



Designation: D6461/D6461M – 16a

Standard Specifications for Silt Fence Materials¹

This standard is issued under the fixed designation D6461/D6461M; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers requirements and test methods for geotextile fabrics and associated components used in temporary silt fence applications. **Table 1** is a material purchasing specification based on AASHTO M288. **Table 2** is a specification to be used in areas of high water flow.

1.2 Both specifications are 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 construction sites and other areas affected by water runoff.

NOTE 1—It should be noted that proper installation and maintenance are critical for the effective functioning of silt fence.

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 either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents, therefore each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

NOTE 2—Although the **Table 1** specification should be acceptable in most erosion control applications, it should be noted that an alternative silt fence specification for a higher water flow rate, listed in **Table 2**, may be required by the engineers in areas that are susceptible to higher water runoff; using **Table 2** specification will minimize safety hazards such as hydroplaning in these areas.

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.

Current edition approved Dec. 1, 2016. Published January 2017. Originally approved in 1999. Last previous edition approved in 2016 as D6461 – 16. DOI: 10.1520/D6461_D6461M-16A.

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 and Rolled Erosion Control Products(RECPs) 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 Methods 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
- D6637 Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-Rib Tensile Method

2.2 AASHTO Standard:

- M288-15 Standard Specification for Geotextile Specification for Highway Applications³

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 polyolefin 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.

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>.