



Designation: D4371/D4371M – 06 (Reapproved 2019)^{ε1}

Standard Test Method for Determining the Washability Characteristics of Coal¹

This standard is issued under the fixed designation D4371/D4371M; 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.

^{ε1} NOTE—The designation was editorially updated to dual and other editorial changes were made throughout in December 2019.

INTRODUCTION

The American Society for Testing and Materials has recognized the need for a standard procedure to conduct washability analyses that will serve as an aid to technical communication among individuals and organizations that supply, purchase, and utilize coal. This test method standardizes procedures utilized for performing washability analyses, the data from which can be used for interpreting preparation plant efficiency, for determining preparation plant design, and for determining the potential recovery and quality of coal reserves.

1. Scope

1.1 This test method describes procedures for determining the washability characteristics of coarse-coal fractions and fine-coal fractions. Each sample being tested can have more than one coarse-coal size fraction and more than one fine-coal size fraction (see [Annex A1](#)). Each such size fraction has an upper size limit and a lower size limit, neither of which overlaps with the next larger nor smaller size fraction. (See Test Method [D4749](#).)

1.2 While, in general, this test method has useful application in determining the washability characteristics of low-rank coals, in the strictest sense, it is not necessarily the most technically correct test method to determine washability characteristics of low-rank coals because of problems relative to the loss of moisture through drying during sample preparation and analysis. Methods that are directly applicable to low-rank coals are to be developed.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.4 *This standard does not purport to address 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. For specific hazard statements, see Section 8 and [Appendix X1](#).

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:²

- [D2013 Practice for Preparing Coal Samples for Analysis](#)
- [D2234/D2234M Practice for Collection of a Gross Sample of Coal](#)
- [D4749 Test Method for Performing the Sieve Analysis of Coal and Designating Coal Size](#)
- [D6883 Practice for Manual Sampling of Stationary Coal from Railroad Cars, Barges, Trucks, or Stockpiles](#)
- [E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves](#)
- [E100 Specification for ASTM Hydrometers](#)
- [E126 Test Method for Inspection, Calibration, and Verification of ASTM Hydrometers](#)
- [E323 Specification for Perforated-Plate Sieves for Testing Purposes](#)

¹ This test method is under the jurisdiction of ASTM Committee [D05](#) on Coal and Coke and is the direct responsibility of Subcommittee [D05.07](#) on Physical Characteristics of Coal.

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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.