MC-4500 CHAMBER

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

STORMTECH MC-4500 CHAMBER
(not to scale)
Nominal Chamber Specifications

<table>
<thead>
<tr>
<th>Size (L x W x H)</th>
<th>52&quot; x 100&quot; x 60&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1321 mm x 2540 mm x 1524 mm</td>
<td></td>
</tr>
</tbody>
</table>

Chamber Storage
106.5 ft³ (3.01 m³)

Min. Installed Storage*
162.6 ft³ (4.60 m³)

Weight
Nominal 125 lbs (56.7 kg)

Shipping
7 chambers/pallet
5 end caps/pallet
11 pallets/truck

*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below chambers, 9" (230 mm) of stone between chambers/end caps and 40% stone porosity.

STORMTECH MC-4500 END CAP
(not to scale)
Nominal End Cap Specifications

<table>
<thead>
<tr>
<th>Size (L x W x H)</th>
<th>38&quot; x 90&quot; x 61&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>965 mm x 2286 mm x 1549 mm</td>
<td></td>
</tr>
</tbody>
</table>

End Cap Storage
39.5 ft³ (1.12 m³)

Min. Installed Storage*
115.3 ft³ (3.26 m³)

Weight
Nominal 90.0 lbs (40.8 kg)

*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below, 12" (300 mm) of stone perimeter, 9" (230 mm) of stone between chambers/end caps and 40% stone porosity.

"MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm)."
## MC-4500 Chamber Specifications

### Storage Volume per Chamber ft³ (m³)

<table>
<thead>
<tr>
<th></th>
<th>Bare Chamber Storage ft³ (m³)</th>
<th>Chamber and Stone Foundation Depth in. (mm)</th>
<th>9&quot; (230 mm)</th>
<th>12&quot; (300 mm)</th>
<th>15&quot; (375 mm)</th>
<th>18&quot; (450 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-4500 Chamber</td>
<td>106.5 (3.01)</td>
<td></td>
<td>162.6 (4.60)</td>
<td>166.3 (4.71)</td>
<td>169.9 (4.81)</td>
<td>173.6 (4.91)</td>
</tr>
<tr>
<td>MC-4500 End Cap</td>
<td>39.5 (1.12)</td>
<td></td>
<td>115.3 (3.26)</td>
<td>118.6 (3.36)</td>
<td>121.9 (3.45)</td>
<td>125.2 (3.54)</td>
</tr>
</tbody>
</table>

Note: Assumes 9" (230 mm) row spacing, 40% stone porosity, 12" (300 mm) stone above and includes the bare chamber/end cap volume. End cap volume assumes 12" (300 mm) stone perimeter in front of end cap.

### Amount of Stone per Chamber

#### English Tons (Yds³)

<table>
<thead>
<tr>
<th>Stone Foundation Depth</th>
<th>9&quot;</th>
<th>12&quot;</th>
<th>15&quot;</th>
<th>18&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-4500 Chamber</td>
<td>7.4 (5.2)</td>
<td>7.8 (5.5)</td>
<td>8.3 (5.9)</td>
<td>8.8 (6.2)</td>
</tr>
<tr>
<td>MC-4500 End Cap</td>
<td>9.8 (7.0)</td>
<td>10.2 (7.3)</td>
<td>10.6 (7.6)</td>
<td>11.1 (7.9)</td>
</tr>
</tbody>
</table>

#### Metric Kilograms (m³)

<table>
<thead>
<tr>
<th>Stone Foundation Depth</th>
<th>230 mm</th>
<th>300 mm</th>
<th>375 mm</th>
<th>450 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-4500 Chamber</td>
<td>6713 (4.0)</td>
<td>7076 (4.2)</td>
<td>7529 (4.5)</td>
<td>7983 (4.7)</td>
</tr>
<tr>
<td>MC-4500 End Cap</td>
<td>8890 (5.3)</td>
<td>9253 (5.5)</td>
<td>9616 (5.8)</td>
<td>10069 (6.0)</td>
</tr>
</tbody>
</table>

Note: Assumes 12" (300 mm) of stone above and 9" (230 mm) row spacing and 12" (300 mm) of perimeter stone in front of end caps.

### Volume Excavation per Chamber Yd³ (M³)

<table>
<thead>
<tr>
<th>Stone Foundation Depth</th>
<th>9&quot; (230 mm)</th>
<th>12&quot; (300 mm)</th>
<th>15&quot; (375mm)</th>
<th>18&quot; (450 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-4500 Chamber</td>
<td>10.5 (8.0)</td>
<td>10.8 (8.3)</td>
<td>11.2 (8.5)</td>
<td>11.5 (8.8)</td>
</tr>
<tr>
<td>MC-4500 End Cap</td>
<td>9.7 (7.4)</td>
<td>10.0 (7.6)</td>
<td>10.3 (7.9)</td>
<td>10.6 (8.1)</td>
</tr>
</tbody>
</table>

Note: Assumes 9" (230 mm) of separation between chamber rows, 12" (300 mm) of perimeter in front of the end caps, and 24" (600 mm) of cover. The volume of excavation will vary as depth of cover increases.

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**Working on a project? Visit us at** [www.stormtech.com](http://www.stormtech.com) **and utilize the StormTech Design Tool**

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For more information on the StormTech MC-4500 Chamber and other ADS products, please contact our Customer Service Representatives at 1-800-821-6710
### ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

<table>
<thead>
<tr>
<th>MATERIAL LOCATION</th>
<th>DESCRIPTION</th>
<th>AASHTO MATERIAL CLASSIFICATIONS</th>
<th>COMPACTION / DENSITY REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>D Final Fill</td>
<td>Fill material for Layer 'D' starts from the top of the 'C' layer to the bottom of flexible pavement or unpaved finished grade above. Note that pavement subbase may be part of the 'D' layer.</td>
<td>Any soil/rock materials, native soils, or per engineer's plans. Check plans for pavement subgrade requirements. N/A</td>
<td>Prepare per site design engineer's plans. Paved installations may have stringent material and preparation requirements.</td>
</tr>
<tr>
<td>C Initial Fill</td>
<td>Fill material for Layer 'C' starts from the top of the embedment stone (if layers to 24&quot; (600 mm) above the top of the chamber. Note that pavement subbase may be a part of the 'C' layer.</td>
<td>Granular well-graded soil/aggregate mixtures, &lt;35% fines or processed aggregate.</td>
<td>AASHTO M43(^1) A-1, A-2-4, A-3 or AASHTO M43(^2) 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10</td>
</tr>
</tbody>
</table>

**NOTES:**

1. Chambers shall meet the requirements of ASTM F2418-16a, "Standard Specification for Polypropylene (PP) Corrugated Wall Stormwater Collection Chambers" chamber classification 80x101
2. MC-4500 Chambers shall be designed in accordance with ASTM F2787 "Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers".
3. The site design engineer is responsible for assessing the bearing resistance (allowable bearing capacity) of the subgrade soils and the depth of foundation stone with consideration for the range of expected soil moisture conditions.
4. Perimeter stone must be extended horizontally to the excavation wall for both vertical and sloped excavation walls.
5. Requirements for handling and installation:
   - To maintain the width of chambers during shipping and handling, chambers shall have integral, interlocking stacking lugs.
   - To ensure a secure joint during installation and backfill, the height of the chamber joint shall not be less than 3".
   - To ensure the integrity of the arch shape during installation, a) the arch stiffness constant as defined in Section 6.2.8 of ASTM F2418 shall be greater than or equal to 500 lbs/in. and b) to resist chamber deformation during installation at elevated temperatures (above 73° F / 23° C), chambers shall be produced from reflective gold or yellow colors.

**PLEASE NOTE:**

1. The listed AASHTO designations are for gradations only. The stone must also be clean, crushed, angular, for example. A specification for 4" stone would state: "Clean, Crushed, Angular No. 4 (AASHTO M43) Stone".
2. Stormtech compaction requirements are met for 'A' location materials when placed and compacted in 9" (230 mm) (MAX) lifts using two full coverages with a vibratory compactor.
3. Where infiltration surfaces may be compromised by compaction, for standard design load conditions, a flat surface may be achieved by raking or dragging without compaction equipment. For special load designs, contact Stormtech for compaction requirements.
4. Once Layer 'C' is placed, any soil/material can be placed in Layer 'D' up to the finished grade. Most pavement subbase soils can be used to replace the material requirements of Layer 'C' or 'D' at the site design engineer's discretion.
MC-4500 TECHNICAL SPECIFICATION

NOMINAL CHAMBER SPECIFICATIONS

- **Size (W x H x Installed Length):** 100.0" x 60.0" x 48.3" (2540 mm x 1524 mm x 1227 mm)
- **Chamber Storage:** 106.5 Cubic Feet (3.01 m³)
- **Minimum Installed Storage:** 162.6 Cubic Feet (4.60 m³)
- **Weight (Nominal):** 125.0 lbs. (56.7 kg)

NOMINAL END CAP SPECIFICATIONS

- **Size (W x H x Installed Length):** 90.0" x 61.0" x 32.8" (2286 mm x 1549 mm x 833 mm)
- **End Cap Storage:** 39.5 Cubic Feet (1.12 m³)
- **Minimum Installed Storage:** 115.3 Cubic Feet (3.26 m³)
- **Weight (Nominal):** 90 lbs. (40.8 kg)

*Assumes 12" (305 mm) stone above, 9" (229 mm) stone foundation and between chambers, 12" (305 mm) stone perimeter in front of end caps and 40% stone porosity.

PARTIAL CUT HOMES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B".
PARTIAL CUT HOMES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T".
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "V".

<table>
<thead>
<tr>
<th>PART #</th>
<th>STUB</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC4500IEPP06T</td>
<td>6&quot; (150 mm)</td>
<td>42.5&quot; (1081 mm)</td>
<td>0.86&quot; (22 mm)</td>
</tr>
<tr>
<td>MC4500IEPP09B</td>
<td>8&quot; (200 mm)</td>
<td>40.5&quot; (1029 mm)</td>
<td>1.01&quot; (26 mm)</td>
</tr>
<tr>
<td>MC4500IEPP08T</td>
<td>10&quot; (250 mm)</td>
<td>38.37&quot; (975 mm)</td>
<td>1.33&quot; (34 mm)</td>
</tr>
<tr>
<td>MC4500IEPP10B</td>
<td>12&quot; (300 mm)</td>
<td>35.69&quot; (907 mm)</td>
<td>1.55&quot; (39 mm)</td>
</tr>
<tr>
<td>MC4500IEPP12T</td>
<td>15&quot; (375 mm)</td>
<td>32.72&quot; (831 mm)</td>
<td>1.70&quot; (43 mm)</td>
</tr>
<tr>
<td>MC4500IEPP15T</td>
<td>18&quot; (450 mm)</td>
<td>29.36&quot; (746 mm)</td>
<td>---</td>
</tr>
<tr>
<td>MC4500IEPP18B</td>
<td>24&quot; (600 mm)</td>
<td>23.05&quot; (585 mm)</td>
<td>---</td>
</tr>
<tr>
<td>MC4500IEPP24T</td>
<td>---</td>
<td>2.26&quot; (57 mm)</td>
<td>---</td>
</tr>
<tr>
<td>MC4500IEPP24BW</td>
<td>---</td>
<td>2.95&quot; (75 mm)</td>
<td>---</td>
</tr>
<tr>
<td>MC4500IEPP30BW</td>
<td>---</td>
<td>3.25&quot; (83 mm)</td>
<td>---</td>
</tr>
<tr>
<td>MC4500IEPP45BW</td>
<td>---</td>
<td>3.55&quot; (90 mm)</td>
<td>---</td>
</tr>
</tbody>
</table>

*Note: All dimensions are nominal.*

CUSTOM PRECURED INERTS ARE AVAILABLE UPON REQUEST.
INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm)
ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN "B" ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.
**INSPECTION & MAINTENANCE**

**STEP 1)** INSPECT ISOLATOR ROW FOR SEDIMENT

A. **REMOVAL:**
   1. REMOVE/OPE N LID ON NYLOPLAST INLINE DRAIN
   2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
   3. USING A FLASHLIGHT AND STADIArod, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
   4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

B. **ALL ISOLATOR ROWS**
   1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
   2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
   i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
   ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
   3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

**STEP 2)** CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
C. VACUUM STRUCTURE SUMP AS REQUIRED

**STEP 3)** REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

**STEP 4)** INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

**NOTES:**

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.
THE ISOLATOR® ROW

INTRODUCTION
An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a patented technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.

THE ISOLATOR ROW
The Isolator Row is a row of StormTech chambers, either SC-160LP, SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the “first flush” and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.
INSPECTION

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

MAINTENANCE

The Isolator Row was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45° are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.

StormTech Isolator Row (not to scale)

Note: Non-woven fabric is only required over the inlet pipe connection into the end cap for DC-780, MC-3500 and MC-4500 chamber models and is not required over the entire Isolator Row.
ISOLATOR ROW STEP BY STEP MAINTENANCE PROCEDURES

STEP 1
Inspect Isolator Row for sediment.
   A) Inspection ports (if present)
      i. Remove lid from floor box frame
      ii. Remove cap from inspection riser
      iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.
      iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.
   B) All Isolator Rows
      i. Remove cover from manhole at upstream end of Isolator Row
      ii. Using a flashlight, inspect down Isolator Row through outlet pipe
         1. Mirrors on poles or cameras may be used to avoid a confined space entry
         2. Follow OSHA regulations for confined space entry if entering manhole
      iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
         If not, proceed to Step 3.

STEP 2
Clean out Isolator Row using the JetVac process.
   A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
   B) Apply multiple passes of JetVac until backflush water is clean
   C) Vacuum manhole sump as required

STEP 3
Replace all caps, lids and covers, record observations and actions.

STEP 4
Inspect & clean catch basins and manholes upstream of the StormTech system.

SAMPLE MAINTENANCE LOG

<table>
<thead>
<tr>
<th>Date</th>
<th>Stadia Rod Readings</th>
<th>Sediment Depth (1)–(2)</th>
<th>Observations/Actions</th>
<th>Inspector</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/15/11</td>
<td>6.3 ft</td>
<td>none</td>
<td>New installation. Fixed point is CI frame at grade</td>
<td>DJM</td>
</tr>
<tr>
<td>9/24/11</td>
<td>6.2</td>
<td>0.1 ft</td>
<td>Some grit fell</td>
<td>SM</td>
</tr>
<tr>
<td>6/20/13</td>
<td>5.8</td>
<td>0.5 ft</td>
<td>Mucky feel, debris visible in manhole and in Isolator Row, maintenance due</td>
<td>NV</td>
</tr>
<tr>
<td>7/7/13</td>
<td>6.3 ft</td>
<td>0</td>
<td>System jetted and vacuumed</td>
<td>DJM</td>
</tr>
</tbody>
</table>
StormTech Construction Guide

REQUIRED MATERIALS AND EQUIPMENT LIST
- Acceptable fill materials per Table 1
- Woven and non-woven geotextiles
- StormTech solid end caps, pre-cored and pre-fabricated end caps
- StormTech chambers, manifolds and fittings

NOTE: MC-3500 chamber pallets are 77” x 90” (2.0 m x 2.3 m) and weigh about 2010 lbs. (912 kg) and MC-4500 pallets are 100” x 52” (2.5 m x 1.3 m) and weigh about 840 lbs. (381 kg). Unloading chambers requires 72” (1.8 m) (min.) forks and/or tie downs (straps, chains, etc).

IMPORTANT NOTES:
A. This installation guide provides the minimum requirements for proper installation of chambers. Nonadherence to this guide may result in damage to chambers during installation. Replacement of damaged chambers during or after backfilling is costly and very time consuming. It is recommended that all installers are familiar with this guide, and that the contractor inspects the chambers for distortion, damage and joint integrity as work progresses.
B. Use of a dozer to push embedment stone between the rows of chambers may cause damage to chambers and is not an acceptable backfill method. Any chambers damaged by using the “dump and push” method are not covered under the StormTech standard warranty.
C. Care should be taken in the handling of chambers and end caps. End caps must be stored standing upright. Avoid dropping, prying or excessive force on chambers during removal from pallet and initial placement.

Requirements for System Installation

Excavate bed and prepare subgrade per engineer’s plans.
Place non-woven geotextile over prepared soils and up excavation walls.
Place clean, crushed, angular stone foundation 9” (230 mm) min. Install underdrains if required. Compact to achieve a flat surface.
Manifold, Scour Fabric and Chamber Assembly

Install manifolds and lay out woven scour geotextile at inlet rows [min. 17.5 ft (5.33 m)] at each inlet end cap. Place a continuous piece (no seams) along entire length of Isolator® Row(s) in two layers.

Align the first chamber and end cap of each row with inlet pipes. Contractor may choose to postpone stone placement around end chambers and leave ends of rows open for easy inspection of chambers during the backfill process.

Continue installing chambers by overlapping chamber end corrugations. Chamber joints are labeled “Lower Joint – Overlap Here” and “Build this direction – Upper Joint” Be sure that the chamber placement does not exceed the reach of the construction equipment used to place the stone. Maintain minimum 6” (150 mm) spacing between MC-3500 rows and 9” (230 mm) spacing between MC-4500 rows. For the Isolator Row place two continuous layers of ADS Woven fabric between the foundation stone and the isolator row chambers, making sure the fabric lays flat and extends the entire width of the chamber feet.

Manifold Insertion

Insert inlet and outlet manifolds a minimum 12” (300 mm) into chamber end caps. Manifold header should be a minimum 12” (300 mm) from base of end cap.

StormTech Isolator Row Detail

Cover pipe connection to end cap with ADS Geosynthetics 60T Non-Woven Geotextile

Two layers of ADS Geosynthetics 315WTM woven geotextile between foundation stone and chambers

MC-3500 - 8.3 (2.5 m) min wide continuous fabric strip

MC-4500 - 10.3’ (3.1 m) min wide continuous fabric strip

Sump depth TBD by site design engineer

(24” (600 mm) min recommended)

24” (600 mm) HDPE access pipe required

Use Factory pre-cored end cap

Optional inspection port
Initial Anchoring of Chambers – Embedment Stone

Initial embedment shall be spotted along the centerline of the chamber evenly anchoring the lower portion of the chamber. This is best accomplished with a stone conveyor or excavator reaching along the row.

Backfill of Chambers – Embedment Stone

Backfill chambers evenly. Stone column height should never differ by more than 12" (300 mm) between adjacent chamber rows or between chamber rows and perimeter.

Perimeter stone must be brought up evenly with chamber rows. Perimeter must be fully backfilled, with stone extended horizontally to the excavation wall.

Call StormTech at 888.892.2694 for technical and product information or visit www.stormtech.com
Backfill of Chambers – Embedment Stone and Cover Stone

Continue evenly backfilling between rows and around perimeter until embedment stone reaches tops of chambers and a minimum 12” (300 mm) of cover stone is in place. Perimeter stone must extend horizontally to the excavation wall for both straight or sloped sidewalls. The recommended backfill methods are with a stone conveyor outside of the bed or build as you go with an excavator inside the bed reaching along the rows. Backfilling while assembling chambers rows as shown in the picture will help to ensure that equipment reach is not exceeded.

Final Backfill of Chambers – Fill Material

Install non-woven geotextile over stone. Geotextile must overlap 24” (600 mm) where edges meet. Compact at 24” (600 mm) of fill. Roller travel parallel with rows.

Inserta Tee Detail

Only after chambers have been backfilled to top of chamber and with a minimum 12” (300 mm) of cover stone on top of chambers can skid loaders and small LGP dozers be used to final grade cover stone and backfill material in accordance with ground pressure limits in Table 2.

Equipment must push material parallel to rows only. Never push perpendicular to rows. StormTech recommends the contractor inspect chamber rows before assembling chambers rows as shown in the picture will help to ensure that equipment reach is not exceeded.

Table 2: Maximum Construction Loads

<table>
<thead>
<tr>
<th>Material Location</th>
<th>Material</th>
<th>Weight</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>A</td>
<td>15,100</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>A</td>
<td>24,800</td>
<td></td>
</tr>
</tbody>
</table>

No rollers allowed. Use dynamic force of roller only after compacted fill depth reaches 24” (600 mm) over chambers. Roller travel parallel to chamber rows only.

No tracked equipment is allowed on chambers until a min. 12” (300 mm) cover stone is in place.

No equipment allowed on bare chambers. Use excavator or stone conveyor positioned off bed or on foundation stone to evenly fill around all chambers to at least the top of chambers.

Note: Precautions will vary based on inlet pipe material. Contact StormTech for more information.

NOTE: Installation of Inserta Tee at Chamber Joints

INSERTA TEE TO BE INSTALLED COVERED OVER CORRUGATION

SECTION AA

CONVEYING PIPE MATERIAL MAY VARY (PVC, HDPE, ETC.)

INSERTA TEE CONNECTION

PLACE ABS (DESYNTHETIC) NON-WOVEN GEOTEXTILE CENTERED ON INSERTA TEE INLET LOSS BEHAVIOR STONE FOR SOUR PROTECTION AT INSERT INLET CONNECTIONS. GEOTEXTILE MUST EXTEND 8” (200 mm) PAST CHAMBER FOOT.

CHAMBER | MAX DIAMETER OF INSERTA TEE | HEIGHT FROM BASE OF CHAMBER (A) |
---------|----------------------------|---------------------------------|
SG-315   | 6” (150 mm)                | 4” (100 mm)                     |
SG-745   | 10” (250 mm)               | 4” (100 mm)                     |
DG-745   | 10” (250 mm)               | 4” (100 mm)                     |
MC-3955  | 12” (300 mm)               | 4” (100 mm)                     |
MC-4955  | 12” (300 mm)               | 8” (200 mm)                     |

INSERTA TEE ERCH AVAILABLE FOR DRAINS, MIXTURE, SING, SPECIAL USES.

D-40 1/2 40 1/2 40 1/2 GASKETED SOLVENT WELD, 1/2” HP STORM CAVES IN 3” DUCTILE IRON.
Backfill of Chambers – Embedment Stone and Cover Stone

& RQWLQXHHYHQO\EDFNÛOOLQJEHWZHHQURZVDQGDURXQG SHULPHWHUXQWLO

MKXØ@ESDQØBG@LADQRØG@UDØADDMØA@BJÚKKDCØSNØSNOØB G@LADQØ@MCØVHSGØ

 embedment stone reaches tops of chambers and a minimum 12” (300 mm) of cover stone is in place. Perimeter stone must extend horizontally to the excavation wall for both straight or sloped sides. The recommended equipment must push material parallel to rows only. Never push perpendicular as assembling chambers rows as shown in the picture will help to ensure that equipment reach is not exceeded.

Final Backfill of Chambers – Fill Material Insertee Detail

Begin compaction after min. 24” (600 mm) of material over the chambers is reached. Compact additional Table 1 -

Figure 1 - Inspection Port Detail

Figure 2 - Fill Material Locations

PLEASE NOTE:

1. The listed AASHTO designations are for gradations only. The stone must also be clean, crushed, angular. For example, a specification for #4 stone would state: “clean, crushed, angular no. 4 (AASHTO M43 stone).”
2. StormTech compaction requirements are met for “A” location materials when placed and compacted in 9” (230 mm) (max) lifts using two full coverages with a vibratory compactor.
3. Where infiltration surfaces may be comprised by compaction, for standard installations and standard design load conditions, a flat surface may be achieved by raking or dragging without compaction equipment. For special load designs, contact StormTech for compaction requirements.

Table 1 - Acceptable Fill Materials

<table>
<thead>
<tr>
<th>Material Location</th>
<th>Description</th>
<th>AASHTO M43 Designation</th>
<th>Compaction/Density Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D</strong> Final Fill</td>
<td>Fill Material for layer ‘D’ starts from the top of the ‘C’ layer to the bottom of flexible pavement or unpaved finished grade above. Note that the pavement subbase may be part of the ‘D’ layer.</td>
<td>Any soil/rock materials, native soils or per engineer’s plans. Check plans for pavement subgrade requirements.</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Granular well-graded soil/aggregate mixtures, &lt;35% fines or processed aggregate. Most pavement subbase materials can be used in lieu of this layer.</td>
<td>AASHTO M145 A-1, A-2, A-3 or AASHTO M431 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10</td>
<td>Begin compaction after min. 24” (600 mm) of material over the chambers is reached. Compact additional layers in 12” (300 mm) max. lifts to a min. 95% Proctor density for well-graded material and 98% relative density for processed aggregate materials.</td>
</tr>
<tr>
<td><strong>C</strong> Initial Fill</td>
<td>Fill Material for layer ‘C’ starts from the top of the embedment stone (‘B’ layer) to 24” (600 mm) above the top of the chamber. Note that pavement subbase may be part of the ‘C’ layer.</td>
<td>Clean, crushed, angular stone</td>
<td>AASHTO M43 3, 357, 4</td>
</tr>
<tr>
<td><strong>B</strong> Embedment Stone</td>
<td>Fill the surrounding chambers from the foundation stone (‘A’ layer) to the ‘C’ layer above.</td>
<td>Clean, crushed, angular stone</td>
<td>AASHTO M43 3, 357, 4</td>
</tr>
<tr>
<td><strong>A</strong> Foundation Stone</td>
<td>Fill below Chambers from the subgrade up to the foot (bottom) of the chamber.</td>
<td>Clean, crushed, angular stone,</td>
<td>AASHTO M43 3, 357, 4</td>
</tr>
</tbody>
</table>

**NOTE:**

1. 2.
2. 3.
3. 4.
4. 5.
5. 6.
6. However, requirements by others
7. Small LGP track dozers & skid loaders allowed to grade cover stone with at least 12” (300 mm) stone under tracks at all times.
8. Equipment must push parallel to rows at all times.
9. Vehicle Loads

**NOTE:**

1. Inspection ports may be connected through any chamber corrugation valley.
2. All Schedule 40 fittings to be solvent cemented (4” PVC not allowed). No equipment allowed on bare chambers. Use excavator or stone conveyor positioned off bed or on foundation stone to evenly fill around all chambers to at least the top of chambers.
3. Use dynamic force of roller only after compacted fill depth reaches 24” (600 mm) over chambers. Roller travel parallel to chamber rows only.
4. No rollers allowed.
5. Asphalt can be dumped into 36” (900 mm) minimum cover required for dump trucks to dump over chambers. Contact StormTech for additional requirements by others.
6. Tables and figures are provided for reference.
7. *Terms and Conditions of Sale* are available on the ADS website, Advanced Drainage Systems, the ADS logo, and the green stripe are registered trademarks of Advanced Drainage Systems, Inc.
NOTES:

1. 36" (900 mm) of stabilized cover materials over the chambers is required for full dump truck travel and dumping.

2. During paving operations, dump truck axle loads on 24" (600mm) of cover may be necessary. Precautions should be taken to avoid rutting of the road base layer, to ensure that compaction requirements have been met, and that a minimum of 24" (600 mm) of cover exists over the chambers. Contact StormTech for additional guidance on allowable axle loads during paving.

3. Ground pressure for track dozers is the vehicle operating weight divided by total ground contact area for both tracks. Excavators will exert higher ground pressures based on loaded bucket weight and boom extension.

4. Mini-excavators (<8,000lbs/3,628 kg) can be used with at least 12" (300 mm) of stone over the chambers and are limited by the maximum ground pressures in Table 2 based on a full bucket at maximum boom extension.

5. StormTech does not require compaction of initial fill at 18" (450 mm) of cover. However, requirements for others for 6" (150 mm) lifts may necessitate the use of small compactors at 18" (450 mm) of cover.

6. Storage of materials such as construction materials, equipment, spoils, etc. should not be located over the StormTech system. The use of equipment over the StormTech system not covered in Table 2 (ex. soil mixing equipment, cranes, etc.) is limited. Please contact StormTech for more information.

7. Allowable track loads based on vehicle travel only. Excavators shall not operate on chamber beds until the total backfill reaches 3 feet (900 mm) over the entire bed. Excavators shall not operate on chamber beds until the total backfill reaches 3 feet (900 mm) over the entire bed.

### Table 2 - Maximum Allowable Construction Vehicle Loads

<table>
<thead>
<tr>
<th>Material Location</th>
<th>Fill Depth over Chambers in. [mm]</th>
<th>Maximum Allowable Wheel Loads</th>
<th>Maximum Allowable Track Loads</th>
<th>Maximum Allowable Roller Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Max Axle Load for Trucks lbs [kN]</td>
<td>Max Wheel Load for Loaders lbs [kN]</td>
<td>Track Width in. [mm]</td>
</tr>
<tr>
<td><strong>Final Fill Material</strong></td>
<td>36&quot; [900] Compacted</td>
<td>32,000 [142]</td>
<td>16,000 [71]</td>
<td>12&quot; [305]</td>
</tr>
<tr>
<td><strong>Initial Fill Material</strong></td>
<td>24&quot; [600] Compacted</td>
<td>32,000 [142]</td>
<td>16,000 [71]</td>
<td>12&quot; [305]</td>
</tr>
<tr>
<td><strong>Embedment Stone</strong></td>
<td>12&quot; [300]</td>
<td>NOT ALLOWED</td>
<td>NOT ALLOWED</td>
<td>NOT ALLOWED</td>
</tr>
<tr>
<td><strong>Foundation Stone</strong></td>
<td>6&quot; [150]</td>
<td>NOT ALLOWED</td>
<td>NOT ALLOWED</td>
<td>NOT ALLOWED</td>
</tr>
</tbody>
</table>

### Table 3 - Placement Methods and Descriptions

<table>
<thead>
<tr>
<th>Material Location</th>
<th>Placement Methods/ Restrictions</th>
<th>Wheel Load Restrictions</th>
<th>Track Load Restrictions</th>
<th>Roller Load Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final Fill Material</strong></td>
<td>A variety of placement methods may be used. All construction loads must not exceed the maximum limits in Table 2.</td>
<td>36&quot; (900 mm) minimum cover required for dump trucks to dump over chambers.</td>
<td>Dozens to push parallel to rows.(^5)</td>
<td>Roller travel parallel to rows only until 36&quot; (900 mm) compacted cover is reached.</td>
</tr>
<tr>
<td><strong>Initial Fill Material</strong></td>
<td>Excavator positioned off bed recommended. Small excavator allowed over chambers. Small dozer allowed.</td>
<td>Asphalt can be dumped into paver when compacted pavement subbase reaches 24&quot; (600 mm) above top of chambers.</td>
<td>Small GSP track dozers &amp; skid loaders allowed to grade cover stone with at least 12&quot; (300 mm) stone under tracks at all times. Equipment must push parallel to rows at all times.</td>
<td>Use dynamic force of roller only after compacted fill depth reaches 24&quot; (600 mm) over chambers. Roller travel parallel to chamber rows only.</td>
</tr>
<tr>
<td><strong>Embedment Stone</strong></td>
<td>No equipment allowed on bare chambers. Use excavator or stone conveyor positioned off bed or on foundation stone to evenly fill all chambers at least the top of chambers.</td>
<td>No wheel loads allowed. Material must be placed outside the limits of the chamber bed.</td>
<td>No tracked equipment is allowed on chambers until a min. 12&quot; (300 mm) cover stone is in place.</td>
<td>No rollers allowed.</td>
</tr>
<tr>
<td><strong>Foundation Stone</strong></td>
<td>No StormTech restrictions. Contractor responsible for any conditions or requirements by others relative to subgrade bearing capacity, leveling or protection of subgrade.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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17.0 Standard Limited Warranty

STANDARD LIMITED WARRANTY OF STORMTECH LLC (“STORMTECH”): PRODUCTS

(A) This Limited Warranty applies solely to the StormTech chambers and end plates manufactured by StormTech and sold to the original purchaser (the “Purchaser”). The chambers and end plates are collectively referred to as the “Products.”

(B) The structural integrity of the Products, when installed strictly in accordance with StormTech’s written installation instructions at the time of installation, are warranted to the Purchaser against defective materials and workmanship for one (1) year from the date of purchase. Should a defective appear in the Limited Warranty period, the Purchaser shall provide StormTech with written notice of the alleged defect at StormTech’s corporate headquarters within ten (10) days of the discovery of the defect. The notice shall describe the alleged defect in reasonable detail. StormTech agrees to supply replacements for those Products determined by StormTech to be defective and covered by this Limited Warranty. The supply of replacement products is the sole remedy of the Purchaser for breaches of this Limited Warranty. StormTech’s liability specifically excludes the cost of removal and/or installation of the Products.

(C) THIS LIMITED WARRANTY IS EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

(D) This Limited Warranty only applies to the Products when the Products are installed in a single layer. UNDER NO CIRCUMSTANCES, SHALL THE PRODUCTS BE INSTALLED IN A MULTI-LAYER CONFIGURATION.

(E) No representative of StormTech has the authority to change this Limited Warranty in any manner or to extend this Limited Warranty. This Limited Warranty does not apply to any person other than to the Purchaser.

(F) Under no circumstances shall StormTech be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the Products, or the cost of other goods or services related to the purchase and installation of the Products. For this Limited Warranty to apply, the Products must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and StormTech’s written installation instructions.

(G) THE LIMITED WARRANTY DOES NOT EXTEND TO INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES. STORMTECH SHALL NOT BE LIABLE FOR PENALTIES OR LIQUIDATED DAMAGES, INCLUDING LOSS OF PRODUCTION AND PROFITS; LABOR AND MATERIALS; OVERHEAD COSTS; OR OTHER LOSS OR EXPENSE INCURRED BY THE PURCHASER OR ANY THIRD PARTY. SPECIFICALLY EXCLUDED FROM LIMITED WARRANTY COVERAGE ARE DAMAGE TO THE PRODUCTS ARISING FROM ORDINARY WEAR AND TEAR; ALTERATION, ACCIDENT, MISUSE, ABUSE OR NEGLECT; THE PRODUCTS BEING SUBJECTED TO VEHICLE TRAFFIC OR OTHER CONDITIONS WHICH ARE NOT PERMITTED BY STORMTECH’S WRITTEN SPECIFICATIONS OR INSTALLATION INSTRUCTIONS; FAILURE TO MAINTAIN THE MINIMUM GROUND COVERS SET FORTH IN THE INSTALLATION INSTRUCTIONS; THE PLACEMENT OF IMPROPER MATERIALS INTO THE PRODUCTS; FAILURE OF THE PRODUCTS DUE TO IMPROPER SITING OR IMPROPER SIZING; OR ANY OTHER EVENT NOT CAUSED BY STORMTECH. A PRODUCT ALSO IS EXCLUDED FROM LIMITED WARRANTY COVERAGE IF SUCH PRODUCT IS USED IN A PROJECT OR SYSTEM IN WHICH ANY GEOTEXTILE PRODUCTS OTHER THAN THOSE PROVIDED BY ADVANCED DRAINAGE SYSTEMS ARE USED. THIS LIMITED WARRANTY REPRESENTS STORMTECH’S SOLE LIABILITY TO THE PURCHASER FOR CLAIMS RELATED TO THE PRODUCTS, WHETHER THE CLAIM IS BASED UPON CONTRACT, TORT, OR OTHER LEGAL THEORY.
ADS GEOSYNTHETICS 0601T NONWOVEN GEOTEXTILE

Scope
This specification describes ADS Geosynthetics 6.0 oz (0601T) nonwoven geotextile.

Filter Fabric Requirements
ADS Geosynthetics 6.0 oz (0601T) is a needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, which are formed into a random network for dimensional stability. ADS Geosynthetics 6.0 oz (0601T) resists ultraviolet deterioration, rotting, biological degradation, naturally encountered basics and acids. Polypropylene is stable within a pH range of 2 to 13. ADS Geosynthetics 6.0 oz (0601T) conforms to the physical property values listed below:

Filter Fabric Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>UNIT</th>
<th>M.A.R.V. (Minimum Average Roll Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (Typical)</td>
<td>ASTM D 5261</td>
<td>oz/ft² (g/m²)</td>
<td>6.0 (203)</td>
</tr>
<tr>
<td>Grab Tensile</td>
<td>ASTM D 4632</td>
<td>lbs (kN)</td>
<td>160 (0.711)</td>
</tr>
<tr>
<td>Grab Elongation</td>
<td>ASTM D 4632</td>
<td>%</td>
<td>50</td>
</tr>
<tr>
<td>Trapezoid Tear Strength</td>
<td>ASTM D 4533</td>
<td>lbs (kN)</td>
<td>60 (0.267)</td>
</tr>
<tr>
<td>CBR Puncture Resistance</td>
<td>ASTM D 6241</td>
<td>lbs (kN)</td>
<td>410 (1.82)</td>
</tr>
<tr>
<td>Permittivity*</td>
<td>ASTM D 4491</td>
<td>sec⁻¹</td>
<td>1.5</td>
</tr>
<tr>
<td>Water Flow*</td>
<td>ASTM D 4491</td>
<td>gpm/ft² (l/min/m²)</td>
<td>110 (4480)</td>
</tr>
<tr>
<td>AOS*</td>
<td>ASTM D 4751</td>
<td>US Sieve (mm)</td>
<td>70 (0.212)</td>
</tr>
<tr>
<td>UV Resistance</td>
<td>ASTM D 4355</td>
<td>%/hrs</td>
<td>70/500</td>
</tr>
</tbody>
</table>

PACKAGING

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll Dimensions (W x L) – ft</td>
<td></td>
<td>12.5 x 360 / 15 x 300</td>
</tr>
<tr>
<td>Square Yards Per Roll</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Estimated Roll Weight – lbs</td>
<td></td>
<td>195</td>
</tr>
</tbody>
</table>

* At the time of manufacturing. Handling may change these properties.
ADS GEOSYNTHETICS 315W WOVEN GEOTEXTILE

Scope
This specification describes ADS Geosynthetics 315W woven geotextile.

Filter Fabric Requirements
ADS Geosynthetics 315W is manufactured using high tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position. ADS Geosynthetics 315W resists ultraviolet deterioration, rotting and biological degradation and is inert to commonly encountered soil chemicals. ADS Geosynthetics 315W conforms to the physical property values listed below:

Filter Fabric Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
<th>ENGLISH M.A.R.V.</th>
<th>METRIC M.A.R.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Minimum Average Roll Value)</td>
<td>(Minimum Average Roll Value)</td>
</tr>
<tr>
<td>Tensile Strength (Grab)</td>
<td>ASTM D-4632</td>
<td>315 lbs</td>
<td>1400 N</td>
</tr>
<tr>
<td>Elongation</td>
<td>ASTM D-4632</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>CBR Puncture</td>
<td>ASTM D-6241</td>
<td>900 lbs</td>
<td>4005 N</td>
</tr>
<tr>
<td>Puncture</td>
<td>ASTM D-4833</td>
<td>150 lbs</td>
<td>667 N</td>
</tr>
<tr>
<td>Mullen Burst</td>
<td>ASTM D-3786</td>
<td>600 psi</td>
<td>4134 kPa</td>
</tr>
<tr>
<td>Trapezoidal Tear</td>
<td>ASTM D-4533</td>
<td>120 lbs</td>
<td>533 N</td>
</tr>
<tr>
<td>UV Resistance (at 500 hrs)</td>
<td>ASTM D-4355</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Apparent Opening Size (AOS)*</td>
<td>ASTM D-4751</td>
<td>40 US Std. Sieve</td>
<td>0.425 mm</td>
</tr>
<tr>
<td>Permittivity</td>
<td>ASTM D-4491</td>
<td>.05 sec⁻¹</td>
<td>.05 sec⁻¹</td>
</tr>
<tr>
<td>Water Flow Rate</td>
<td>ASTM D-4491</td>
<td>4 gpm/ft²</td>
<td>163 l/min/m²²</td>
</tr>
<tr>
<td>Roll Sizes</td>
<td></td>
<td>12.5’ x 360’</td>
<td>3.81 m x 109.8 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.0’ x 300’</td>
<td>4.57 m x 91.5 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.5’ x 258’</td>
<td>5.33 m x 78.6 m</td>
</tr>
</tbody>
</table>

*Maximum average roll value.