



Designation: C1054 – 03(Reapproved 2008)

Standard Practice for Pressing and Drying Refractory Plastic and Ramming Mix Specimens¹

This standard is issued under the fixed designation C1054; 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 practice covers the pressing and drying of chemically and nonchemically bonded aluminum-silicate and high alumina plastic and ramming mix refractory specimens classified in accordance with Classification C673.

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

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.*

2. Referenced Documents

2.1 ASTM Standards:²

- C16 Test Method for Load Testing Refractory Shapes at High Temperatures
- C20 Test Methods for Apparent Porosity, Water Absorption, Apparent Specific Gravity, and Bulk Density of Burned Refractory Brick and Shapes by Boiling Water
- C113 Test Method for Reheat Change of Refractory Brick
- C133 Test Methods for Cold Crushing Strength and Modulus of Rupture of Refractories
- C179 Test Method for Drying and Firing Linear Change of Refractory Plastic and Ramming Mix Specimens
- C181 Test Method for Workability Index of Fireclay and High-Alumina Refractory Plastics
- C288 Test Method for Disintegration of Refractories in an Atmosphere of Carbon Monoxide
- C417 Test Method for Thermal Conductivity of Unfired Monolithic Refractories
- C577 Test Method for Permeability of Refractories

- C583 Test Method for Modulus of Rupture of Refractory Materials at Elevated Temperatures
- C673 Classification of Fireclay and High-Alumina Plastic Refractories and Ramming Mixes
- C704 Test Method for Abrasion Resistance of Refractory Materials at Room Temperature
- C830 Test Methods for Apparent Porosity, Liquid Absorption, Apparent Specific Gravity, and Bulk Density of Refractory Shapes by Vacuum Pressure
- C832 Test Method of Measuring Thermal Expansion and Creep of Refractories Under Load
- C874 Test Method for Rotary Slag Testing of Refractory Materials
- C885 Test Method for Young's Modulus of Refractory Shapes by Sonic Resonance
- C914 Test Method for Bulk Density and Volume of Solid Refractories by Wax Immersion

3. Significance and Use

3.1 This practice is useful for producing uniform specimens of refractory plastics and ramming mixes for use in standard ASTM tests. Samples thus formed may be used for referee testing when setting specifications between producer and user. Forming parameters such as sample size, workability, and forming pressure should be agreed upon and specified in the report when referee testing.

3.2 This practice is applicable for preparing test specimens of various sizes. Note that 9 by 4½ by 2½ in. (228 by 114 by 64-mm) samples, because of their large cross-section, have a greater tendency to form flaws during pressing, handling, and drying than smaller cross-sectional samples.

3.3 Other tests for which these specimens may be used encompass, but are not limited to, the following ASTM standards: Method C16, Test Methods C20, Test Method C113, Test Methods C133, Test Method C179, Test Method C288, Test Method C417, Test Method C577, Test Method C583, Test Method C704, Test Methods C830, Test Method C832, Practice C874, Test Method C885, and Test Method C914.

3.4 A purpose of this practice is to minimize flaws in pressed specimens. It is not intended to duplicate all field installation conditions.

¹ This practice is under the jurisdiction of ASTM Committee C08 on Refractories and is the direct responsibility of Subcommittee C08.09 on Monolithics.

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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.