Designation: C1195 – 03

Standard Test Method for Absorption of Architectural Cast Stone[1]

This standard is issued under the fixed designation C1195; 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 test method covers the sampling, preparation of specimens, and determination of the absorption of architectural cast stone.

1.2 This test method describes two procedures: (*1*) cold water and (*2*) boiling water. The user of the test method should stipulate which is desired. If no stipulation is made, the cold water procedure will be used.

1.3 *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.*

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C642 Test Method for Density, Absorption, and Voids in Hardened Concrete

3. Terminology

3.1 *Definition:*

3.1.1 *cast stone*—an architectural precast concrete building unit intended to simulate natural cut stone.

4. Significance and Use

4.1 This test method is to be used in determining the absorption of cast stone. Absorption is one measure of porosity of cast stone and, hence, its resistance to weathering and structural stress.

5. Sampling

5.1 Select the sample to represent the cast stone under consideration. The sample may be randomly selected by the purchaser or his authorized representative from each 500 ft^3(14 m^3) of cast stone. Select a sample of adequate size to permit the preparation of three absorption test specimens.

6. Test Specimens

6.1 For absorption tests take three specimens from the sample. Cut specimens from the finished surface of the sample to consist of one surface intended to be exposed to view and five saw-cut surfaces, except that for faced cast stone, cut the specimens through the faced surface to consist of approximately equal parts of the facing material and the backup material.

6.2 Cut specimens from the sample with saws. The test specimens shall be 2-in. (50.8-mm) or 50-mm cubes. The allowable size tolerance of the cubes shall be ±⅛ in. (3.2 mm).

7. Conditioning

7.1 For this test, oven dry specimens at a temperature of 100 to 110°C (212 to 230°F) until the loss in mass is not more than 0.1 % in 24 h of drying. Remove specimens from the oven and allow to cool in room temperature to a final temperature of 20 to 25°C (68 to 77°F) before testing for absorption.

8. Procedure

8.1 Weigh the specimens immediately after conditioning and determine the mass to the nearest 0.1 g.

8.2 *Method A, Cold Water Test*—Immerse the specimens completely in filtered or distilled water at 23± 1.7°C (73.4 ± 3°F) for 48 h. At the end of this period, remove them from the water bath one at a time, surface dry with a damp cloth, and determine the mass to the nearest 0.1 g.

8.3 *Method B, Boiling Water Test*—Immerse the specimens completely in cold filtered or distilled water for 48 h and then immerse in boiling water at 100 ± 5°C (212± 9°F) for 5 h. Allow the specimens to cool to a final temperature of 20 to 25°C (68 to 77°F), surface dry, and weigh to the nearest 0.1 g.

[1] This test method is under the jurisdiction of ASTM Committee C27 on Precast Concrete Products and is the direct responsibility of Subcommittee C27.20 on Architectural and Structural Products.

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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.