



Designation: C140/C140M – 17a

Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units¹

This standard is issued under the fixed designation C140/C140M; 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 U.S. Department of Defense.

1. Scope*

1.1 These test methods provide various testing procedures commonly used for evaluating characteristics of concrete masonry units and related concrete units. Methods are provided for sampling, measurement of dimensions, compressive strength, absorption, unit weight (density), moisture content, flexural load, and ballast weight. Not all methods are applicable to all unit types, however.

1.2 Specific testing and reporting procedures are included in annexes to these test methods for the following specific unit types:

- Annex A1**—Concrete masonry units (Specifications **C90**, **C129**)
- Annex A2**—Concrete and calcium silicate brick (Specifications **C55**, **C73**, **C1634**)
- Annex A3**—Segmental retaining wall units (Specification **C1372**)
- Annex A4**—Concrete interlocking paving units (Specification **C936/C936M**)
- Annex A5**—Concrete grid paving units (Specification **C1319**)
- Annex A6**—Concrete roof pavers (Specification **C1491**)
- Annex A7**—Dry-cast articulating concrete block (Specification **D6684**)

1.3 The test procedures included in these test methods are also applicable to other types of units not referenced in these test methods, but specific testing and reporting requirements for those units are not included.

1.4 These test methods include the following sections:

	Section
Scope	1
Referenced Documents	2
Terminology	3
Significance and Use	4
Sampling	5
Measurement of Dimensions	6
Compressive Strength	7
Absorption	8

¹ These test methods are under the jurisdiction of ASTM Committee **C15** on Manufactured Masonry Units and are the direct responsibility of Subcommittee **C15.03** on Concrete Masonry Units and Related Units.

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Calculations	Section 9
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Annexes—Test Procedures	
Concrete Masonry Units	Annex A1
Concrete and Calcium Silicate Brick	Annex A2
Segmental Retaining Wall Units	Annex A3
Concrete Interlocking Paving Units	Annex A4
Concrete Grid Paving Units	Annex A5
Concrete Roof Pavers	Annex A6
Dry-Cast Articulating Concrete Block	Annex A7
Determining Plate Thickness Requirements for Compression Testing	Annex A8
Worksheet and Test Report for Concrete Masonry Units	Appendix X1

NOTE 1—The testing laboratory performing these test methods should be evaluated in accordance with Practice **C1093**.

1.5 The text of this test method references notes and footnotes that provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

1.6 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.

1.7 *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.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

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