



Designation: D8204 – 18

Standard Practice for Burial and Retrieval of Samples in a Test Pad to Evaluate Installation Effects on Geosynthetic Clay Liners¹

This standard is issued under the fixed designation D8204; 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 practice covers standardized procedures for obtaining samples of geosynthetic clay liners (GCLs) from a test pad for use in assessment of the effects immediately after installation caused only by the installation techniques. The assessment may include physical testing. This practice is applicable to GCLs only.

1.2 This practice is limited to full-scale test pads, and does not address laboratory modeling of field conditions. This practice does not address which test method(s) to use for quantifying installation damage.

1.3 *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.*

1.4 *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

D1557 Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))

D1883 Test Method for California Bearing Ratio (CBR) of Laboratory-Compacted Soils

D2216 Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

D2487 Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)

D4429 Test Method for CBR (California Bearing Ratio) of Soils in Place (Withdrawn 2018)³

D4439 Terminology for Geosynthetics

D5887/D5887M Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter

D5888 Guide for Storage and Handling of Geosynthetic Clay Liners

D5993 Test Method for Measuring Mass per Unit Area of Geosynthetic Clay Liners

D6072/D6072M Practice for Obtaining Samples of Geosynthetic Clay Liners

D6102 Guide for Installation of Geosynthetic Clay Liners

D6496/D6496M Test Method for Determining Average Bonding Peel Strength Between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners

D6768/D6768M Test Method for Tensile Strength of Geosynthetic Clay Liners

D6913/D6913M Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

2.2 GRI Standard:⁴

GRI Guide GS11 Standard Guide for Constructing Test Pads to Assess Protection Materials Intended to Avoid Geomembrane Puncture

3. Terminology

3.1 Definitions:

3.1.1 *geosynthetic clay liner (GCL), n*—a manufactured hydraulic barrier consisting of clay bonded to a layer or layers of geosynthetics.

3.1.2 *multi-component GCL, n*—GCL with an attached film, coating, or membrane decreasing the hydraulic conductivity or protecting the clay core, or both.

3.1.3 *sample, n*—(1) a portion of material that is taken for testing or for record purposes; (2) a group of specimens used,

¹ This practice is under the jurisdiction of ASTM Committee D35 on Geosynthetics and is the direct responsibility of Subcommittee D35.04 on Geosynthetic Clay Liners.

Current edition approved July 15, 2018. Published July 2018. Originally approved in 2018. DOI: 10.1520/D8204-18.

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.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from Geosynthetic Institute, 475 Kedron Avenue, Folsom, PA 19033-1208, <http://www.geosynthetic-institute.org>.