



Standard Guide for Coring and Logging Cement - or Lime-Stabilized Soil¹

This standard is issued under the fixed designation D 6236; 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 guide covers guidance for obtaining cores of cement or lime-stabilized soil for use in determining compressive strength, lift thickness and bond strength, and other physical properties. This guide is primarily for use in coring through shallow (0.3 to 3 m (1 to 10 ft) thick) layers of cement or lime-stabilized soils containing particles < 50 mm (2 in.) in diameter to the underlying foundation.

NOTE 1—This guide could be used for some Class C in self-cementing fly ash materials, which may also stabilize soil.

1.2 This guide does not cover material of less than 2070 kPa (300 psi) compressive strength such as cement-soil-bentonite mixtures or some controlled low strength materials (CLSM).

1.3 The values stated in SI units are to be regarded as the standard. Other values are examples or for information only.

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 and health practices and determine the applicability of regulatory limitations prior to use.* Specific precautionary statements are given in Section 8.

1.5 *This guide offers an organized collection of information or a series of options and does not recommend a specific course of action. This guide cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this guide may be applicable in all circumstances. This guide is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this guide be applied without consideration of a project's many unique aspects. The word "Standard" in the title of this document means only that the document has been approved through the ASTM consensus process.*

2. Referenced Documents

2.1 ASTM Standards:²

- C 51 Terminology Relating to Lime and Limestone (as used by the Industry)
- C 219 Terminology Relating to Hydraulic Cement
- D 559 Test Methods for Wetting and Drying Compacted Soil-Cement Mixtures
- D 560 Test Methods for Freezing and Thawing Compacted Soil-Cement Mixtures
- D 653 Terminology Relating to Soil, Rock, and Contained Fluids
- D 1633 Test Method for Compressive Strength of Molded Soil-Cement Cylinders
- D 2113 Practice for Rock Core Drilling and Sampling of Rock for Site Investigation
- D 4220 Practices for Preserving and Transporting Soil Samples
- D 4452 Test Methods for X-Ray Radiography of Soil Samples
- D 5079 Practices for Preserving and Transporting Rock Core Samples
- D 5102 Test Method for Unconfined Compressive Strength of Compacted Soil-Lime Mixtures
- D 5434 Guide for Field Logging of Subsurface Explorations of Soil and Rock

3. Terminology

3.1 Definitions:

- 3.1.1 Refer to Terminology C 51 for terms relating to *lime*.
- 3.1.2 Refer to Terminology C 219 for terms relating to *hydraulic cement*.
- 3.1.3 Refer to Terminology D 653 for terms relating to *soil*.

4. Summary of Guide

4.1 Core samples of cement or lime-stabilized soil with a core diameter of 76- or 102-mm (3- or 4-in.) are obtained through the entire thickness of a stabilized soil section or facing using a rotary drill equipped with a diamond coring bit.

¹ This test method is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.15 on Stabilization With Admixtures.

Current edition approved May 1, 2004. Published June 2004. Originally approved in 1998. Last previous edition approved in 1998 as D 6236 - 98.

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.

