DMS-6200, Filter Fabric

Overview


This Specification governs for the material certification, sampling and testing, and material requirements of filter fabrics.

There are two (2) types of filter fabric.
♦ Type 1 is a standard weight fabric for retaining walls and soil separation.
♦ Type 2 is a high strength fabric for rock riprap or other severe use.

Certification

The Materials and Pavements Section of the Construction Division (CST/M&P) maintains an approved list of materials conforming to this Specification. These materials need no further testing unless deemed necessary by the project engineer. Refer to "DMS-6320, Certification of Temporary Sediment Control Fence Fabric, Filter Fabric, and Fabric Underseal" for further details on certification and the approved list of materials.

Sampling and Testing Requirements

For the sampling and testing of Fabric Underseal, the following applies:

Samples are taken in accordance with Test Method “Tex-735-I, Sampling Construction Fabrics.”

Testing is performed in accordance with the test methods listed under “Physical Requirements.”

Material Requirements

General Requirements

Both types of filter fabric have the following qualities:

The fabric consists exclusively of manmade thermoplastic fibers, is a non-woven geotextile fabric, and forms a mat of uniform quality.

Fabric fibers are continuous and randomly throughout the fabric.

The fabric is mildew resistant and rot-proof and it is satisfactory for use in a wet soil and aggregate environment.
Physical Requirements

The fabric conforms to the following requirements when tested according to the test methods specified.

<table>
<thead>
<tr>
<th>Filter Fabric Requirements</th>
<th>Test Method</th>
<th>Type 1</th>
<th>Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabric Weight, on an ambient temperature air-dried tension-free sample.</td>
<td>Test Method “Tex-616-J, Construction Fabrics”</td>
<td>136.0 g/m² (4 oz/yd²), minimum</td>
<td>203.0 g/m² (6 oz/yd²), minimum</td>
</tr>
<tr>
<td>Permittivity 1/sec.</td>
<td>ASTM D 4491</td>
<td>1.0, min</td>
<td>0.5, min</td>
</tr>
<tr>
<td>Tensile Strength, N</td>
<td>ASTM D 4632</td>
<td>445 N (100 lbs.) minimum</td>
<td>890 N (200 lbs.) minimum</td>
</tr>
<tr>
<td>Apparent Opening size</td>
<td>ASTM D 4751</td>
<td>70-100</td>
<td>80-120</td>
</tr>
<tr>
<td>Elongation at yield, %</td>
<td>ASTM D 4632</td>
<td>20-100</td>
<td>20-100</td>
</tr>
<tr>
<td>Trapezoidal Tear, N</td>
<td>ASTM D 4533</td>
<td>156 N (35 lbs.) minimum</td>
<td>334 N (75 lbs.) minimum</td>
</tr>
</tbody>
</table>

Packaging Requirements

Provide fabric in the length and width specified on the plans, specified in the purchase order awarded by the state or as approved.

Wind fabric onto suitable cylindrical forms or cores to aid in handling and unrolling.

Package fabric individually in a suitable container to protect the geotextile from damage due to ultraviolet light and moisture during normal storage and handling.

Identification

Identify each roll with a tag or label affixed to the outside of the roll on one end. List the following information on the tag or label:

♦ unique roll number, serially designated
♦ manufacturer’s lot number or control numbers, if any
♦ name of fabric manufacturer
♦ brand name of the product
♦ manufacturer’s style or catalog designation of the fabric, if any
♦ roll width in meters (inches)
♦ roll length in meters (yards).
Basis for Rejection

Should any individual sample selected at random from 100 rolls, or fraction thereof, fail to meet any specification requirement, then that roll shall be rejected. Two (2) additional samples shall be taken, one from each of two other rolls selected at random from the same 100-roll lot, or fraction thereof.

If either of these two additional samples fails to comply with any portion of the Specification, then the entire quantity of rolls represented by that sample shall be rejected.

Archived Versions

Archived versions of “DMS 6200, Filter Fabrics” are available through the following links:

Click on 6200-0898 for the Specification effective August 1998 through February 2002.