installed quote **313.881.1777**.

FEATURES AND BENEFITS

- Cost Effective
- Alternative to Full-Depth Pavement Replacement and Crack & Seat Old Concrete Pavements
- Extends the Service Life of New Overlays
- Allows the Use of Thinner Asphalt Overlays
- May eliminate the need for a Leveling Course
- Eliminates reflective cracking over concrete joints
- Reinforces against rutting and shoving in asphalt overlays
- Available in Four Widths (6.6', 9.8', 10.8' and 13.1' x 164')

APPLICATIONS

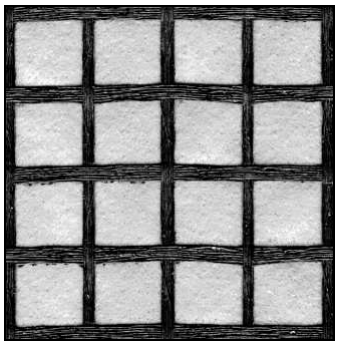
- Overlays Over Jointed and Cracked Concrete Slabs
- Overlays Over Severely Distressed Asphalt
- Rehabilitation of failed pavements Over Weak
- Rehabilitation of rutted/shoving asphalt at traffic intersections

PACKING

Width	Length	Weight
6.6 ft. (4m)	164 ft. (50m)	361 lbs (173 kg)
9.8 ft (3m)	164 ft. (50m)	579 lbs (260 kg)
10.8 ft (3.3m)	164 ft. (50m)	628 lbs (285 kg)
13.1 ft (4m)	164 ft. (50m)	761 lbs (345 kg)

Reinforcing Pavement Overlay Grids

PaveGrid™



PaveGrid™ asphalt overlay reinforcement

Is composed of a fiberglass grid that is bonded to a nonwoven paving fabric meeting AASHTO specifications. PaveGrid™ products are specifically designed for use in the construction and repair of flexible (asphalt) and rigid (concrete) pavements such as roads, parking lots, airfields, and other paved surfaces.

NOTE: Call today for an installed quote **313.881.1777**

FEATURES AND BENEFITS

- When placed with a suitable tack coat between the existing pavement and the asphalt overlay, PaveGrid™ helps extend pavement life by:
- Providing a waterproof barrier for subgrade foundation soil protection
- Improving the fatigue resistance of the new overlay to traffic loads by providing reinforcement
- Retarding the propagation of an existing crack through the new overlay (reflective cracking)
- Reinforcement of system through high strength fiberglass or polyester yarns
- Extending the useful life of the overlay
- Strengthening the entire pavement system

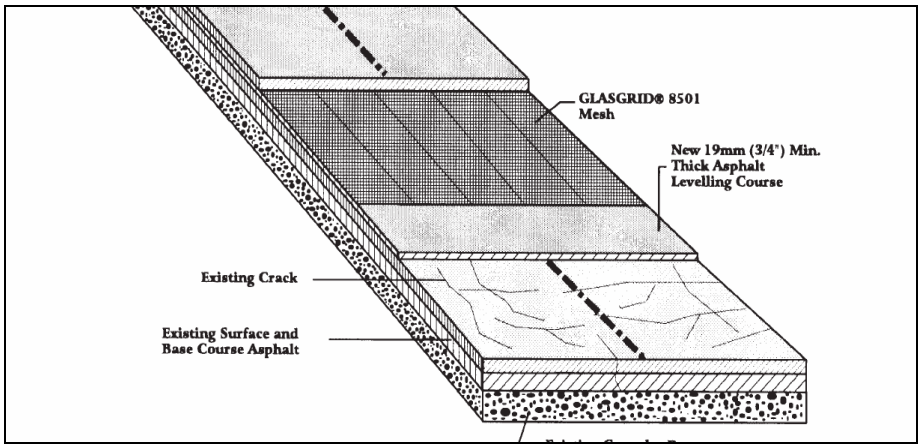
APPLICATIONS

- Provides a long-term waterproofing and reinforcement layer that extends the pavement lifecycle
- Highways
- Streets
- Parking Lots
- Bridges
- Airport Runways

PRODUCT SIZES

- 2 m (6.58') x 55 m (180')

GlasGrid®



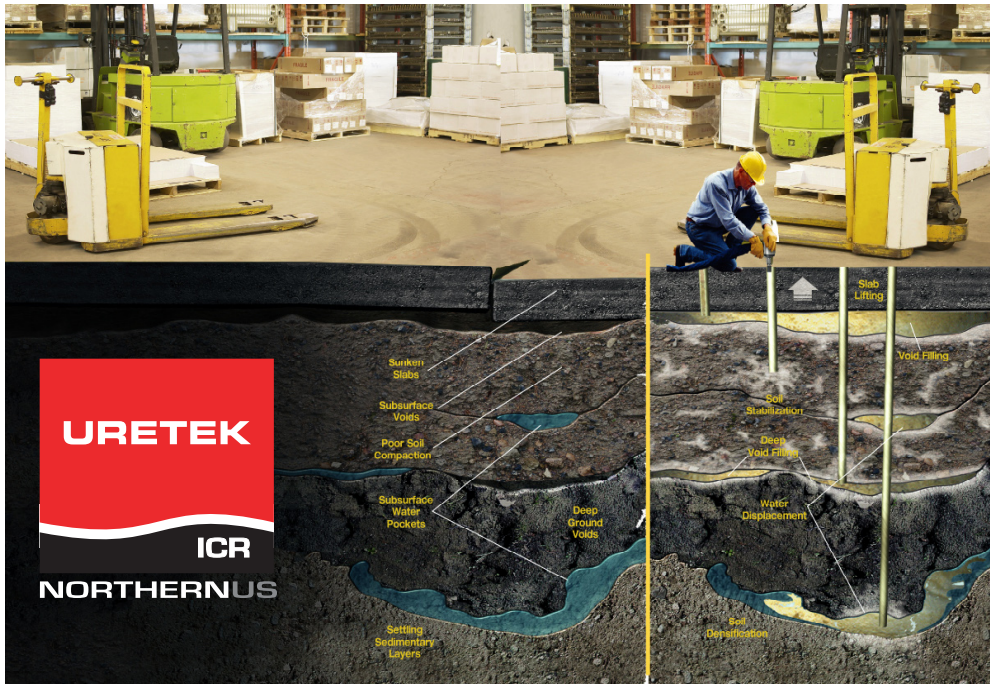
Pavement cracking is caused by traffic loading, age hardening and temperature cycling. Glasgrid Pavement Reinforcing Geogrid helps arrest this cycle of deterioration by preventing cracks from "reflecting" through to a new overlay. As energy from existing cracks moves upward through the crack, toward the new overlay, it reaches Glasgrid. Here the energy is redirected horizontally, and dissipated, preventing the crack from reappearing in the new overlay. Through years of research and applications, Glasgrid has proven itself to extend pavement live by up to 84%. Glasgrid is stronger than steel and reduces both thermal and stress related cracking. Glasgird 8501 Complete Road System is designed for applications warranting 100% reinforcement such as construction joints and intermittent transverse cracks. Glasgrid should only be installed by or underneath direction of an expert installer.

NOTE: Call today for an installed quote **313.881.1777**

PRODUCT SIZES

- Glasgrid 8501 (5' x 330')
- Glasgrid 8502 (5' x 198')

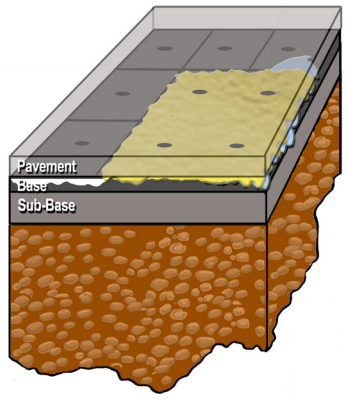
Why replace settled concrete slabs, structures or infrastructures? URETEK instead!



DO YOU/YOUR CLIENT'S HAVE CONCRETE PROBLEMS?

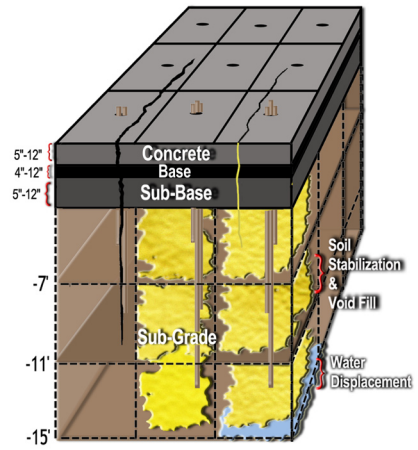
URETEK's patented processes, materials, and worldwide experience help you extend the life of your concrete assets. Don't spend to replace costly structures, disrupt ongoing operations, or displace tenants or residents - use URETEK instead.

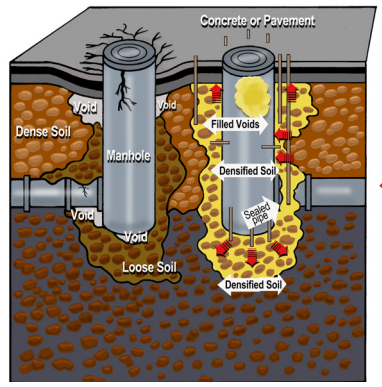
The clear choice for fast, predictable, accurate, and low cost concrete asset repair/ restoration is URETEK. 85,000 successful, worldwide, projects have benefitted from URETEK. So can you! **Call for your free, no-obligation site survey!**



URETEK Method:
Structure Lifting, Void Fill, Slab Alignment, Sub-surface Sealing, Specification Restoration.

URETEK Deep Injection:
Soil Densification, Void Fill (at depth), Water Displacement, Load Bearing Capacity Incrreases.





URETEK Infrastructure Rehabilitation:
Subsurface Soil Stabilization, Water Displacement, Subsurface Joint/Crack Sealing, Load Capacity Restoration, Surface Materials Alignment.

URETEK gives slabs, structures, and infrastructures new life!

Restore, lift, re-align, fill, and seal concrete structures and densify subsurface soil for maximum performance.

Fastest Results
Up to 90% less project time. 90% strenth in as little as 15 minutes.

Least Disruptive
To tenants, residents, employees, and business operations.

Best Warranty
The only 10-year material warranty in the industry.

Earth Friendly
Environmentally inert materials, no material breakdown. Safe for people, water, and animals.

Low Cost
Up to 75% less expensive than traditional repair or replacement methods.

Accurate
Restore beauty, utility, strength, and alignment spec's up to 1/8" tolerances.

Call: +1 888 442 7687
www.icrnus.com/freesurvey

FREE, NO OBLIGATION ON-SITE SURVEY!!

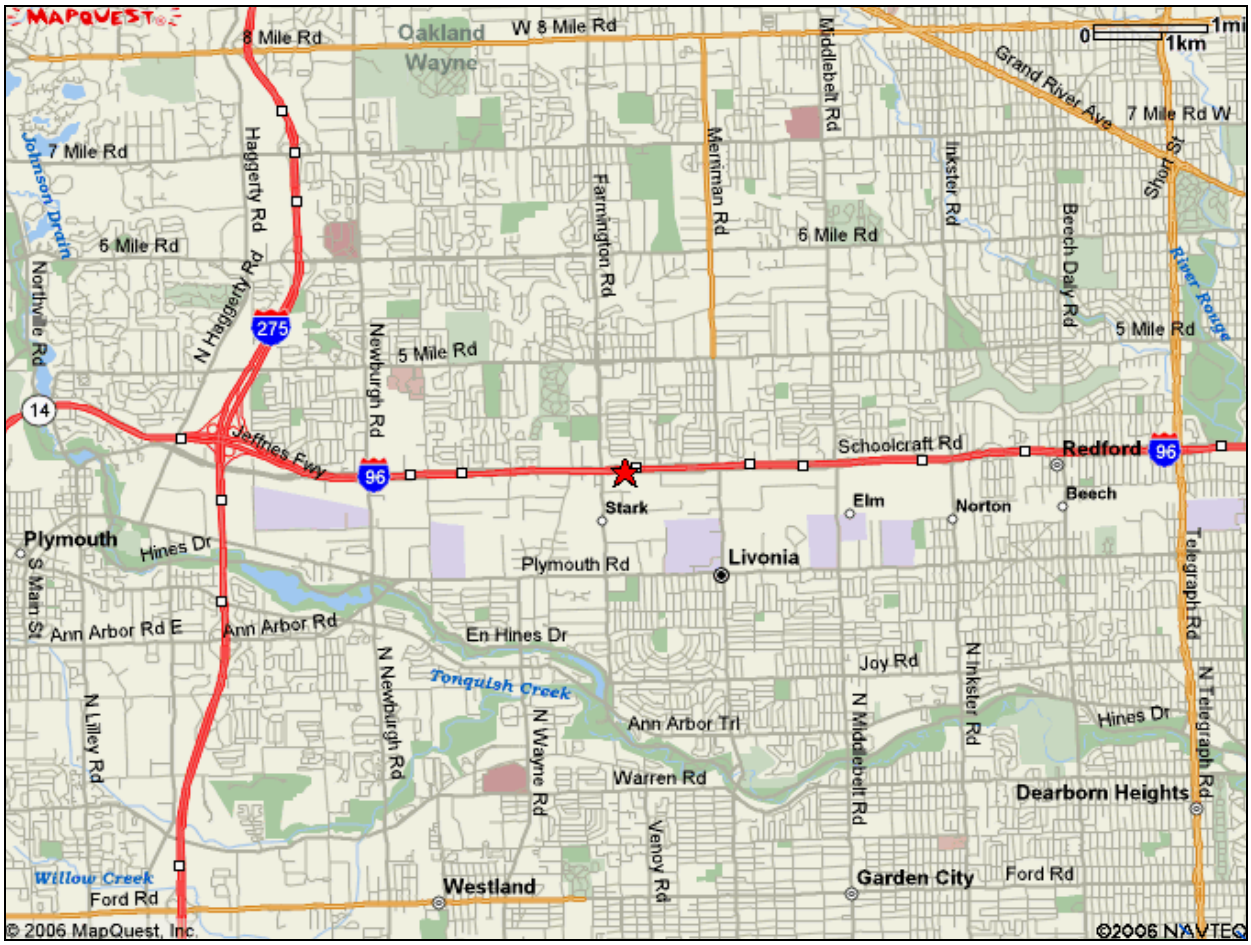
MDOT Selection Guide

MDOT Classification	Propex	Mirafi	Erosion Control Product
Geotextile Blanket	4546	140 NC	NA
Geotextile Liner	4553	180N	NA
Geotextile Heavy Liner	4512	1100N	NA
		S1000	
Geotextile Stabilization	2005	600X	NA
	2006		NA
Geotextile Separation	2005	600X	NA
	2006		NA
Mulch Blanket	NA	NA	ECS1
High Velocity Mulch Blanket	NA	NA	ECS2
TRM	NA	NA	ECP2
Permeable Runoff Structures	NA	NA	Georidge

Oakland County Selection Guide

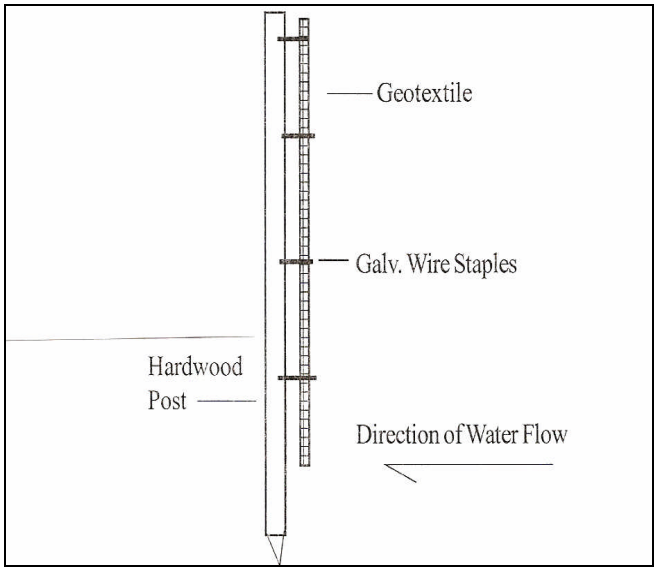
Classification	Propex	Mirafi	Erosion Control Product
NW 5 Geotextile	4551	160 N	NA
NW 8 Geotextile	4553	180N	NA
Silt Fence			2’ fabric, 6 foot staking on center, with lathe
High Flow Silt Fence			3’ monofilament fabric, 6 foot staking on center, with lathe
Mulch Blanket	NA	NA	ECS1
High Velocity Mulch Blanket	NA	NA	ECS2
Rear Guard Catch Basin Filter	NA	NA	Silt Saver
Permeable Runoff Structu	NA	NA	Nilex Georidge

Warehouse Location



Geoproducts is conveniently located on the I-96 service drive (32925 Schoolcraft Rd.), ¼ mile East of Farmington Rd. in Livonia, MI.

Silt Fence Submittals (Attachment A)



	Standard Silt Fence	Oakland Co. Silt Fence	MDOT Silt Fence
Woven Geotextile	24” x 100’	24” x 100’	30” x 100’
Hardwood Posts	1.5” x 1.5” x 32”	1.5” x 1.5” x 32”	2.25” x 2.25” x 38”
Post Spacing	10’ on center	6’ on center	6.25’ on center
Attachment	Galvanized Staples	Galvanized Staples	Galvanized Staples
Roll Length	100’	100’	100’
Rolls/Pallet	50	50	20

Silt Fence Geotextile Propex 2130

Property	Test Method	Min. Ave. Roll Value (Eng)	Min. Ave. Roll Value (Met)
Grab Tensile	ASTM-D-4632	124 x 124 lbs	.550 x .550 kN
Grab Elongation	ASTM-D-4632	15% x 20%	15% x 20%
Mullen Burst	ASTM-D-3786	300 psi	2060 kPa
Puncture	ASTM-D-4833	65 lbs	.285 kN
Trapezoidal Tear	ASTM-D-4533	65 lbs	.285 kN
UV Resistance	ASTM-D-4355	80%	80%
AOS	ASTM-D-4491	30 sieve	.600 mm
Permittivity	ASTM-D-4491	8 gal/min/ft$_2$	325 L/min/m$_2$