



Standard Terminology of Mortar and Grout for Unit Masonry¹

This standard is issued under the fixed designation C 1180; 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 terminology covers terms, definitions of terms, descriptions of terms, nomenclature, and explanations of abbreviations, acronyms, and symbols specifically associated with standards under the jurisdiction of ASTM Committee C12 on Mortars and Grouts for Unit Masonry.

1.2 The definitions and descriptions of terms in this terminology pertain to Test Methods C 780, C 952, C 1019, C 1148, C 1324, and C 1403; Specifications C 144, C 270, C 404, C 476, C 887, C 1142, and C 1384; Practice C 946; and Guide C 1586.

2. Referenced Documents

2.1 ASTM Standards:²

- C 43 Terminology of Structural Clay Products
- C 144 Specification for Aggregate for Masonry Mortar
- C 270 Specification for Mortar for Unit Masonry
- C 404 Specification for Aggregates for Masonry Grout
- C 476 Specification for Grout for Masonry
- C 780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
- C 887 Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar
- C 952 Test Method for Bond Strength of Mortar to Masonry Units
- C 946 Practice for Construction of Dry-Stacked, Surface-Bonded Walls
- C 1019 Test Method for Sampling and Testing Grout
- C 1142 Specification for Extended Life Mortar for Unit Masonry
- C 1148 Test Method for Measuring the Drying Shrinkage of Masonry Mortar

- C 1209 Terminology of Concrete Masonry Units and Related Units
- C 1232 Terminology of Masonry
- C 1324 Test Method for Examination and Analysis of Hardened Masonry Mortar
- C 1384 Specification for Admixtures for Masonry Mortars
- C 1403 Test Method for Rate of Water Absorption of Masonry Mortars
- C 1586 Guide for Quality Assurance of Mortars

3. Terminology

3.1 The definitions in this terminology are specific to mortar and grout. For terminology specific to (1) structural clay products, see Terminology C 43; (2) concrete masonry units, see Terminology C 1209; (3) masonry, see Terminology C 1232.

3.2 Definitions:

admixture, *n*—substance other than the Specification C 270 prescribed materials of water, aggregate, and cementitious materials that is added to a masonry mortar as an ingredient to improve one or more chemical or physical properties of the conventional masonry mortar.

aggregates, *n*—a granular mineral material such as natural sand, manufactured sand, gravel, crushed stone, and air cooled blast furnace slag.

cementitious material, *n*—Committee C12 standards for mortar and grout consider the following as cementitious materials: Hydraulic cements, pozzolans, hydrated lime, lime putty, and ground granulated blast furnace slag.

DISCUSSION—Hydraulic cements (such as portland cement, blended cement, masonry cement, and mortar cement) react with water to harden and will do so under water. Pozzolans (such as coal fly ash, raw, or calcined natural pozzolans) react with lime in the presence of moisture. Hydrated lime and lime putty react with carbon dioxide from the air. Ground granulated blast furnace slag, blended cements, and some pozzolans may exhibit both hydraulic and pozzolanic properties.

compressive strength, *n*—the maximum compressive load which a specimen will support divided by the cross-sectional area of the specimen.

disturbed sample—any plastic mortar test sample which is taken at some time after mixing and bulk sampling, that is further remixed or molded immediately prior to test, or both.

¹ This terminology is under the jurisdiction of ASTM Committee C12 on Mortars and Grouts for Unit Masonry and is the direct responsibility of Subcommittee C12.08 on Terminology.

Current edition approved July 15, 2007. Published August 2007. Originally approved in 1991. Last previous edition approved in 2003 as C 1180 – 03a¹.

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.

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

durability, *n*—the ability of a material to resist weathering action, chemical attack, abrasion, and other conditions of service.

flow, *n*—a laboratory measured mortar property that indicates the percent increase in diameter of the base of the truncated cone of mortar when it is placed on a flow table, and mechanically raised and dropped specified times under specified conditions.

gradation, *n*—the particle size distribution of aggregate as determined by separation with standard screens. Gradation of aggregate is expressed in terms of the individual percentages passing standard screens. Sieve analysis and screen analysis are synonyms when referring to gradation of aggregate.

grout, *n*—a mixture of cementitious materials, aggregates, water, with or without admixtures, initially produced to pouring consistency without segregation. Requirements for grout are contained in Specification **C 476**.

mortar, *n*—a mixture consisting of cementitious materials, fine aggregate, water, with or without admixtures, that is used to construct unit masonry assemblies.

mortar bond or grout bond, *n*—adhesion between mortar or grout and masonry units, reinforcement, or connectors.

repoint, *v*—to remove defective mortar and place properly prehydrated plastic mortar into mortar joints.

shrinkage, *n*—a decrease in volume due to chemical reaction or drying.

tuck point, *v*—(1) (*historical*) to point masonry with a flush mortar joint that approximates the color of the masonry units and then add a mortar strip of contrasting color such that a narrow mortar joint width is simulated. (2) regional term for repoint.

undisturbed sample—any plastic mortar test sample molded immediately after mixing and sampling that is allowed to set on a vibration-free surface until tested.

water retention, *n*—the measured physical property of a plastic mortar indicating its ability, under suction, to retain its mixing water.

water retentivity, *n*—a characteristic of plastic mortar describing its ability to retain its mixing water.

workability, *n*—the ability of mortar to be easily placed and spread.

3.3 Definitions of Terms Specific to Indicated Standards:

admixed mortar, *n*—masonry mortar that deviates from those

combinations of materials recognized by Specification **C 270** in that it also contains an admixture. **C 1384**

batch mixer samples—those obtained during or immediately after the discharge of the mortar from the batch mixer. **C 780**

bond enhancer, *n*—admixture incorporated into a masonry mortar to increase the bond strength between the mortar and the masonry unit. **C 1384**

extended life mortars—mortar consisting of cementitious materials, aggregate, water, and set-control admixtures which are measured and mixed at a central location using weight-or-volume-control equipment. This mortar as delivered to a construction site shall be usable for a period in excess of 2½ h. **C 1142**

mortar board samples—those obtained from the mortar board after some established time period from the end of mixing, and before retempering. Retempered mortar board samples are those obtained from the mortar board after retempering. Since mortar on a mason's mortar board is disturbed by the activity of the mason, samples from a mason's mortar board shall be so identified to differentiate them from samples taken from a mortar board used exclusively for test purposes. **C 780**

reference mortar, *n*—mortar of the same composition as an admixed mortar except that the reference mortar does not include the admixture and may contain a different amount of water to obtain an equivalent flow or penetration as the admixed mortar. **C 1384**

set accelerator, *n*—admixture incorporated into a masonry mortar to shorten the time of setting of a mortar. **C 1384**

set retarder, *n*—admixture incorporated into a masonry mortar to lengthen the time of setting of a mortar. **C 1384**

surface bonding mortar—a product containing hydraulic cement, glass fiber reinforcement with or without inorganic fillers, or organic modifiers in a prepackaged form requiring only the addition of water prior to application. **C 887**

water repellent, *n*—admixture incorporated into a masonry mortar to decrease the rate of water absorption of the hardened mortar. **C 1384**

workability enhancer, *n*—admixture incorporated into a masonry mortar to increase the ease of being worked and used. A workability enhancer will increase the board life and maintain the water retention of a mortar. **C 1384**

SUMMARY OF CHANGES

Committee C12 has identified the location of selected changes to this standard since the last issue (C 1180 – 03a^{e1}) that may impact the use of this standard. (Approved July 1, 2007.)

- (1) Added *water retention* and *water retentivity* as new terms. (3) Added Practice C 946, Test Method C 1324, Test Method C 1403, and Guide C 1586 to Sections 1.2 and 2.
- (2) Added introductory language in 3.1, and added Terminologies C 43, C 1209, and C 1232 to Section 2.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).