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AMERICAN SOCIETY FOR TESTING AND MATERIALS  
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# Standard Practice for Pressing and Drying Refractory Plastic and Ramming Mix Specimens<sup>1</sup>

This standard is issued under the fixed designation C 1054; 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 ( $\epsilon$ ) 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 C 673.

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:

- C 16 Test Method of Load Testing Refractory Brick at High Temperatures<sup>2</sup>
- C 20 Test Methods for Apparent Porosity, Water Absorption, Apparent Specific Gravity, and Bulk Density of Burned Refractory Brick and Shapes by Boiling Water<sup>2</sup>
- C 113 Test Method for Reheat Change of Refractory Brick<sup>2</sup>
- C 133 Test Methods for Cold Crushing Strength and Modulus of Rupture of Refractories<sup>2</sup>
- C 179 Test Method for Drying and Firing Linear Change of Refractory Plastic and Ramming Mix Specimens<sup>2</sup>
- C 180 Method of Panel Spalling Testing Fireclay Plastic Refractories<sup>3</sup>
- C 181 Test Method for Workability Index of Fireclay and High-Alumina Plastic Refractories<sup>2</sup>
- C 288 Test Method for Disintegration of Refractories in an Atmosphere of Carbon Monoxide<sup>2</sup>
- C 417 Test Method for Thermal Conductivity of Unfired Monolithic Refractories<sup>2</sup>
- C 546 Method of Load Testing Refractory Brick at High Temperatures, Long-Time<sup>4</sup>
- C 577 Test Method for Permeability of Refractories<sup>2</sup>
- C 583 Test Method for Modulus of Rupture of Refractory

### Materials at Elevated Temperatures<sup>2</sup>

- C 673 Classification of Fireclay and High-Alumina Plastic Refractories and Ramming Mixes<sup>2</sup>
- C 704 Test Method for Abrasion Resistance of Refractory Materials at Room Temperature<sup>2</sup>
- C 830 Test Methods for Apparent Porosity, Liquid Absorption, Apparent Specific Gravity, and Bulk Density of Refractory Shapes by Vacuum Pressure<sup>2</sup>
- C 832 Test Method of Measuring the Thermal Expansion and Creep of Refractories Under Load<sup>2</sup>
- C 874 Practice for Rotary Slag Testing of Refractory Materials<sup>2</sup>
- C 885 Test Method for Young's Modulus of Refractory Shapes by Sonic Resonance<sup>2</sup>
- C 914 Test Method for Bulk Density and Volume of Solid Refractories by Wax Immersion<sup>2</sup>

## 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 C 16, Test Methods C 20, Test Method C 113, Test Methods C 133, Test Method C 179, Method C 180, Test Method C 288, Test Method C 417, Method C 546, Test Method C 577, Test Method C 583, Test Method C 704, Test Methods C 830, Test Method C 832, Practice C 874, Test Method C 885, and Test Method C 914.

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

3.5 Variations in workability as determined by Test Method C 181 can significantly affect the number of flaws contained in a specimen. For comparison testing between two laboratories,

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee C-8 on Refractories and is the direct responsibility of Subcommittee C08.09 on Monolithic Refractories. Current edition approved Dec. 27, 1985. Published February 1985.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 15.01.

<sup>3</sup> Discontinued. See 1984 *Annual Book of ASTM Standards*, Vol 15.01.

<sup>4</sup> Discontinued. See 1985 *Annual Book of ASTM Standards*, Vol 15.01.