# Acceptable Fill Materials: Stormtech SC-310 Chamber Systems

## Material Location

<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</td>
<td>Final Fill Material for Layer D starts from the top of the C’ layer to the bottom of flexible pavement or unraised finished grade above. Note that pavement subbase may be part of the D’ layer.</td>
<td>Any Soil, Rock, Materials, Native Soils, or Per Engineered Plans. Check Plans for Pavement Subgrade Requirements.</td>
<td>Prepare per Site Design Engineer's Plans. Pave Installation may have stringent material and preparation requirements.</td>
</tr>
<tr>
<td>C</td>
<td>Initial Fill Material for Layer C starts from the top of the Embankment Stone (C’ layer) to 18” (400 mm) above the top of the Chamber. Note that pavement subbase may be part of the C’ layer.</td>
<td>Granular Well-Graded Soil, Aggregate Mixtures, 35% fines or processed aggregate. Most pavement subbase materials can be used in lieu of the layer.</td>
<td>Begin compaction after 12” (300 mm) of material over the Chambers is reached. Compact additional layers at 16” (400 mm) max lifts to a minimum 55% Proctor Density for well-graded material and 95% relative density for processed aggregate materials. Roller Gross Vehicle Weight not to exceed 12,000 lbs (53 MN). Dynamic Force not to exceed 20,000 lbs (69 MN).</td>
</tr>
<tr>
<td>B</td>
<td>Embedment Stone Fill surrounding the chambers from the Foundation Stone (C’ layer) to the C’ layer above.</td>
<td>Clean, Crushed, Angular stone</td>
<td>No compaction required.</td>
</tr>
<tr>
<td>A</td>
<td>Foundation Stone Fill below chambers from the subgrade up to the foot (bottom) of the chamber.</td>
<td>Clean, Crushed, Angular stone</td>
<td>Plate compact or roll to achieve a flat surface.11</td>
</tr>
</tbody>
</table>

### Please Note:

1. The listed AASHTO designations are for gradations only. The stone must also be clean, crushed, angular. For example, a specification for A4 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 a 12” (300 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.

### Diagram:

- **Perimeter Stone (See Note 6)**: 12” (300 mm) MIN
- **Excavation Wall (Can be sloped or vertical)**: 12” (300 mm) MIN
- **SC-310 End Cap**: 12” (300 mm) MIN
- **Pavement Layer (Designed by Site Design Engineer)**: 6” (150 mm) MIN, 18” (450 mm) MAX
- **SC-310 Subgrade Soils (See Note 4)**: 34” (865 mm) MIN

### Notes:

2. SC-310 Chambers shall be designed in accordance with AASHTO F2981 “Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers”.
3. *Acceptable Fill Materials* table above provides materials locations, descriptions, gradations, and compaction requirements for foundation, embedment, and fill materials.
4. 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.
5. Perimeter stone must be extended horizontally to the excavation wall for both vertical and sloped excavation walls.
6. 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.

### Diagram:

- Adair Geosynthetics 80% Non-Woven Geotextile all around clean crushed, angular stone in A & B layers.