

# Pioneering Stormwater Solutions











# A Heritage of Excellence

Since 1982, Invisible Structures has provided the finest in grass porous paving, gravel porous paving, underground water storage, erosion control, drainage, and access ADA mats.

POROUS PAVING STORMWATER MANAGEMENT ACCESSIBILITY GREEN BUILDING



### **Our Commitment**

What started in a garage in 1982, has grown to be the industry's trusted choice in porous paving and modular underground water containment. Founded by a Landscape Architect, Invisible Structures is committed to maintaining the values upon which we were built: the highest quality sustainable product, unparalleled customer service and the finest aesthetics available.

### The Strength Contest is No Contest

Our lab-tested products withstand an astonishing amount of compression due to our proprietary blend of recycled plastic and trademark ring-on-grid design. Each independent cylinder transfers the load to the weight bearing base course protecting vegetation or decorative gravel while supporting the weight of any vehicle. This chart illustrates Grasspave2 and Gravelpave<sup>2</sup>'s overqualifications in measurements of pounds per square inch (PSI).

## **Designed by a Landscape Architect** for Landscape Architecture

With creative project goals at the forefront of its inception our products were created with designers in mind. The invention of each product came from the desire to address a specific landscape design challenge. Our painstaking attention to detail in the design process yielded products that have been reliable since 1982.

## **Flexibility Advantages**

Due to our trademark design and proprietary blend of HDPE 100% recycled plastic, our products offer distinct design and installation advantages. Most products roll out like carpet making for an easy installation and labor cost reduction. Products can be trimmed with pruning shears and will bend slightly to accommodate surface imperfections and curves for layout and design customization.

TYPE OF VEHICLE/ PAVING	PSI
Car & Pick-up Truck	45
Utility, Delivery, H-20 loading	60
Fire Truck H-20	110
Semi-Truck Tire	120
DC-10 Airplane	250
Concrete	3,000
Grasspave <sup>2</sup> /Gravelpave <sup>2</sup>	15,940

\*\*Over 5x the Strength of Concrete



## Void Space Advantage

Our founding product designer felt it was important for our products to achieve results without interfering with the landscape aesthetic. He streamlined the designs to optimize space for root growth, unparalleled water storage and virtually invisible products.

# **Quick, Cost Effective Install**

Lightweight large rolls make installation fast and easy requiring fewer man-hours than other products. For example, a 430sf installation of Grasspave2 (product only) requires approximately 5 minutes of labor. A full installation of the same size, including product, sand, Hydrogrow and sod/seed can be completed in about an hour.

# Why Sand Instead of Soil

Soil can easily compact and become impermeable creating mud, ruts and "bath tubbing". Because sand never compacts it remains porous allowing the roots to thrive, providing an excellent medium for growing any vegetation. The addition of our proprietary Hydrogrow (included with every order of Grasspave2) ensures water and nutrient retention at the base course level to expedite the root growth process after installation.

# Sustainable, Recycled, USA

- Reduces CO2 Levels (GP2, ST3)
- Increases Greenspace (GP2, ST3)
- Manages and Preserves Stormwater (ALL \*except BR2)
- Captures Stormwater for Reuse (RS3)
- Made from 100% Recycled Plastic (ALL)
- 100% Recyclable Material (ALL)
- Emits Zero Toxins (ALL)
- Naturally Filters Water (GP2, GV2, ST3, DC2)
- Removes Hydrocarbons Through Bioremediation (GP2, GV2, ST3)
- Lasts for More Than 60 Years if Properly Maintained (ALL)
- Proudly Manufactured in the USA





# Grasspave<sup>2</sup> Porous Grass Paver

### Made From 100% Recycled Plastic

For a green porous paving solution built to last, trust Grasspave2 – the industry's leader since 1982. Designed by a Landscape Architect, Grasspave<sup>2</sup> comes in easy-to-install rolls. It's flexible, lightweight, durable and provides design versatility to any project. Due to its incredible strength, Grasspave<sup>2</sup> offers limitless solutions to practical applications such as fire

lanes, parking lots and helicopter landing pads. With an expected lifespan of over 60 years, Grasspave<sup>2</sup> provides a long-term green paving alternative that can reduce CO2 emissions and filter out environmental toxins through bioremediation. In fact, an acre of grass makes a better "carbon sink" than an acre of trees and produces roughly four times the oxygen.

## **Grass is Greener**

Grasspave<sup>2</sup> is a 100% recycled ring-on-grid structure that supports and protects grass roots to withstand pedestrian and heavy-weight vehicular traffic. With a compression strength of 15,940 psi, Grasspave<sup>2</sup> is over five times stronger than concrete and can support the weight of virtually any vehicle. 92% void space enables excellent root development and rapid stormwater drainage.

Install 430 square feet of product with one person in five minutes with our easy-to-install rolls. Bend, trim with pruning shears, or use our curve chart to easily create curves or customize layouts.

Made in the USA

## The Grasspave<sup>2</sup> Advantages

- Design Flexibility
- High Compressive Strength (15,940psi)
- Easy, Quick Installation
- 92% Void Space
- All Weather
- Reduces CO2 and Toxin Filtration
- Long Life Span (60+) Years
- Environmental Beautification

# **Applications**

- Fire Lanes, Utility and Emergency Access Roads
- Parking Lots
- Driveways
- Outdoor Event Spaces
- Paths and Walkways (ADA Compliant)
- Ramps, Docks and Loading Areas
- Airplane Taxiing Areas
- Helicopter Landing Pads





# The Original Porous Gravel Paving

### Made From 100% Recycled Plastic

Created by a Landscape Architect, Gravelpave<sup>2</sup> has been the Designers' trusted choice for low maintenance porous paving since 1991. With a remarkable compressive strength, 5 times that of concrete, (15,940 psi) Gravelpave<sup>2</sup> can support the weight of virtually any vehicle. The lightweight and flexible rolls allow for

quick and easy installation while the ability to cut with pruning shears offers design versatility. Gravelpave<sup>2</sup> is now available in Granite - a new color designed to blend seamlessly with almost any aggregate. Also available in black and custom colors.

### **Pave Better Solutions**

Gravelpave<sup>2</sup> is a 100% recycled plastic ring-on-grid trimmed with pruning shears and even slightly bent to create curves and customize any layouts. structure designed to support unlimited traffic. With great flexibility and a high compressive strength, Made in the USA Gravelpave<sup>2</sup> is a practical and sustainable option for any low speed area. Gravelpave<sup>2</sup>'s fabric backing acts as a vegetation barrier, a dust inhibitor, provides true **Applications** containment and will never come off or disintegrate. • Fire Lanes, Utility and Emergency Access Roads A 92% void space allows for rapid stormwater Parking Lots drainage and filtration of environmental toxins through Driveways bioremediation.

Using the US-made steel pins and washers included in every order, one person can install 430-sf of product in forty-five minutes. Our easy-to-install rolls can be

# The Gravelpave<sup>2</sup> Advantages

- Design Flexibility
- High Compressive Strength (15,940psi)
- Easy, Quick Installation
- 92% Void Space
- All Weather
- Toxin filtration
- Unlimited Traffic for Low Speed Areas
- Low Maintenance/Long Lifespan (60+ years)
- Available in Custom Colors



- Outdoor Event Spaces
- Paths and Walkways (ADA Compliant)
- Ramps, Docks and Loading Areas
- Airplane Taxiing Areas
- Helicopter Landing Pads





# Rainstore<sup>3</sup> Stormwater Solutions

Made from 100% recycled plastic Rainstore<sup>3</sup> is a modular, stackable, underground water containment system. Designed by a Landscape Architect for both subsurface detention basins and retention/harvesting systems in 1999, Rainstore<sup>3</sup> has since been used

in a myriad of other applications such as water/rain gardens, green roofs and sports field drainage. With depths ranging from 4" to 7.9', units arrive to the site preassembled for easy, drop-in installation.

# **Better Stormwater Solutions**

Each unit of Rainstore<sup>3</sup> measures 1 m x 1 m x 0.1 m high(3.28 ft x 3.28 ft x 4 inches). The compression fit units are stacked (if applicable) and sent preassembled to the construction site so there is no assembly required.

Making use of Invisible Structure's trademark ring-ongrid design, Rainstore<sup>3</sup> exceeds H-20 loading allowing it to support vehicular traffic, lightweight buildings or greenspace. An impressive 94% void space equates to almost 25 gallons of water storage per unit with no gravel fill required.

# The Rainstore<sup>3</sup> Advantages

- Modular and Stackable
- 94% Void Space with No Gravel Fill
- Exceeds H-20 Loading
- No Assembly Required
- 100% Recycled Plastic
- LEED Certified

# **Applications**

- Underground Detention Basin
- Retention/Harvesting Systems
- Water/Rain Gardens
- Green Roofs
- Sports Field Drainage
- Downspout Catch Basins







# Slopetame<sup>3</sup> Erosion Control System

Slopetame<sup>3</sup> provides an immediate and permanent solution to erosion and sedimentation problems. Using the trademark interlocking ring-on-grid design with the added benefit of crossbars on every row Slopetame<sup>3</sup> is a reinforcement and stabilization system. The attached

geotextile filter fabric will never come off and allows for the growth and containment of vegetation. Even with only a 1" depth required Slopetame<sup>3</sup> can permanently stabilize slopes with angles up to 45 degrees.

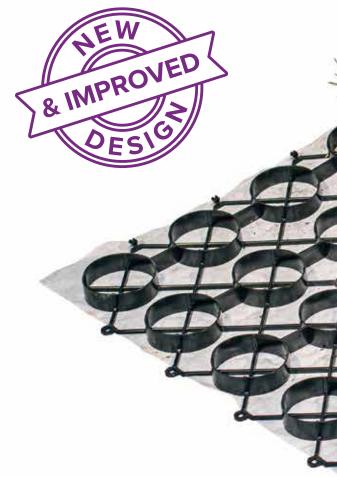
## Description

The 100% recycled plastic rolls are lightweight and easy to install. Secured with a provided Duckbill® Anchor and single rebar, one person can install 430 sf of product in approximately 10 minutes. Slopetame<sup>3</sup> can be bent and trimmed with pruning shears to achieve curves, avoid trees and create custom layouts.

Made in the USA

### **Benefits**

- Permanent Stabilization
- Vegetation Containment
- Controlled Porosity
- Lightweight and Easy to Install
- UV Resistant
- 100% Recycled Plastic

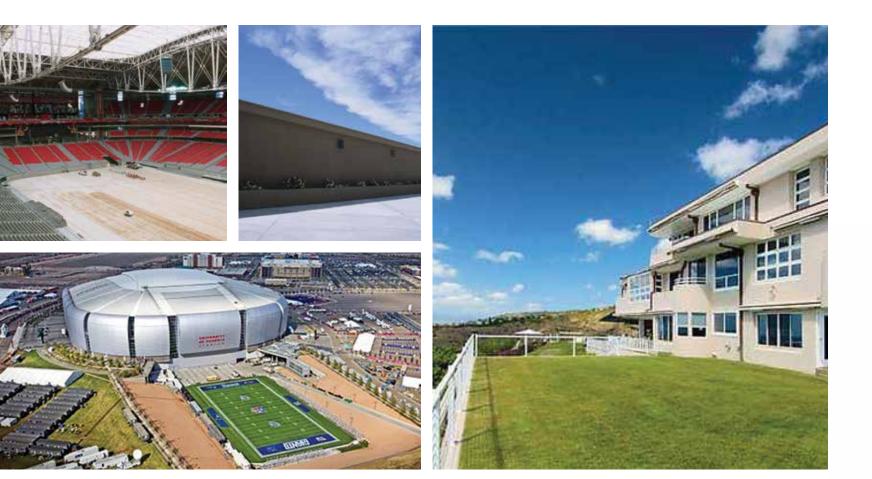


# **Tame These Applications**

- Steep Slope Erosion Control

- Bank Stabilization
- Vegetated Swale Applications
- Stormwater Infiltration Trenches
- 1:1 Slope Erosion Control





## Description

Draincore<sup>2</sup> is a 100% recycled plastic ring-on-grid system that allows for rapid, high volume drainage. Temporary or permanent installations offer solutions for places where stormwater typically collects and pools. With either vertical or horizontal configurations, water can enter from any direction making Draincore<sup>2</sup> a more versatile alternative to antiquated drainage systems. Shipped in large, easy-to-install, light-weight rolls, it can also be trimmed with pruning shears or bent to create slight curves. Install 430 square feet in five minutes with one person.

Made in the USA

### **Benefits**

- High Volume Flow Rate
- 92% Void Space
- Cost Effective
- Lightweight, Easy to Install
- High Compressive Strength

# Draincore<sup>2</sup> Geocomposite Drainage Layer

Draincore<sup>2</sup> was designed by a Landscape Architect to address drainage in areas where shallow and rapid drainage is required. A 92% void space allows drainage at the rate of 42 gallons per minute (per square foot) so even the heaviest rains won't leave standing water

on the surface. Its high compressive strength can support any vehicle making it an ideal solution for outdoor sports fields and golf courses. Draincore<sup>2</sup> also offers design flexibility to green roofs, retaining walls and planters.

# **Applications**

- Sports Fields
- Golf Courses
- Green Roofs
- Retaining Walls
- Planter Drainage
- Fountains







## Description

Made of lightweight, flexible plastic Beachrings<sup>2</sup> is available in 3 colors and 7 sizes. It maintains its flexibility and strength, even in cold temperatures, and can be swept clean or rinsed with a hose. Each Beachring<sup>2</sup> tile interlocks to create a slip-resistant continuous surface supported by the shallow ring-on-grid structure below.

Made in the USA

# **Benefits**

- ADA Compliant
- Slip Resistant
- Light Weight
- Affordable
- Easy to Clean

# Beachrings<sup>2</sup> Portable Access Mat

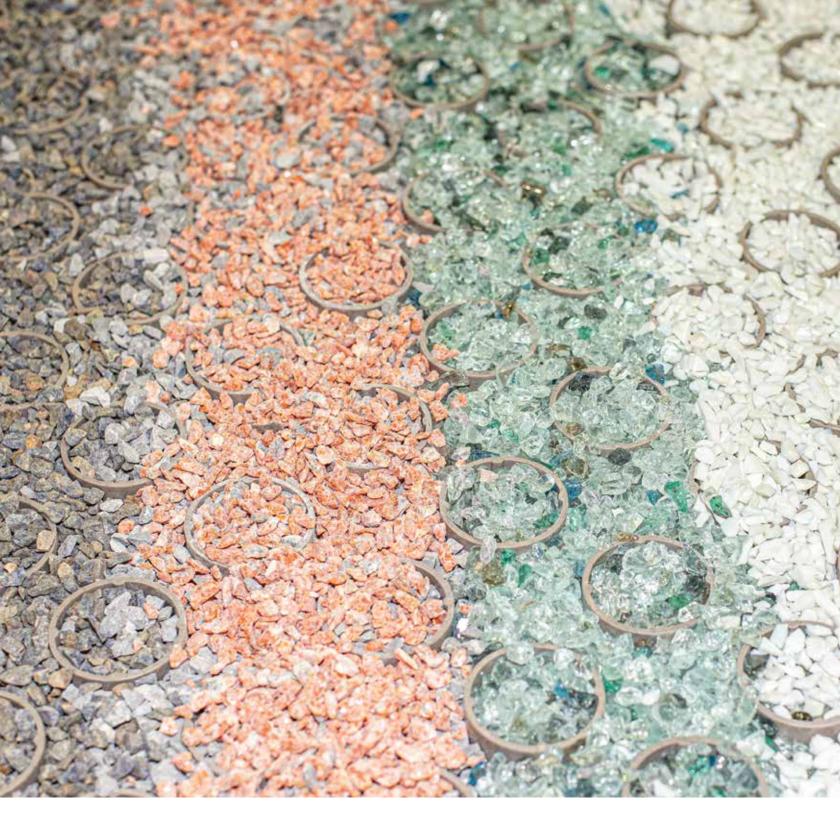
Designed to provide access to some of nature's trickiest terrain, Beachrings<sup>2</sup> was the first plastic portable access mats to be introduced in the late 1980s. Providing the ability to traverse over sand mud, grass, gravel and shallow snow, Beachrings<sup>2</sup> is an ADA compliant

walkway. It's textured and slip resistant surface stays cooler than sand in the hot sun. Durable, long lasting, UV resistant and easy to maintain, Beachrings<sup>2</sup> is a versatile accessibility solution.



# **Accessibility Applications**

- Beach/Sand
- Loose Gravel
- Muddy or Soft Soil Areas
- Shallow Snow
- Event Flooring





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