



Designation: C1232 – 24

Standard Terminology for Masonry¹

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1. Scope*

1.1 This standard incorporates generic terms and generic definitions of terms specifically associated with manufactured masonry units and masonry constructed with manufactured masonry units. These generic terms and definitions are used within the standards developed by Committee C12 on Mortars and Grouts for Unit Masonry and Committee C15 on Manufactured Masonry Units.

1.2 This standard incorporates terms and definitions of terms associated with the standards specific to clay masonry units, in particular to Specifications C32, C34, C56, C62, C126, C212, C216, C279, C410, C530, C652, C902, C1088, C1167, C1261, C1272, and C1405, and to Test Methods C67/C67M.

1.3 This standard incorporates terms and definitions of terms associated with the standards specific to concrete masonry units in particular to Specifications C55, C73, C90, C129, C139, C744, C1319, C1372, C1491, C1623, and C1634 and to Test Methods C140/C140M, C426, and C1262/C1262M.

1.4 This standard incorporates terms and definition of terms associated with the standards specific to autoclaved aerated concrete masonry units in particular to Practice C1692 and to Specifications C1386, C1691, and C1693.

1.5 This standard incorporates terms and definitions of terms associated with the standards specific to clay and concrete roofing tile units in particular to Specifications C1167 and C1492 and to Test Methods C1568, C1569, and C1570.

1.6 For terminology specific to mortar and grout, see Terminology C1180.

1.7 *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.*

¹ This terminology is under the jurisdiction of ASTM Committee C15 on Masonry - Manufactured Masonry Units, Mortars and Grouts and is the direct responsibility of Subcommittee C15.08 on Terminology.

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2. Referenced Documents

2.1 ASTM Standards:²

- C32 Specification for Sewer and Manhole Brick (Made From Clay or Shale)
- C34 Specification for Structural Clay Loadbearing Wall Tile
- C55 Specification for Concrete Building Brick
- C56 Specification for Structural Clay Nonloadbearing Tile
- C62 Specification for Building Brick (Solid Masonry Units Made from Clay or Shale)
- C67/C67M Test Methods for Sampling and Testing Brick and Structural Clay Tile
- C73 Specification for Calcium Silicate Brick (Sand-Lime Brick)
- C90 Specification for Loadbearing Concrete Masonry Units
- C126 Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units
- C129 Specification for Nonloadbearing Concrete Masonry Units
- C139 Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes
- C140/C140M Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
- C212 Specification for Structural Clay Facing Tile
- C216 Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)
- C270 Specification for Mortar for Unit Masonry
- C279 Specification for Chemical-Resistant Masonry Units
- C410 Specification for Industrial Floor Brick
- C426 Test Method for Linear Drying Shrinkage of Concrete Masonry Units
- C476 Specification for Grout for Masonry
- C530 Specification for Structural Clay Nonloadbearing Screen Tile
- C652 Specification for Hollow Brick (Hollow Masonry Units Made From Clay or Shale)
- C744 Specification for Prefaced Concrete and Calcium Silicate Masonry Units
- C902 Specification for Pedestrian and Light Traffic Paving Brick

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. 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

- C936/C936M Specification for Solid Concrete Interlocking Paving Units
- C1088 Specification for Thin Veneer Brick Units Made From Clay or Shale
- C1167 Specification for Clay Roof Tiles
- C1180 Terminology of Mortar and Grout for Unit Masonry
- C1261 Specification for Firebox Brick for Residential Fireplaces
- C1262/C1262M Test Method for Evaluating the Freeze-Thaw Durability of Dry-Cast Segmental Retaining Wall Units and Related Concrete Units
- C1272 Specification for Heavy Vehicular Paving Brick
- C1319 Specification for Concrete Grid Paving Units
- C1372 Specification for Dry-Cast Segmental Retaining Wall Units
- C1386 Specification for Precast Autoclaved Aerated Concrete (AAC) Wall Construction Units (Withdrawn 2013)³
- C1405 Specification for Glazed Brick (Single Fired, Brick Units)
- C1491 Specification for Concrete Roof Pavers (Withdrawn 2023)³
- C1492 Specification for Concrete Roof Tile
- C1568 Test Method for Wind Resistance of Concrete and Clay Roof Tiles (Mechanical Uplift Resistance Method)
- C1569 Test Method for Wind Resistance of Concrete and Clay Roof Tiles (Wind Tunnel Method)
- C1570 Test Method for Wind Resistance of Concrete and Clay Roof Tiles (Air Permeability Method)
- C1623 Specification for Manufactured Concrete Masonry Lintels
- C1634 Specification for Concrete Facing Brick and Other Concrete Masonry Facing Units
- C1691 Specification for Unreinforced Autoclaved Aerated Concrete (AAC) Masonry Units
- C1692 Practice for Construction and Testing of Autoclaved Aerated Concrete (AAC) Masonry
- C1693 Specification for Autoclaved Aerated Concrete (AAC)

3. Terminology

3.1 *Generic Definitions*—The definitions apply to manufactured masonry units and masonry constructed with manufactured masonry units. They are generic as used by ASTM Committees C12 and C15.

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

area, gross, *n*—*in masonry units*, the area delineated by the out-to-out dimensions of a masonry unit in the plane under consideration.

DISCUSSION—Gross area of a masonry unit includes the total area of a section perpendicular to the direction of the load, including areas within cores, cells, and voids.

area, net, *n*—*in masonry units*, the solid area of a masonry unit crossed by the plane under consideration, based on out-to-out dimensions.

DISCUSSION—Net area of a masonry unit does not include the area of cores, cells, and voids.

bed surface, *n*—*before and during construction*, the nonvertical surfaces of a manufactured masonry unit intended by the manufacturer to be joined by mortar or other methods.

bed surface, *n*—*in situ*, the nonvertical surfaces of a manufactured masonry unit joined by mortar or other methods.

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

cementitious material (hydraulic), *n*—an inorganic material or a mixture of inorganic materials that sets and develops strength by chemical reaction with water by formation of hydrates, and is capable of setting and gaining strength under water.

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

cryptofluorescence, *n*—crystalline deposit of water-soluble compounds in the pores of masonry.

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

efflorescence, *n*—crystalline deposit, usually white, of water-soluble compounds on the surface of masonry.

face, exposed, *n*—masonry unit surface(s) that is exposed to view when the unit is placed in usage.

face, finished, *n*—any surface(s) of a manufactured masonry unit intended by the manufacturer to be exposed to view.

freeze thaw resistance, *n*—the ability of masonry to maintain integrity under the forces caused by cyclic action of freezing and thawing in the presence of moisture.

frog, *n*—an indentation in a bed surface of a masonry unit.

DISCUSSION—Indentations not exceeding $\frac{3}{8}$ in. (9.5 mm) are termed a frog, sometimes called a panel or panel frog. Indentations exceeding $\frac{3}{8}$ in. (9.5 mm) are termed a deep frog.

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

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.

groove, *n*—a channel formed on surfaces other than finished faces of manufactured masonry units for production or construction purposes.

grout for masonry, *n*—(1) a plastic mixture of cementitious materials, aggregates, and water, with or without admixtures,

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

initially produced to pouring consistency without segregation of the constituents during placement; (2) the hardened equivalent of such mixtures.

DISCUSSION—Requirements for grout for masonry are contained in Specification C476.

height, *n*—vertical dimension of the face of a unit when the unit is positioned as a stretcher.

length, *n*—horizontal dimension of the face of a unit when the unit is positioned as a stretcher.

masonry, *n*—the type of construction made up of manufactured masonry units laid with mortar, grout, or other methods of joining.

mortar, admixed, *n*—masonry mortar that deviates from those combinations of materials recognized by Specification C270 in that the mortar also contains an admixture.

mortar, for unit masonry, *n*—a mixture, in either the unhardened or hardened state, consisting of cementitious materials, fine aggregate, water, with or without admixtures, that is used to construct unit masonry assemblies.

nominal dimension, *n*—dimension that is greater than the specified dimension by the specified thickness of a mortar joint.

DISCUSSION—Nominal dimension is usually expressed as a whole number.

permeable unit pavement system, *n*—pavement with wearing surface made from clay or concrete units that allows infiltration of water through open-graded aggregate in the joints, cores, or other openings, to a bed, base, and subbase, or combinations thereof.

DISCUSSION—Permeable pavement systems are utilized to reduce stormwater runoff. Permeable pavements have wearing surfaces with high initial water infiltration through open spaces filled with aggregates to drain water into open-graded bedding and base materials. The open spaces in the wearing surface are designed to enable sufficient infiltration rates to handle runoff from designated storm types (for example, 1 year, 24 hour event).

With unit pavers the open spaces can be achieved with exposed coring, a specially-shaped perimeter configuration, or wider joints, or combinations thereof. Permeable pavement systems can also be made with standard units and a laying pattern that permits sufficient water entry.

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

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

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.

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

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.

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

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

score, *n*—a channel formed for appearance purposes on the finished faces of a manufactured masonry unit.

set accelerator, *n*—admixture to shorten the time of setting.

set retarder, *n*—admixture to lengthen the time of setting.

shell, *n*—the outer walls of a hollow masonry unit.

DISCUSSION—Shell can either be an end shell or a face shell.

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

specified dimensions, *n*—dimensions to which masonry units or constructions are required to conform. Actual (measured) dimensions may differ from the specified dimensions by permissible variations.

surface bonding mortar, *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.

surface feature, *n*—a quality or condition of the face of a manufactured masonry unit.

DISCUSSION—Surface features include coatings, colors, textures, relief, or combinations of these. A masonry unit may have different surface features on individual faces.

thickness, *n*—that dimension designed to lie at right angles to the face of the wall, floor, or other assembly.

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.

unit, facing, *n*—manufactured masonry unit designed for use where one or more faces will be exposed to view when the unit is placed in usage, and for which the specification includes requirements on color, finish, and other properties affecting appearance.

unit, hollow masonry, *n*—unit whose net cross-sectional area in any plane parallel to the surface containing cores, cells, or deep frogs is less than 75 % of its gross cross-sectional area measured in the same plane.

unit, manufactured masonry, *n*—a manmade noncombustible building product intended to be laid by hand and joined by mortar, grout, or other methods of joining.

unit, permeable paving, *n*—a manufactured masonry unit for pavement applications configured to achieve a minimum percentage of open area in the wearing surface.