



Designation: D 4354 – 99

## Standard Practice for Sampling of Geosynthetics for Testing<sup>1</sup>

This standard is issued under the fixed designation D 4354; 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.

### 1. Scope

1.1 This practice covers three procedures for the sampling of geosynthetics for testing. This practice requires that instructions on taking laboratory samples and test specimens be part of every test method for geosynthetics.

1.1.1 The first procedure describes the sampling of production units for the purpose of manufacturer's quality control (MQC) (Table 1).

1.1.2 The second procedure describes the sampling of production units for the purpose of manufacturer's quality assurance (MQA) testing during the manufacturing process. This requires that backup statistical process control records be maintained during the manufacturing process (Table 2).

1.1.3 The third procedure describes the division of shipments of geosynthetics into lots and the determination of lot sample size for purchaser's specification conformance testing (Table 3).

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 123 Terminology Relating to Textiles<sup>2</sup>
- D 4271 Practice for Writing Statements on Sampling in Test Methods for Textiles<sup>3</sup>
- D 4439 Terminology for Geosynthetics<sup>4</sup>

### 3. Terminology

#### 3.1 Definitions:

3.1.1 *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.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee D-35 on Geosynthetics and is the direct responsibility of Subcommittee D35.01 on Mechanical Properties.

Current edition approved Dec. 10, 1999. Published March 2000. Originally published as D 4354 – 84. Last previous edition D 4354 – 96.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 07.01.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 07.02.

<sup>4</sup> *Annual Book of ASTM Standards*, Vol 04.13.

TABLE 1 Number of Units to be Selected as Lot Sample—Purchaser's Specification Conformance

Number of Units in Lot	Number of Units Selected
1 to 2	1
3 to 8	2
9 to 27	3
28 to 64	4
65 to 125	5
126 to 216	6
217 to 343	7
344 to 512	8
513 to 729	9
730 to 1000	10
1001 or more	11

3.1.2 *lot, n*—a unit of production, or a group of other units or packages, taken for sampling or statistical examination, having one or more common properties and being readily separable from other similar units.

3.1.3 *quality assurance, n*—all those planned or systematic actions necessary to provide adequate confidence that a material, product, system, or service will satisfy given needs.

3.1.4 *quality control, n*—the operational techniques and the activities which sustain a quality of material, product, system, or service that will satisfy given needs; also the use of such techniques and activities.

3.1.5 *sample, n*—(1) a portion of material which is taken for testing or for record purposes. (See also *sample, lot*; *sample, laboratory*; and *specimen*.) (2) a group of specimens used, or of observations made, which provide information that can be used

TABLE 2 Number of Units to be Selected as Lot Sample—Manufacturer's Quality Assurance

Number of Units in Lot	Number of Units Selected
1 to 200	1
201 to 500	2
501 to 1000	3
1001 or more	4

TABLE 3 Number of Units to be Selected as Lot Sample—Purchaser's Specification Conformance

Number of Units in Lot	Number of Units Selected
1 to 200	1
201 to 500	2
501 to 1000	3
1001 or more	4