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Standard Specification for Quartz-Based 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 quartz-based dimension stone for general building and structural purposes.~~

1.1 This specification covers the material characteristics, physical requirements, and sampling appropriate to the selection of quartz-based dimension stone for general building and structural purposes. Refer to Guides C 1242 and C 1528 for the appropriate selection and use of quartz-based dimension stone.

1.2 Quartz-based 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, and also crushed and broken stone.

2. Referenced Documents

2.1 ASTM Standards:²

C 97 Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone

C 99 Test Method for Modulus of Rupture of Dimension Stone

C 119 Terminology Relating to Dimension Stone

~~C 170 Test Method for Compressive Strength of Dimension Stone~~

~~C 241 Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic~~

~~C 1353 Test Method Using the Taber Abraser for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic~~

C 170 Test Method for Compressive Strength of Dimension Stone

C 241 Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic

C 1242 Guide for Selection, Design, and Installation of Dimension Stone Anchoring Systems

C 1353 Test Method Using the Taber Abraser for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic

C 1528 Guide for Selection of Dimension Stone for Exterior Use -08

3. Terminology

3.1 *Definitions*—All definitions are in accordance with Terminology C 119.

4. Classification

4.1 Quartz-based dimension stone sandstone shall be classified according to the free silica content as follows:

4.1.1 *I Sandstone*, with 60 % minimum free silica content.³

4.1.2 *II Quartzitic Sandstone*, with 90 % minimum free silica content.

4.1.3 *III Quartzite*, with 95 % minimum free silica content.

5. Physical Properties

5.1 Quartz-based dimension stone supplied under this specification shall conform to the physical requirements in Table 1.

5.2 Quartz-based dimension stone 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 The desired color and texture, with their permissible natural variations in material characteristics for all material to be

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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 Free silica consists of detrital quartz grains plus authigenic silica.