

**ALABAMA DEPARTMENT OF TRANSPORTATION**  
**BUREAU OF MATERIALS AND TESTS**  
ALDOT - 406-01

**METHOD FOR THE PHYSICAL TESTING OF TEMPORARY EROSION CONTROL  
GEOTEXTILES (SILT FENCE) FOR INCLUSION ON LIST II-3**

**1. SCOPE**

1.1 This method covers the procedures for testing temporary silt fence.

**2. APPLICABLE DOCUMENTS**

- 2.1 AASHTO M 288 (Current Edition), Geotextile Specification for Highway Applications
- 2.2 ASTM D 4354, Practice for Sampling of Geosynthetics for Testing
- 2.3 ASTM D 4355, Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
- 2.4 ASTM D 4491, Test Methods for Water Permeability of Geotextiles by Permittivity
- 2.5 ASTM D 4632, Test Method for Grab Breaking Load and Elongation of Geotextiles
- 2.6 ASTM D 4759, Practice for Determining the Specification Conformance of Geosynthetics

**3. MATERIALS**

3.1 The materials used in sediment control shall meet the requirements of AASHTO M 288 for Temporary Silt Fence and Section 810 of ALDOT Standard Specifications for Highway Construction. Silt fences consist of a woven wire fabric, mounted on posts with a geotextile attached to the fence fabric. (Note: See Special Drawing No. ESC-200(Sheet 4 of 4) Details of Silt Fence.)

4. **PROCEDURE**

- 4.1 Before a product can be evaluated to be included on Materials, Sources and Devices with Special Acceptance Requirements List II-3 Geotextiles, it must have been evaluated by the AASHTO National Transportation Product Evaluation Program (NTPEP). If a product is listed in the NTPEP Report, then it may be submitted for evaluation by ALDOT. The Department will then make selected verification tests of the product to insure compliance with the Department's Specifications. The sample should be two pieces a minimum of nine feet (3 meters) by the width of the roll to enable samples for testing.
- 4.2 Geotextiles submitted for testing must meet the specifications of AASHTO M 288 Table 7 (Temporary Silt Fence Property Requirements). These tests include Grab Strength ASTM D 4632, Permittivity ASTM D 4491 and Apparent Opening Size ASTM D 4751. Geotextile product acceptance shall be based on ASTM D 4759.
- 4.3 If the geotextile meets the above requirements, a piece of geotextile shall be subjected to a six month weathering test. The sample shall be placed on a stand and positioned so as to be facing East-West to enable the material to be exposed to the maximum sunlight possible. Geotextile shall be tested on a monthly schedule. Two samples shall be cut for Grab Strength and Elongation ASTM D 4632 in each the machine and cross machine direction.
- 4.4 At the end of a six-month test period, the geotextile shall retain a minimum of 80% of the specified Grab Strength as per AASHTO M 288 Table 7.

5. **REPORTING**

- 5.1 Note the test values for the average of the six-month test period on BMT-16. Send a copy of results to the Product Evaluation Board for their recommendation to the Testing Engineer for placing product on List II-3.