
Standard Specification for Quicklime and Hydrated Lime for Soil Stabilization

AASHTO Designation: M 216-22¹

Technically Revised: 2022

Technical Subcommittee: 3a, Cement, Lime, and Concrete Materials

ASTM Designation: C977-18



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. This specification pertains to quicklime and hydrated lime, either high calcium, dolomitic, or magnesian lime, for use in stabilization of soils. (See Notes 1 and 2.)
- Note 1**—Quicklime and hydrated lime act on clay soils and may render such soils suitable for highway construction and other load-bearing applications. In most cases, lime causes finely divided clay particles to agglomerate into coarser particles, which improves load-bearing properties, and subsequently the lime-treated soil hardens by chemical reaction.
- Note 2**—No attempt is made to present requirements for by-product lime, commercial lime slurry, etc. Specification requirements for these materials could be better determined on a local basis.
- 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standard:*
- M 339M/M 339, Thermometers Used in the Testing of Construction Materials
- 2.2. *ASTM Standards:*
- C25, Standard Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime
 - C50/C50M, Standard Practice for Sampling, Sample Preparation, Packaging, and Marking of Lime and Limestone Products
 - C51, Standard Terminology Relating to Lime and Limestone (as used by the Industry)
 - C110, Standard Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone
 - D6276, Standard Test Method for Using pH to Estimate the Soil-Lime Proportion Requirement for Soil Stabilization (withdrawn 2015)
 - E1, Standard Specification for ASTM Liquid-in-Glass Thermometers
 - E230/E230M, Standard Specification for Temperature-Electromotive Force (emf) Tables for Standardized Thermocouples