

Beachrings2 Spec Data

Portable Boardwalk for Equal Access Over Sand

Sept 2000

1. Product Name - Beachrings2 - Equal Access Mats for access over loose sand by able and disabled pedestrians and light wheeled vehicles.

2. Manufacturer - Invisible Structures, Inc., 1600 Jackson Street, Suite 310, Golden, Colorado 80401USA, Phone: 800-233-1510, International: 303-233-8383, Fax: 303-233-8282.

3. Product Description

Materials: Beachrings2 is made of injection molded Low Density Polyethylene (LDPE) consisting of very strong rings projecting from one side of a flexible grid and perforated membrane layer with slightly raised traction discs.

The standard product is Colorado Sky Blue in color, contains UV inhibitors, is non-biodegradable, and offers excellent chemical resistance.

Size: Beachrings2 is supplied in single modular units 0.4meters x 0.4 meters x 20 mm (15.75" x 15.75" x 0.79"). Post and hole connectors are provided for easy assembly. Six roll sizes are available.

Units can be linked together with integral posts and holes. Pieces are fastened together with pressure washers. Nylon wire ties can be used to form custom sized pathways and platform areas. Curves can be made by offsetting the connections which are 133mm (5.25") on center.

Two units of width (.8m) will accommodate one wheelchair. Four units wide will allow for two chairs to pass. Mixed able and disabled traffic will require wider paths.

Custom Colors: Custom colors may be selected at an additional cost to meet specific project requirements, with quotations available on request. Cashew Brown, Pewter Grey, Meadow Green, Bandanna Yellow, Saddle Brown, Rodeo Red, Purple Majesty, are seven ready-mixed colors offered in addition to standard color Colorado Sky Blue.

4. Applications

Beachrings2 is designed for "portable boardwalks" to provide access over sand for use by able and disabled people. Uses include:

- Controlled Access Through Dunes
- Accommodation for Disabled Access
- Baby Stroller Use
- Equal Access to Special Events –
boat races, volleyball competition, surfing events, sand castle exhibits
- Platforms for Special Events - music and dance, food, shade structures / tents
- Continuous Beachfront Walks
- Wheelchair Access to Playground Equipment
- Personal Travel Capability with "World Travel Kit"

Beachrings2 uses the structural load bearing capacity of sand by confining and restricting movement of sand at the surface with hidden rings and grid. The product also provides a firm disc textured surface for bare feet, shoes (even high heels), and wheels.

5. Features

Beachrings2 is lightweight, factory finished and ready to use.

Lightweight - easy to place, carry, and store.

Flexible - rolled up for storage, flex without cracking, conforms to ground.

Permanent or Temporary Joints - various sizes and shapes of panels, fastened with pressure washers.

| 6. Specifications | English | Metric |
|--------------------------|-----------------|-----------------------|
| Polymer | LDPE | LDPE |
| Unit Height | 0.80" | 20 mm |
| Unit Width x Length | 15.75" x 15.75" | 0.4m x 0.4m |
| Area | 1.72 sf | 0.16 m ² |
| Unit Weight | 13 oz | 370 grams |
| Weight/area | 0.47 lb/sf | 1.5 kg/m ² |

7. Installation Preparation

Design gradients of paths to be as gentle as possible (consider use by child in manual wheelchair). Use switchbacks or other means to assist user in steep areas.

Determine long term configuration of layout and decide size and shape of larger permanent modules to be fastened together. Larger panels should be easily rolled, lifted by one or two people, and set on end. Laying panels flat will put pressure on joints that may break.

Prior to installing Beachrings2, the site should be raked to clear debris and sharp objects, to a relatively smooth surface (i.e. no deep footprints in soft sands).

Assemble modules together leaving joints temporary by snapping joints together, or using nylon wire ties. You may wish to lay the rolls side by side without connecting them. Move mats when using beach cleaning equipment.

Mats are lightweight and may need to be anchored, sandbagged, or removed in high wind situations. The rings on the bottom help keep the mats down under mild weather conditions.

8. Maintenance

Beachrings2 will require little maintenance under normal conditions. The product can be swept by hand or power broom, and power spray washed with detergents. Rainfall and spilled liquids will drain through the perforations and/or evaporate. The plastic material will not absorb liquids or stain from most materials.

The plastic mats will burn and melt when held in direct contact to a flame, but will extinguish when the flame is removed. Burned or otherwise damaged units can be easily replaced with new units.

Storage of the product should be in an enclosed facility with the product protected from sunlight, even though Beachrings2 has UV inhibitors. Product life will be extended if protected from light when not in use.

Do not fold the mats and lay them down as this will unnecessarily put strain on the joints. Be sure to roll them, fasten with a bungee cord, and stand on end, with the pin side down. This is the form in which the product was delivered. Do not unroll or flex in very cold temperatures. The slight curve from rolling will return to a flat condition in a matter of hours upon exposure to warmth from the sun.

9. Historical Background

The original form of Beachrings2 was developed in 1985 by Bill Bohnhoff, a registered Landscape Architect. The product was awarded US Patent #4,986,993 in January 1990.

The Beachrings2 mat was developed with practical on-site testing by various public park and recreation agencies and private groups devoted to improvement of accessibility for disabled citizens. It has been used successfully since 1988.

Other product for wheelchair access over grass is our Grasspave2 which has a ring and grid structure of plastic, similar to Beachrings2, but without the mat walking surface. Using a reinforcing structure embedded in the grass prevents wear and tear of the grass while providing a firm, smoother surface for building access ramps. An example is the grass ramp added for visitor access to the Eugene O'Neil National Historic site in California by the National Park Service.

For higher traffic areas, trails, and low-rainfall areas, Gravelpave2 can be chosen as a stable handicapped accessible surface. Beneficial Design performed the ADA testing for Gravelpave2. Our web site contains the testing data and project profiles for this application.

Designated handicapped parking spaces can also be paved with Grasspave2 or Gravelpave2 to provide a visually distinctive surface, as well as reducing hard surface pavement volumes and associated storm runoff.

10. Warranty

Invisible Structures, Inc. warrants that Beachrings2 will be supplied without manufacturing defects, and will perform as stated in this document provided the applications and installation methods follow our recommendations. If defects are found prior to installation, we will replace the damaged pieces free of charge, or refund the purchase price of the damaged pieces provided we are notified and the units are returned within 30 days.

Product replacement or refund are the Buyer's sole remedy for breach of warranty or negligence and we will not be liable for any indirect, consequential, special or resultant damages.

To the best of our knowledge, the information contained herein is accurate. Final decisions as to the suitability of information or product is sole responsibility of user.

11. Short Form Design Specification

The Beachrings2 as shown on the drawings and in the specifications shall be injection molded. All product and installation of the system shall be approved by the Project Engineer/Design Architect, and conform to the manufacturer's written recommendations.

12. Sample and Price Quotation

For a Beachrings2 sample and price quotation, call 1-800-233-1510, overseas use country code plus 303-373-1234, or fax 303-373-1223. Shipment can usually be fulfilled within 7-10 days on most orders. Beachrings2 will help make more recreation areas available to more people.

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