



Designation: C1529 – 19

# Standard Specification for Quicklime, Hydrated Lime, and Limestone for Environmental Uses<sup>1</sup>

This standard is issued under the fixed designation C1529; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope\*

1.1 This specification covers lime and limestone products and by-product alkaline materials suitable for environmental uses as shown in [Table 1](#).

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 The buyer shall designate the use, as listed in [Table 1](#), and may specify one or more of the type designations listed below [Table 1](#).

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:<sup>2</sup>

[C25 Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime](#)

[C50/C50M Practice for Sampling, Sample Preparation, Packaging, and Marking of Lime and Limestone Products](#)

[C51 Terminology Relating to Lime and Limestone \(as used by the Industry\)](#)

[C110 Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone](#)

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee C07 on Lime and Limestone and is the direct responsibility of Subcommittee C07.02 on Specifications and Guidelines.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[C400 Test Methods for Quicklime and Hydrated Lime for Neutralization of Waste Acid](#)

[D6249 Guide for Alkaline Stabilization of Wastewater Treatment Plant Residuals](#)

## 3. Terminology

### 3.1 Definitions:

3.1.1 For definitions of terms relating to this specification, refer to Terminology [C51](#).

## 4. Chemical Composition and Physical Properties

4.1 The requirements for quicklime, hydrated lime, and limestone for the designated end uses are as shown in [Table 1](#), and are on the basis of the weight of sample taken at the place of manufacture.

## 5. General Requirements

5.1 Quicklime shall be reasonably free of unslakable residues and shall be capable of disintegrating in water to form a suspension of finely divided material. The amount of residue shall not exceed that agreed upon between the manufacturer and the purchaser (the residue is the amount of material retained on a specified screen). The method for measuring quicklime residue appears in Test Methods [C110](#).

5.2 The slaking rate for the specified quicklime should be matched to the requirements of the slaking equipment. The method for measuring the slaking rate of quicklime appears in Test Methods [C110](#).

## 6. Sampling and Inspection

6.1 Conduct the sampling, inspection, rejection, retesting, packaging, and marking in accordance with Practice [C50/C50M](#).

## 7. Test Methods

7.1 The chemical analyses shall be made in accordance with Test Methods [C25](#).

7.2 The physical tests shall be made in accordance with Test Methods [C110](#).

7.3 The basicity-factor tests shall be made in accordance with Test Methods [C400](#).

\*A Summary of Changes section appears at the end of this standard