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Designation: C 91 – 03

Standard Specification for Masonry Cement[1]

This standard is issued under the fixed designation C 91; 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 three types of masonry cement for use where mortar for masonry is required.

1.2 The values stated in SI units are to be regarded as the standard. Values in SI units shall be obtained by measurement in SI units or by appropriate conversion of measurements made in other units, using the Rules for Conversion and Rounding given in IEEE/ASTM SI 10.

1.3 The text of this standard refers to 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.

1.4 The following safety hazards caveat pertains only to Sections 17 and 18 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.* (**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:*

C 109/C 109M Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)[3]

C 151 Test Method for Autoclave Expansion of Portland Cement[3]

C 183 Practice for Sampling and the Amount of Testing of Hydraulic Cement[3]

C 185 Test Method for Air Content of Hydraulic Cement Mortar[3]

C 187 Test Method for Normal Consistency of Hydraulic Cement[3]

C 188 Test Method for Density of Hydraulic Cement[3]

C 219 Terminology Relating to Hydraulic Cement[3]

C 230/C 230M Specification for Flow Table for Use in Tests of Hydraulic Cement[3]

C 266 Test Method for Time of Setting of Hydraulic Cement Paste by Gillmore Needles[3]

C 270 Specification for Mortar for Unit Masonry[4]

C 305 Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency[3]

C 430 Test Method for Fineness of Hydraulic Cement by the 45-µm (No. 325) Sieve[3]

C 511 Specification for Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes[3]

C 778 Specification for Standard Sand[3]

C 1506 Test Method for Water Retention of Hydraulic Cement-Based Mortars and Plasters [3]

IEEE/ASTM SI 10 Standard for Use of the International System of Units (SI): The Modern Metric System[5]

3. Terminology

3.1 *Definitions:*

3.1.1 *masonry cement*—a hydraulic cement, primarily used in masonry and plastering construction, consisting of a mixture of portland or blended hydraulic cement and plasticizing materials (such as limestone, hydrated or hydraulic lime) together with other materials introduced to enhance one or more properties such as setting time, workability, water retention, and durability.

3.1.2 Other terms used in this standard are defined in Terminology C 219.

4. Classification

4.1 *Type N*—For use in preparation of Specification C 270 Type N mortar without further addition of cements or hydrated lime, and for use in preparation of Specification C 270 Type S

[1] This specification is under the jurisdiction of ASTM Committee C01 on Cement and is the direct responsibility of Subcommittee C01.11 on Masonry Cement.

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[2] *Annual Book of ASTM Standards*, Vol 04.01. See the section on Safety Precautions in the Manual of Cement Testing.

[3] *Annual Book of ASTM Standards*, Vol 04.01.

[4] *Annual Book of ASTM Standards*, Vol 04.05.

[5] *Annual Book of ASTM Standards*, Vol 14.04.

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