



Designation: D 6461 – 99 (Reapproved 2007)<sup>ε1</sup>

## Standard Specification for Silt Fence Materials<sup>1</sup>

This standard is issued under the fixed designation D 6461; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

<sup>ε1</sup> NOTE—Editorial changes were made throughout in November 2007.

### 1. Scope

1.1 This specification covers requirements and test methods for geotextile fabrics and associated components used in temporary silt fence applications. This is a material purchasing specification based on AASHTO M288.

1.2 This specification is applicable to the use of a geotextile as a vertical permeable interceptor designed to remove suspended soil from overland, nonconcentrated water flow. The function of a temporary silt fence is to trap and allow settlement of soil particles from sediment laden water. The purpose is to greatly limit the transport of eroded soil from the a construction site by water runoff.

1.3 The tests used to characterize the silt fence are intended to ensure good workmanship and quality and are not necessarily adequate for design purposes in view of the wide variety of possible sediments and performance objectives.

1.4 The values stated in SI units are to be regarded as the standard. The values in inch-pound units are provided for information only.

### 2. Referenced Documents

#### 2.1 ASTM Standards:<sup>2</sup>

D 123 Terminology Relating to Textiles

D 276 Test Methods for Identification of Fibers in Textiles

D 4354 Practice for Sampling of Geosynthetics for Testing

D 4355 Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus

D 4439 Terminology for Geosynthetics

D 4491 Test Methods for Water Permeability of Geotextiles by Permittivity

D 4632 Test Method for Grab Breaking Load and Elongation of Geotextiles

D 4751 Test Method for Determining Apparent Opening Size of a Geotextile

D 4759 Practice for Determining the Specification Conformance of Geosynthetics

D 4873 Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples

D 5141 Test Method for Determining Filtering Efficiency and Flow Rate of a Geotextile for Silt Fence Application Using Site-Specific Soil

#### 2.2 AASHTO Standard:

M288-96 Standard Specification for Geotextile Specification for Highway Applications<sup>3</sup>

### 3. Materials and Manufacture

3.1 Fibers used in the manufacture of geotextiles for silt fence, and the threads used in joining geotextiles by sewing, shall consist of long-chain synthetic polymers composed of at least 95 % by weight of polyolefins or polyester. They shall be formed into a stable network such that the filaments or yarns retain their dimensional stability relative to each other, including selvages.

3.2 Geotextiles and related materials used for temporary silt fence shall conform with the physical requirements of Sections 7 and 8.

3.3 All property values, with the exception of apparent opening size (AOS), in this specification represent minimum average roll values (MARV) in the weakest principle direction (that is, average test results of any roll in a lot sampled for conformance or quality assurance testing shall meet or exceed the minimum value provided herein). Values for AOS represent maximum average roll values.

### 4. Sampling, Testing, and Acceptance

4.1 Silt fence shall be subject to sampling and testing to verify conformance with this specification. Sampling for testing shall be in accordance with Practice D 4354. Acceptance shall be based on testing of either conformance samples obtained using Procedure A of Practice D 4354, or based on

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.25 on Erosion and Sediment Control Technology.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001, <http://www.transportation.org>.