



Designation: C1372 – 09

Standard Specification for Dry-Cast Segmental Retaining Wall Units¹

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1. Scope*

1.1 This specification covers dry-cast segmental retaining wall units of concrete, machine-made from hydraulic cement, water, and suitable mineral aggregates with or without the inclusion of other materials. The units are intended for use in the construction of mortarless segmental retaining walls.

NOTE 1—When particular features are desired, such as weight classification, higher compressive strength, surface texture, finish, color, or other special features, such properties should be specified separately by the purchaser. Local suppliers should be consulted as to availability of units having the desired features.

1.2 The text of this standard references 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.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

2. Referenced Documents

2.1 *ASTM Standards*:²

- C33 Specification for Concrete Aggregates
- C140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
- C150 Specification for Portland Cement
- C331 Specification for Lightweight Aggregates for Concrete Masonry Units
- C595 Specification for Blended Hydraulic Cements
- C618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- C989 Specification for Slag Cement for Use in Concrete and Mortars

¹ This specification is under the jurisdiction of ASTM Committee C15 on Manufactured Masonry Units and is the direct responsibility of C15.03 on Concrete Masonry Units and Related Units

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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.

- C1157 Performance Specification for Hydraulic Cement
- C1232 Terminology of Masonry
- C1262 Test Method for Evaluating the Freeze-Thaw Durability of Dry-Cast Segmental Retaining Wall Units and Related Concrete Units

3. Terminology

3.1 Terminology defined in Terminology C1232 shall apply for this specification.

3.2 *Definitions*:

3.2.1 *Dry-cast, adj*—manufacturing concrete products using low frequency, high amplitude vibration to consolidate concrete of stiff or extremely dry consistency in a form.

3.2.2 *segmental retaining wall unit, n*—unit manufactured of concrete for the construction of dry-stacked earth retaining walls.

3.2.3 *segmental retaining wall unit, dry-cast, n*—a segmental retaining wall unit manufactured of concrete using a dry-cast process.

4. Materials

4.1 *Cementitious Materials*—Materials shall conform to the following applicable specifications:

4.1.1 *Portland Cements*—Specification C150.

4.1.2 *Modified Portland Cement*—Portland cement conforming to Specification C150, modified as follows:

4.1.2.1 *Limestone*—Limestone, with a minimum 85 % Calcium Carbonate (CaCO₃) content, shall be permitted to be added to the cement, provided these requirements of Specification C150 as modified are met:

- (1) Limitation on Insoluble Residue—1.5 %.
- (2) Limitation on Air Content of Mortar—Volume percent, 22 % max.
- (3) Limitation on Loss of Ignition—7 %.

4.1.3 *Blended Hydraulic Cements*— Specification C595.

4.1.4 *Hydraulic Cement*—Specification C1157.

4.1.5 *Pozzolans*—Specification C618.

4.1.6 *Blast Furnace Slag Cement*—Specification C989.

4.2 *Aggregates*—Aggregates shall conform to the following specifications, except that grading requirements shall not necessarily apply:

4.2.1 *Normal Weight Aggregates*—Specification C33.

4.2.2 *Lightweight Aggregates*—Specification C331.

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