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Standard Specification for Granite Dimension Stone¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers the material characteristics, physical requirements, and sampling appropriate to the selection of granite for general building and structural purposes.

1.2 Granite dimension stone shall include stone that is sawed, cut, split, or otherwise finished or shaped, and shall specifically exclude molded, cast, or otherwise artificially aggregated units composed of fragments, crushed and broken stone.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

2. Referenced Documents

2.1 *ASTM Standards*:²

C97/C97M Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone

C99/C99M Test Method for Modulus of Rupture of Dimension Stone

C119 Terminology Relating to Dimension Stone

C170/C170M Test Method for Compressive Strength of Dimension Stone

C241/C241M Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic

C880/C880M Test Method for Flexural Strength of Dimension Stone

C1353 Test Method for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic Using a Rotary Platform, Double-Head Abraser

¹ This specification is under the jurisdiction of ASTM Committee C18 on Dimension Stone and is the direct responsibility of Subcommittee C18.03 on Material Specifications.

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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. Terminology

3.1 *Definitions*—All definitions are in accordance with Terminology C119.

4. Classification

4.1 Granite dimension stone under this specification shall be granite used for:

4.1.1 Exterior and interior cladding of buildings and structures;

4.1.2 Curbstone, paving, and landscape features;

4.1.3 Structural components having established dimensions;

4.1.4 Grade separations and retaining walls; and

4.1.5 Monuments.

5. Physical Properties

5.1 Granite supplied under this specification shall conform to the physical requirements prescribed in Table 1. See 5.1.2 for possible variations from this table.

5.1.1 The minimum compressive strength, flexural strength, and modulus of rupture shall be based upon the minimum average strength of specimens tested in four conditions: wet or dry and parallel or perpendicular to rift.

5.1.2 The physical properties given in Table 1 represent properties of granite that have a history of successful use for general building and structural purposes. Granite with strength or abrasion resistance less than the minimum values prescribed in Table 1 may be used provided that competent engineering authority has evaluated relevant characteristics of the granite. This evaluation shall consider both structural effects and material characteristics such as durability, permanent volume change, modulus of elasticity, thermal expansion, and the like.

5.2 Granite shall be sound, durable, and free of spalls, cracks, open seams, pits, or other defects that are likely to impair its structural integrity in its intended use.

5.3 Granite shall be free of minerals that may cause objectionable staining under normal environments of use.

5.4 The desired color and texture, with their permissible natural variations in material characteristics for all material to be produced for the project, shall be established by control samples. Select representative samples by viewing a sufficient