
Standard Method of Test for Autoclave Expansion of Hydraulic Cement

AASHTO Designation: T 107M/T 107-22

Technically Revised: 2022

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

ASTM Designation: C151/C151M-18



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

- 1.1. This test method covers determination of the autoclave expansion of hardened hydraulic cement paste when exposed to the autoclave conditions in this method.
- 1.2. The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.
- 1.3. *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. For specific precaution statements, see the section on Safety Precautions.*
- 1.4. *The quality of the results produced by this standard are dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of R 18 are generally considered capable of competent and objective testing/sampling/inspection/etc. Users of this standard are cautioned that compliance with R 18 alone does not completely assure reliable results. Reliable results depend on many factors; following the suggestions of R 18 or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.*
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2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- M 201, Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes
 - M 339M/M 339, Thermometers Used in the Testing of Construction Materials
 - R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
 - R 70, Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar, and Concrete
 - T 129, Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
 - T 162, Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
- 2.2. *ASTM Standards:*
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