



Designation: D5050 – 08 (Reapproved 2023)

Standard Guide for Commercial Use of Lime Kiln Dusts and Portland Cement Kiln Dusts¹

This standard is issued under the fixed designation D5050; 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 is intended to evaluate and describe lime kiln dusts and portland cement kiln dusts for use in commercial applications. This guide is not intended to cover uses for lime or portland cement.

1.2 *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.*

1.3 *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

- C25** Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime
- C109/C109M** Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50 mm] Cube Specimens)
- C110** Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone
- C151/C151M** Test Method for Autoclave Expansion of Hydraulic Cement
- C184** Test Method for Fineness of Hydraulic Cement by the 150- μ m (No. 100) and 75- μ m (No. 200) Sieves (Withdrawn 2002)³

¹ This guide is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.03 on Treatment, Recovery and Reuse.

Current edition approved June 1, 2023. Published June 2023. Originally approved in 1990. Last previous edition approved in 2015 as D5050 – 08 (2015). DOI: 10.1520/D5050-08R23.

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.

- C187** Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
 - C266** Test Method for Time of Setting of Hydraulic-Cement Paste by Gillmore Needles
 - C305** Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
 - C400** Test Methods for Quicklime and Hydrated Lime for Neutralization of Waste Acid
 - C593** Specification for Fly Ash and Other Pozzolans for Use With Lime for Soil Stabilization
 - C602** Specification for Agricultural Liming Materials
 - C911** Specification for Quicklime, Hydrated Lime, and Limestone for Selected Chemical and Industrial Uses
 - C1529** Specification for Quicklime, Hydrated Lime, and Limestone for Environmental Uses
 - D558/D558M** Test Methods for Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures
 - D1632** Practice for Making and Curing Soil-Cement Compression and Flexure Test Specimens in the Laboratory
 - D1633** Test Methods for Compressive Strength of Molded Soil-Cement Cylinders
 - D3155** Test Method for Lime Content of Uncured Soil-Lime Mixtures (Withdrawn 2020)³
 - D3551** Practice for Laboratory Preparation of Soil-Lime Mixtures Using Mechanical Mixer
 - D3668** Test Method for Bearing Ratio for Laboratory Compacted Soil-Lime Mixtures (Withdrawn 1997)³
 - D4318** Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
 - D6249** Guide for Alkaline Stabilization of Wastewater Treatment Plant Residuals
- 2.2 *Code of Federal Regulations:*⁴
- 40 CFR Part 268 Appendix 1 Toxicity Characteristics Leaching Procedure
 - 40 CFR Part 268.43(a) Treatment Standards Expressed as Waste Concentrations (reserved)

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 lime kiln dust:

⁴ Code of Federal Regulations available from the Superintendent of Documents, United States Government Printing Office, Washington, DC 20402.