



Designation: C195 – 07

Standard Specification for Mineral Fiber Thermal Insulating Cement¹

This standard is issued under the fixed designation C195; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers mineral fiber thermal insulating materials in the form of dry cement, which, when mixed with a suitable proportion of water, applied as a plastic mass, and dried in place, affords resistance to heat transmission on surfaces operating at temperatures between 250 and 1900°F (about 121 and 1038°C).

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 The following safety hazards caveat pertains only to the test methods section of this specification: *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 ASTM Standards:²

- C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates
- C163 Practice for Mixing Thermal Insulating Cement Samples
- C166 Test Method for Covering Capacity and Volume Change Upon Drying of Thermal Insulating Cement
- C168 Terminology Relating to Thermal Insulation
- C177 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus
- C356 Test Method for Linear Shrinkage of Preformed High-

Temperature Thermal Insulation Subjected to Soaking Heat

- C390 Practice for Sampling and Acceptance of Thermal Insulation Lots
- C411 Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation
- C518 Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- C1045 Practice for Calculating Thermal Transmission Properties Under Steady-State Conditions
- C1058 Practice for Selecting Temperatures for Evaluating and Reporting Thermal Properties of Thermal Insulation
- C1114 Test Method for Steady-State Thermal Transmission Properties by Means of the Thin-Heater Apparatus
- E136 Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C

3. Terminology

3.1 *Definitions*—Terminology C168 shall be considered as applying to the terms used in this specification.

4. Materials and Manufacture

4.1 Mineral fiber thermal insulating cement shall be composed of mineral fiber and inorganic fillers, with a suitable proportion of heat-resistant binder.

4.2 The mineral fiber shall consist of rock, slag, or glass processed from a molten state into fibrous form.

4.3 Asbestos shall not be used as an ingredient or component part of the product.

5. Other Requirements

5.1 The cement shall conform to the requirements given in Table 1. Conformance shall be based on results of tests on specimens prepared in accordance with 9.1.

5.2 *Maximum Use Temperature*—When tested in accordance with 10.5, the dried cement shall not warp, flame, or glow during hot surface exposure. No evidence of melting or fiber degradation shall be evident upon post-test inspection.

5.3 *Non-combustibility*—When tested in accordance with 10.6, the dried cement shall conform to the requirements of Test Method E136.

¹ This specification is under the jurisdiction of ASTM Committee C16 on Thermal Insulation and is the direct responsibility of Subcommittee C16.20 on Homogeneous Inorganic Thermal Insulations.

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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.