



Standard Specification for Ground Calcium Carbonate and Aggregate Mineral Fillers for use in Hydraulic Cement Concrete¹

This standard is issued under the fixed designation C1797; 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.

^{ε1} NOTE—The designation was corrected editorially in September 2016.

1. Scope

1.1 This specification applies to ground calcium carbonate (GCC is a type of ground limestone) and other finely divided aggregate mineral filler (AMF) materials for use in concrete mixtures. The specification defines the types of GCC and AMF materials for use in concrete.

1.2 If concrete in service is subject to sulfate exposure, fillers derived from ground limestone should not be used unless mitigation methods are used.

NOTE 1—American Concrete Institute (ACI) technical documents 201.2R, 318, 332, and 350 contain useful information and code requirements dealing with sulfate exposure in service. Soluble sulfate in water can be determined in accordance with Test Method D516 or Test Method D4130. Percent sulfate by mass in soil can be determined by Test Method C1580.

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

NOTE 2—Sieve size is identified by its standard designation in Specification E11. The alternative designation given in parentheses is for information only and does not represent a different standard sieve size.

1.4 The text of this standard references notes and footnotes, which provide explanatory information. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

1.5 *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.*

¹ This specification is under the jurisdiction of ASTM Committee C09 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.20 on Normal Weight Aggregates.

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2. Referenced Documents

2.1 ASTM Standards:²

- 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
- C117 Test Method for Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing
- C125 Terminology Relating to Concrete and Concrete Aggregates
- C136/C136M Test Method for Sieve Analysis of Fine and Coarse Aggregates
- C311/C311M Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
- C566 Test Method for Total Evaporable Moisture Content of Aggregate by Drying
- C595/C595M-15 Specification for Blended Hydraulic Cements
- C1580 Test Method for Water-Soluble Sulfate in Soil
- C1777 Test Method for Rapid Determination of the Methylene Blue Value for Fine Aggregate or Mineral Filler Using a Colorimeter
- D75/D75M Practice for Sampling Aggregates
- D516 Test Method for Sulfate Ion in Water
- D1193 Specification for Reagent Water
- D4130 Test Method for Sulfate Ion in Brackish Water, Seawater, and Brines

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.