



Designation: D586 – 23

Standard Test Method for Ash and Organic Matter Content of Degradable Erosion Control Products¹

This standard is issued under the fixed designation D586; 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 test method covers the determination of the ash and organic matter contents of degradable Erosion Control Products (ECPs) by ignition at $900 \pm 25^\circ\text{C}$. This test method is primarily used to determine the ash and organic matter contents of degradable erosion control products (ECPs) to satisfy specifications set forth by various agencies.

1.2 *Units*—The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice D6026.

1.3.1 The procedures used to specify how data are collected/recorded and calculated in the standard are regarded as the industry standard. In addition, they are representative of the significant digits that generally should be retained. The procedures used do not consider material variation, purpose for obtaining the data, special purpose studies, or any considerations for the user's objectives; and it is common practice to increase or reduce significant digits of reported data to be commensurate with these considerations. It is beyond the scope of this standard to consider significant digits used in analysis methods for engineering data.

1.4 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *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:*

D653 Terminology Relating to Soil, Rock, and Contained Fluids

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

D4753 Guide for Evaluating, Selecting, and Specifying Balances and Standard Masses for Use in Soil, Rock, and Construction Materials Testing

D6026 Practice for Using Significant Digits and Data Records in Geotechnical Data

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of common technical terms used in this standard, refer to Terminology D653.

4. Summary of Test Method

4.1 This test method is used to determine the average percent ash and organic matter content of a degradable ECP. At least three test specimens are obtained from a representative sample. One specimen is used to determine the water content which is used in calculating the moisture-free mass. Two or more specimens are used to determine the average ash content.

4.2 A test specimen of known mass used to determine the ash content is placed inside a muffle furnace at $900 \pm 25^\circ\text{C}$ for a period of time until it is completely combusted. The remaining material after combustion is ash. This process is repeated at least twice, such that the average ash content and a calculation for organic material for the degradable ECP is determined.

5. Significance and Use

5.1 The ash content of the degradable ECP may consist of various residues from chemicals used in its manufacture, metallic matter from piping and machinery, mineral matter in the ECP fibers from which the degradable ECP was made, and filling, coating, pigmenting or other added materials. The amount and composition of the ash is a function of the presence or absence of any of these materials or others singly or in

¹ This test method 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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*A Summary of Changes section appears at the end of this standard