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Standard Specification for Silt Fence Materials[1]

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ε[1] NOTE—Editorial changes were made throughout in November 2007.
ε[2] NOTE—Reference to Terminology D653 added in March 2008.

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:*[2]

D123 Terminology Relating to Textiles
D276 Test Methods for Identification of Fibers in Textiles
D653 Terminology Relating to Soil, Rock, and Contained Fluids
D4354 Practice for Sampling of Geosynthetics for Testing
D4355 Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus
D4439 Terminology for Geosynthetics
D4491 Test Methods for Water Permeability of Geotextiles by Permittivity
D4632 Test Method for Grab Breaking Load and Elongation of Geotextiles
D4751 Test Method for Determining Apparent Opening Size of a Geotextile
D4759 Practice for Determining the Specification Conformance of Geosynthetics
D4873 Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples
D5141 Test Method for Determining Filtering Efficiency and Flow Rate of the Filtration Component of a Sediment Retention Device

2.2 *AASHTO Standard:*

M288-96 Standard Specification for Geotextile Specification for Highway Applications[3]

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.

[1] 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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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] 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.