



Designation: C 629 – 99

Standard Specification for Slate Dimension Stone¹

This standard is issued under the fixed designation C 629; 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.

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 slate for general building and structural purposes.

1.2 Dimension slate 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.

1.3 It specifically excludes roofing slate (see Specification C 406) and slate for industrial uses.

2. Referenced Documents

2.1 ASTM Standards:

- C 119 Terminology Relating to Dimension Stone²
- C 120 Methods of Flexure Testing of Slate (Modulus of Rupture, Modulus of Elasticity)²
- C 121 Test Method for Water Absorption of Slate²
- C 217 Test Method for Weather Resistance of Slate²
- C 241 Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic²
- C 406 Specification for Roofing Slate²
- C 1353 Test Method Using the Taber Abraser for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic²

3. Terminology

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

4. Classification

- 4.1 Dimension slate shall be selected for the following uses:
 - 4.1.1 *I Exterior.*
 - 4.1.2 *II Interior.*

5. Physical Requirements

5.1 Slate supplied under this specification shall conform to the requirements listed in Table 1.

¹This specification is under the jurisdiction of ASTM Committee C-18 on Dimension Stone and is the direct responsibility of Subcommittee C18.03 on Material Specifications.

Current edition approved April 10, 1998. Published July 1999. Originally published as C 629 – 68. Last previous edition C 629 – 98.

²Annual Book of ASTM Standards, Vol 04.07.

TABLE 1 Physical Requirements

Property	Test Requirements	Classifications	Test Method(s)
Absorption, max, %	0.25	I Exterior	C 121
	0.45	II Interior	
Modulus of rupture, min, psi (MPa):	Across grain	I Exterior	C 120
		II Interior	
	Along grain	I Exterior	
		II Interior	
Abrasion resistance, min, H ^{a,A,B,C}	8.0	I Exterior	C 241/C 1353
	8.0	II Interior	
Acid resistance, max, in. (mm)	0.015 (0.38)	I Exterior	C 217
	0.025 (0.64)	II Interior	

^APertains only to stone subject to foot traffic.

^BThe supplier of the No. 60 Alundum abrasive, Norton, has indicated that the formula for Norton treatment 138S has been changed. The new abrasive is currently more aggressive, resulting in lower abrasive hardness values (H_a) than when the standard was initially established. As such, care should be taken when interpreting H_a values from tests using the new abrasive, particularly with regard to current ASTM stone standard specification requirements for abrasion resistance, which were developed when the original abrasive was still in use. Committee C-18 is actively studying alternatives to address this issue.

^CAbrasion Resistance Test Method C 1353 will eventually replace Test Method C 241 and it is not necessary to perform both tests. Availability of the proper equipment and materials by the testing laboratory may determine which test is performed.

5.2 Slate used for exterior applications in ambient acidic atmospheres or in industrial areas where heavy air pollution occurs shall be free of carbonaceous ribbons. Slate 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 Slate shall be selected for overall satisfactory and natural appearance.

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 number of physical samples prior to production that show the complete range of variations in color and texture of the slate specified.

6. Sampling

6.1 Samples, if required, for testing to determine the characteristics and physical properties shall be representative of the slate to be used.

**NOTICE: This standard has either been superseded and replaced by a new version or discontinued.
Contact ASTM International (www.astm.org) for the latest information.**



The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, West Conshohocken, PA 19428.