



Designation: D8106 – 17

Standard Test Methods for Determining the Oil Sorption Capacity of Organophilic Clay¹

This standard is issued under the fixed designation D8106; 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 standard covers two test methods (Method A for granular material, Method B for powdered material) that can be used as an index test for the evaluation of the oil sorption capacity of a representative sample of organophilic clay. The test method is not intended to be a performance test and the oil specified in the test methods may yield different results than other non-aqueous phase liquids (for example, coal tar, creosote, crude oil) encountered in the field. Method A should only be used on granular organophilic clay; otherwise finer particles may pass through the test sieve.

1.2 All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice [D6026](#).

1.2.1 The procedures used to specify how data are collected/recorded or calculated in this 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 the 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 design.

1.3 *Units*—The values stated in SI units are to be regarded as the primary units for the standard. For information only, non-SI units of measurement are also included in this standard to describe some equipment (bucket, sieve).

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:²

- [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 in Geotechnical Data](#)
- [D6913 Test Methods for Particle-Size Distribution \(Gradation\) of Soils Using Sieve Analysis](#)
- [E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves](#)

3. Terminology

3.1 Definitions:

3.1.1 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 *granular organophilic clay, n*—a manufactured oleophilic material consisting of base clay to which an organic compound has been chemically bonded to the clay surface with at least 95 % material, by dry mass, retained on a 210 μm (No. 70) sieve in accordance with [D6913](#).

3.2.2 *powdered organophilic clay, n*—a manufactured oleophilic material consisting of base clay to which an organic compound has been chemically bonded to the clay surface with at least 65 % material, by dry mass, passing a 75 μm (No. 200) sieve.

¹ This test method is under the jurisdiction of ASTM Committee [D18](#) on Soil and Rock and is the direct responsibility of Subcommittee [D18.21.07](#) on Groundwater and Vadose Zone Remediation Technologies.

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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.