PRODUCT SPECIFICATION

Geotextile Fabric

GT Impax geotextile fabric is used with GT Impax surfacing to separate the surfacing from the drainage system. It provides a water permeable barrier to hold the GT Impax Surfacing in place and prevent the drainage system from being clogged.

Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>28 mils (minimum)</td>
</tr>
<tr>
<td>Water permeability (min)</td>
<td>26 gallons/sq. ft./minute (minimum)</td>
</tr>
</tbody>
</table>

Warranty

GameTime warrants all Geotextile products to be free of defects in material and workmanship for the life of the product. Geotextile will not deteriorate under normal soil conditions.

GameTime will replace any Geotextile fabric found to be defective at no cost to the customer.
PRODUCT SPECIFICATION: TerraFlow® Geocomposite Sub surfacing Collector-drain (aka Geocomposite Drainage System)

The prefabricated TerraFlow geocomposite subsurface drainage system shall consist of a flexible thermoformed three-dimensional polymer core. The polymer core shall be tightly encapsulated by a non-woven geotextile. The core shall consist of a sufficient number of support members for a composite interaction between the polymer core and the geotextile overwrap to prevent geotextile intrusion and in-plane flow reduction.

The prefabricated TerraFlow geocomposite drainage system shall provide a minimum flow rate of 18 gallons per minute per foot width when tested in accordance with ASTM D4716 under the following boundary conditions:

- 200 psf load
- 0.10 gradient
- Soil environment

The product test sample shall be representative of the product to be supplied for installation.

The prefabricated TerraFlow subsurface drainage system shall permit inflow from both sides. The minimum area for unobstructed inflow shall be 85% on the primary side of the drain and 12% on the secondary collection side of the drain.

The compressive strength of the prefabricated TerraFlow subsurface drainage system shall be determined by ASTM D1621 and shall be a minimum of 2600 psf at the maximum deflection of 10%. Core material must be virgin high-density polyethylene conforming to ASTM D1248, Type III with suitable colorants and additives to provide protection against ultraviolet-light degradation during storage and installation. The drain core must have cuspations projecting from the flat, perforated base in a uniformly spaced pattern.

The geotextile used to overlap the polymer core should be non-woven, needle-punched and meet the following minimum roll values:

- Grab Tensile Strength (ASTM D4632) 95 Lbs.
- Grab Tensile Elongation (ASTM D4632) 50% Minimum
- Puncture (ASTM D4833) 45 Lbs.
- Trapezoidal Tear Strength (ASTM D4533) 40 Lbs.
- Mullen Burst (ASTM D3786) 180 Lbs.
- Coefficient of permeability (ASTM D4491) 0.20 cm/sec.
- AOS (ASTM D4751) 70

Warranty: GT Impax warrants all Terraflow Drain products to be free of defects in material and workmanship for the life of the product. Terraflow is manufactured using quality polypropylene resins for core and geotextile wrap and will not deteriorate under normal soil conditions.

GT Impax will replace any Terraflow Drain found to be defective at no cost to the customer.
Drill a 3/8” hole in the center and approximately 12” from each end of the curb. Insert 1/2” x approximately 24” reinforcement anchor in each hole and drive in ground. Recess the anchor about half the thickness of the curb.

6” x 6” x 8’ Rubber Flex Curb (Patent Pending)
- Actual Size: 6” x 6” x 8’
- Weight: 77 lbs.
- Colors: Red, Green, Brown & Black
- Water Drain Ports: Located throughout the bottom of the curb for better drainage.

6” x 8” x 8’ Rubber Flex Curb (Patent Pending)
- Actual Size: 6” x 8” x 8’
- Weight: 90 lbs.
- Colors: Red, Green Brown & Black
- Water Drain Ports: Located throughout the bottom of the curb for better drainage.
Rubber Flex Curb Specifications

<table>
<thead>
<tr>
<th>Sizes/Weight (Actual Sizes are noted in diagrams)</th>
<th>3”x3”x8’: 22 lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4”x4”x8’: 36 lbs</td>
</tr>
<tr>
<td></td>
<td>6”x6”x8’: 79 lbs</td>
</tr>
<tr>
<td></td>
<td>6”x8”x8’: 99 lbs</td>
</tr>
<tr>
<td></td>
<td>8”x12”x8’: 116 lbs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Colors</th>
<th>Red, Green, Brown, and Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Height Attenuation</td>
<td>6”x8”x8’</td>
</tr>
<tr>
<td></td>
<td>G-Max ≤200: 11’</td>
</tr>
<tr>
<td></td>
<td>HIC ≤ 1,000: 12’</td>
</tr>
</tbody>
</table>

| Corrugated/Perforated Pipe                       | 4” Pipe located in center of 8”x12”x8’ Curb to collect and channel water, reduce weight, and allows for easier handling. |

| Water Drain Ports                                 | ½” x ½” Channels running the width of the bottom of Curb for better drainage |

| Rebar Anchor Size (If Applicable)                 | 3” & 4” Curb: 3/8”x18” |
|                                                  | 6”, 8”, & 12” Curb: ½”x24” |
Rubber Flex Curbs Installation Instructions

Installation Instructions (When Using Rebar Anchors)
1. Drill a ¼" hole (for 3” & 4” Curb) for a 3/8” hole (for 6”, 8”, and 12” curbs) 8” from each end of the curb.
2. Insert anchors into the holes and drive into the ground. Recess the anchors to approximately half the thickness of the curb.

Rubber Surfacing

Installation Instruction (When Using Adhesives)
1. Install Non-Woven Geo-textile Membrane over compacted base.
2. Glue Rubber Flex Curbs to textile.
3. Glue Curbs end to end.
DRILL A 1/4" HOLE IN THE CENTER AND APPROXIMATELY 12" FROM EACH END OF THE CURB. INSERT 3/8" X APPROXIMATELY 18" REINFORCEMENT ANCHOR IN EACH HOLE AND DRIVE IN GROUND. Recess the anchor about half the thickness of the curb.

THRU VIEW OF 4" AND 6" CURB

END VIEW OF 4IN AND 12IN CURB

END VIEW OF 6IN AND 12IN CURB
Minimum Specifications for Flexible Playground Border Containment Curbs

Flexible Containment Curbs (Flex Curbs):
Flexible Containment Curbs for Playgrounds, Landscape, Trails, or Path Borders must be composed of 100% recycled SBR shredded rubber buffings. Flex curbs must be able to contour and possess drainage capability.

Part 1 General
1.1 Section Includes
A. Flexible Containment Curb, Outdoor Surfacing Products.

1.2 Product Description
Materials: Compression Molded shredded SBR Rubber Buffings Iron Oxide NON Toxic Pigments and Aromatic Polyurethane Binder

Available Models:
- a) 4"W x 4"H x 96"L with a weight of 32lbs
- b) 6"W x 6"H x 96"L with a weight of 67lbs
- c) 6"W x 8"H x 96"L with drain pipe inserted for a weight of 65lbs
- d) 8"W x 12"H x 96"L with drain pipe inserted for a weight of 112lbs

Finishing Colors:
Black, Brown, Gray, Green, Red

1.3 References
Flexible Containment Curbs must meet or exceed the following:
- Flexible Containment Curbs must be manufactured using a Long-Strand Shredded Rubber Particle mixed with Aromatic Urethane.
- ASTM-D3574 Test for Flexible Cellular Density.
- ASTM D412-98a Test for Tensile & Elongation Properties
- ASTM D624 Test for Tear Strength
- ASTM 2240 Test for Durometer Hardness
- ASTM D395 Test for Compression Set
- ASTM C501-84 (96) Test for Abrasive Wear
- ASTM C1028 Test for Slip Resistance
- ASTM C67 Test for Freeze Thaw
- ASTM D2859 Test for Burning Pill Test
1.4 Submittals

A. Submittal Procedures.
B. Product Data: Submit manufacturer's product data, including installation examples and/or subsurface recommendations
   a) Samples: Submit manufacturer's sample of one Flex curb product size approximately 12" sample of curb.
C. Warranty: Submit manufacturer's standard warranty.

1.5 Delivery, Storage, and Handling

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
B. Storage: Outdoor Surfacing Products:
   a) Store Products in a dry area prior to installation.
C. Adhesive: Store adhesive in a dry area at a minimum temperature of 40 degrees F.
D. Handling:
   a) Protect materials during handling and installation to prevent damage.

1.6 Warranty

A. Materials and Workmanship: Outdoor surfacing Products shall be warranted against cracking, breaking and excessive degeneration based on normal wear and proper installation, cleaning and maintenance for a period of 5 years from date of purchase.

1.7 Cleaning

A. Outdoor Products may be broom sweep.
B. A leaf blower to remove loose debris from Products.
C. A biodegradable detergent may be used on the outdoor Products for heavily soiled areas.
   1. Rinse Products.
   2. Apply detergent.
   3. Brush with broom or bristled scrub brush.
   4. Rinse thoroughly.
Part 2: Products

2.1 Manufacturer

A. Rubber Designs, LLC
   105 US Hwy 411 NE, Ranger, GA 30734
   Web: www.RubberDesigns.com

2.2 Accessories

A. Rubber Mulch:
   a) Colored SBR Shredded Buffings colored rubber mulch.
B. Adhesive: Mastic 1. Material – MSDS
C. Prepare subsurface in accordance with manufacturer’s instructions to ensure proper support and drainage for Outdoor Surfacing Projects.
D. Compacted well drained soil.
E. Granular Aggregate Subsurface: Compacted, granular aggregate subsurface.

2.3 Installation

A. Playgrounds, Landscaping, Walkways, Trails and Path Borders.
   1. Installation Methods: (See Installation instructions)
      a) Mark the layout with marking point.
      b) Glue 3-4 curbs at a time, end to end, allow to cure while the rest of the process is underway. This will allow for seamless transitions in curved or contoured areas.
      c) Dig trench and compact ground or gravel for solid base for the curb.
      d) Secure the curb with 3 Rebar Spike 24” – 36” long depending on curb height (minimum diameter of 3/8” recommended diameter is 5/8”)

Note: Counter sink spike approximately ¼” Flexcurb covers 7.96 linear feet
PRODUCT SPECIFICATION
GT Impax Wear Mat

Quality Assurance

Manufactured to high standards, GT Impax Wear Mats utilize the best quality materials. Each tile is molded to a +/- 1mm tolerance.

Color

The color of the GT Impax Wear Mats shall be black with gray specks.

Testing

GT Impax wear mats will meet the Gmax and HIC requirements for a 2’ Critical Fall Height when tested according to ASTM F1292-04

Water Permeability

Percolation rated no less than 1.4 liters/sec/square meter.

Coefficient of Friction

ASTM D 1894 of greater than .73 dry.

Physical Characteristics

44 inches x 48 inches (14.667 square feet) x 1” thick. Average weight 57 lbs.

Materials

GT Impax Wear Mats shall be manufactured of a combination of EPDM rubber (15%) recycled SBR rubber (85%), and a single component polyurethane binding agent.

Warranty

Gametime warrants GT Impax Wear Mats to be free from defects in materials and workmanship for a period of one year from the date of purchase.
PRODUCT SPECIFICATION
GT Impax Wear Mat

Quality Assurance

Manufactured to high standards, GT Impax Wear Mats utilize the best quality materials. Each tile is molded to a +/- 1mm tolerance.

Color

The color of the GT Impax Wear Mats shall be black with gray specks.

Water Permeability

Percolation rated no less than 1.4 liters/sec/square meter.

Coefficient of Friction

ASTM D 1894 of greater than .73 dry.

Physical Characteristics

36 inches x 36 inches (9.0 square feet) x 3/4” thick. Average weight 26 lbs.

Materials

GT Impax Wear Mats shall be manufactured of a combination of EPDM rubber (5%) recycled SBR rubber (95%), and a single component polyurethane binding agent.

Warranty

Gametime warrants GT Impax Wear Mats to be free from defects in materials and workmanship for a period of one year from the date of purchase.