



Designation: D 4759 – 02

Standard Practice for Determining the Specification Conformance of Geosynthetics¹

This standard is issued under the fixed designation D 4759; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This practice covers a procedure for determining the conformance of geosynthetic properties to standard specifications.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 4354 Practice for Sampling of Geosynthetics for Testing²

D 4439 Terminology for Geosynthetics²

D 4533 Test Method for Trapezoid Tearing Strength of Geotextiles²

3. Terminology

3.1 *Definitions:*

3.1.1 *geotextile, n*—any permeable textile used with foundation soil, rock, earth, or any other geotechnical engineering related material as an integral part of a man-made project, structure, or system.

3.1.2 *geosynthetic, n*—a planar product manufactured from polymeric material used with soil, rock, earth, or other geotechnical engineering related material as an integral part of a man-made project, structure, or system.

3.1.3 *specification, n*—a precise statement of a set of requirements to be satisfied by a material, product, system or service that indicates the procedures for determining whether each of the requirements is satisfied.

3.1.4 *test result, n*—a value obtained by a given test method, expressed as a single determination or a specified combination of a number of determinations.

3.1.5 For definition of terms relating to geotextiles, refer to Terminology D 4439.

4. Significance and Use

4.1 This practice provides a means by which the purchaser can determine the conformance of geosynthetic properties as applied to the acceptance or rejection of a material in regards to a material specification.

4.2 This practice has been developed with strong emphasis on practicality and the realization that all geosynthetics are subjected to a vigorous quality control program prior to shipping.

NOTE 1—It is suggested that the user obtain the mean, standard deviation, and/or the coefficient of variation for given physical/mechanical properties of a product directly from the manufacturer. If this data is unavailable, it is suggested that users of this practice begin to accumulate data that can be used to estimate product averages and standard deviations for each product.

NOTE 2—The risk to the purchaser of buying out of specification materials is minimal when conformance requirements are detailed in the purchase specification and adequate conformance testing is performed. It is the producer's responsibility to perform thorough quality control testing for all properties requiring certification. The producer's risk of rejection is minimal with the performance of this thorough quality control testing.

5. Procedure

5.1 Divide into lots and select lot and laboratory samples as directed in Practice D 4354.

5.2 Test the number of specimens as directed in the applicable testing method.

5.3 If the average test values for the individual lot sampling unit meet all the acceptable specification values, the lot passes.

5.4 If the average test value for any individual lot sampling unit does not meet one or more of the acceptable specification values, the lot shall be resampled and tested, except as noted in 5.4.3.

¹ This practice is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.01 on Mechanical Properties.

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² *Annual Book of ASTM Standards*, Vol 04.13.