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Standard Terminology of Mortar and Grout for Unit Masonry¹

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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 **C780**, **C1019**, **C1148**, **C1324**, and **C1403**; Specifications **C144**, **C270**, **C404**, **C476**, **C887**, and **C1384**; Practice **C946**; and Guide **C1586**.

1.3 *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.*

2. Referenced Documents

2.1 ASTM Standards:²

- [C144 Specification for Aggregate for Masonry Mortar](#)
- [C270 Specification for Mortar for Unit Masonry](#)
- [C404 Specification for Aggregates for Masonry Grout](#)
- [C476 Specification for Grout for Masonry](#)
- [C780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry](#)
- [C887 Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar](#)
- [C946 Practice for Construction of Dry-Stacked, Surface-Bonded Walls](#)
- [C1019 Test Method for Sampling and Testing Grout for Masonry](#)
- [C1148 Test Method for Measuring the Drying Shrinkage of Masonry Mortar \(Withdrawn 2019\)³](#)
- [C1232 Terminology for Masonry](#)
- [C1324 Test Method for Examination and Analysis of Hardened Masonry Mortar](#)
- [C1384 Specification for Admixtures for Masonry Mortars](#)
- [C1403 Test Method for Rate of Water Absorption of Masonry Mortars](#)
- [C1586 Guide for Quality Assurance of Mortars](#)

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.

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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.

³ The last approved version of this historical standard is referenced on www.astm.org.

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

3. Terminology

3.1 The definitions in this terminology are specific to mortar and grout. For terminology specific to (1) clay masonry units; (2) concrete masonry units; (3) autoclaved aerated concrete masonry units; (4) roofing tile units; and (5) masonry, see Terminology C1232.

3.2 Terms and Their Definitions:

admixture, *n*—substance other than the Specification C270 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.

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

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

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gradation, *n*—the particle size distribution of aggregate as determined by separation with standard screens. ~~c1180-22~~

DISCUSSION—

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, grout for masonry, *n*—(1) a plastic mixture of cementitious materials, aggregates, and water, with or without admixtures, initially produced to pouring consistency without ~~segregation~~ segregation of the constituents during placement; (2) the hardened equivalent of such mixtures.

DISCUSSION—

Requirements for grout for masonry are contained in Specification C476.

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.

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 **C270** in that ~~it~~ the mortar also contains an admixture. **C1384**

bond enhancer, *n*—admixture incorporated into a masonry mortar to increase the bond strength between the mortar and the masonry unit. **C1384**

mortar, surface bonding, *n*—a product designed to secure masonry units to each other by means of an exterior coating consisting of cementitious materials, glass fiber reinforcement with or without inorganic fillers, or organic modifiers in a prepackaged form requiring only the addition of water prior to application. **C887**

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. **C1384**

sample, batch mixer, *n*—mortar obtained during or immediately after the discharge of the mortar from the batch mixer. **C780**

sample, disturbed, *n*—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. **C780**

sample, mortar board, *n*—plastic mortar obtained from the mortar board after some established time period from the end of mixing, and before retempering. **C780**

DISCUSSION—

Retempered mortarboard samples are those obtained from the mortarboard after retempering. Since mortar on a mason's mortarboard is disturbed by the activity of the mason, samples from a mason's mortarboard shall be so identified to differentiate them from samples taken from a mortarboard used exclusively for test purposes. **C780**

sample, undisturbed, *n*—any plastic mortar test sample molded immediately after mixing and sampling. **C780**

DISCUSSION—

This sample is allowed to set on a vibration-free surface until tested.

set accelerator, *n*—admixture incorporated into a masonry mortar to shorten the time of setting of a mortar. **C1384**

set retarder, *n*—admixture incorporated into a masonry mortar to lengthen the time of setting of a mortar. **C1384**

water repellent, *n*—admixture incorporated into a masonry mortar to decrease the rate of water absorption of the hardened mortar. **C1384**

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. **C1384**