



Designation: C232/C232M – 13b

Standard Test Method for Bleeding of Concrete¹

This standard is issued under the fixed designation C232/C232M; 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.

1. Scope*

1.1 This test method covers the determination of the relative quantity of mixing water that will bleed from a sample of freshly mixed concrete.

1.2 When various concretes are to be compared, if the batches are of similar unit weight, the sample masses shall not differ by more than 1 kg [2 lb].

1.3 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. Some values have only SI units because the inch-pound equivalents are not used in practice.

NOTE 1—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 material. 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. (Warning—Fresh hydraulic cementitious mixtures are caustic and may cause chemical burns to skin and tissue upon prolonged exposure).*²

2. Referenced Documents

2.1 ASTM Standards:³

¹ These test methods are under the jurisdiction of ASTM Committee C09 on Concrete and Concrete Aggregates and are the direct responsibility of Subcommittee C09.60 on Testing Fresh Concrete.

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² Section on Safety Precautions, Manual of Aggregate and Concrete Testing, *Annual Book of ASTM Standards, Vol 04.02*.

³ 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.

- C29/C29M Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate
- C125 Terminology Relating to Concrete and Concrete Aggregates
- C138/C138M Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
- C172/C172M Practice for Sampling Freshly Mixed Concrete
- C192/C192M Practice for Making and Curing Concrete Test Specimens in the Laboratory
- C670 Practice for Preparing Precision and Bias Statements for Test Methods for Construction Materials
- E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this test method refer to Terminology C125.

4. Significance and Use

4.1 This test method provides procedures to be used for determining the effect of variables of composition, treatment, environment, or other factors in the bleeding of concrete. It is also permitted to be used to determine the conformance of a product or treatment with a requirement relating to its effect on bleeding of concrete.

4.2 A specimen consolidated by rodding and tested without further disturbance simulates conditions in which the concrete is not subjected to intermittent vibration after placement.

5. Apparatus

5.1 *Container*—A cylindrical container of approximately 14-L [$\frac{1}{2}$ -ft³] capacity, having an inside diameter of 255 ± 5 mm [$10 \pm \frac{1}{4}$ in.] and an inside height of 280 ± 5 mm [$11 \pm \frac{1}{4}$ in.]. The container shall conform to the requirements for a measure in Test Method C29/C29M. The inside shall be free of corrosion, coatings, or lubricants.

5.2 *Scale*, of sufficient capacity to determine the mass of the load required with an accuracy of 0.5 %. Balances or scales shall be calibrated at least annually or whenever there is reason to question the accuracy of the equipment.

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