



Designation: ~~D4427~~ – ~~13~~ ~~D4427~~ – 13 (Reapproved 2017)

Standard Classification of Peat Samples by Laboratory Testing¹

This standard is issued under the fixed designation D4427; 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 U.S. Department of Defense.

1. Scope*~~Scope~~

1.1 This classification is a system for subdividing and assigning nomenclature to peat samples through laboratory tests.

1.2 *This standard does not purport to address all of the safety problems, 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.*

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

[D653 Terminology Relating to Soil, Rock, and Contained Fluids](#)

[D1997 Test Method for Laboratory Determination of the Fiber Content of Peat Samples by Dry Mass](#)

[D2974 Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils](#)

[D2976 Test Method for pH of Peat Materials](#)

[D2980 Test Method for Saturated Density, Moisture-Holding Capacity, and Porosity of Saturated Peat Materials](#)

[D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction](#)

3. Terminology

3.1 *Definitions*—For definitions of common technical terms in this standard, refer to Terminology [D653](#).

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *absorbency*—the amount of water by mass that can be held by the peat. This amount is expressed in terms of the water-holding capacity as measured using Test Method [D2980](#).

3.2.2 *acidity*—expressed as the pH of the peat in water as measured using Test Method [D2976](#).

3.2.3 *ash content*—the percentage by dry mass of material remaining after the oven dry peat is burned, using the methods described in Test Methods [D2974](#).

3.2.4 *botanical composition*—the dominant plant genus, genera, or informal plant group identified by visual observation as comprising a portion of the fiber in the peat.

3.2.5 *fiber content*—the dry mass of fibers remaining after wet sieving over a No. 100 (150- μ m) sieve. Fiber content is expressed as a percentage of the original dry mass, using the method described in Test Method [D1997](#).

4. Significance and Use

4.1 The purpose of this classification is to standardize the naming of peat materials so that the peat-producer can better identify the product and the peat-consumer can better select peat materials to meet requirements. This system may also be used for peat

¹ This classification is under the jurisdiction of ASTM Committee [D18](#) on Soil and Rock and is the direct responsibility of Subcommittee [D18.07](#) on Identification and Classification of Soils.

Current edition approved July 1, 2013May 1, 2017. Published July 2013July 2017. Originally approved in 1984. Last previous edition approved in 20072013 as [D4427 – 07](#):[D4427 – 13](#). DOI: [10.1520/D4427-13](#):[10.1520/D4427-13R17](#).

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.

*A Summary of Changes section appears at the end of this standard