



## Standard Test Method for Flowability and Bearing Area of Chemical-Resistant Polymer Machinery Grouts<sup>1</sup>

This standard is issued under the fixed designation C 1339; 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.

<sup>ε1</sup> NOTE—Fig. 3 was editorially corrected in April 2004.

### 1. Scope

1.1 This test method covers the measure of flowability of chemical-resistant polymer machinery grouts as evaluated in a 2-in. (5-cm) or 1-in. (2.5-cm) pour thickness. The test method provides for the assessment of upper surface plate contact area (bearing area). These grouts will typically be two- or three-component formulations that may be used for installations where grout thickness will range from 1 to 6 in. (2.5 to 15 cm) underneath the base or plates being grouted.

1.2 *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.*

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

### 2. Referenced Documents

#### 2.1 ASTM Standards:

C 904 Terminology Relating to Chemical-Resistant Non-metallic Materials<sup>2</sup>

### 3. Terminology

3.1 *Definitions*—For definition of terms used in this test method, see Terminology C 904.

### 4. Summary of Test Method

4.1 Polymer machinery grout of a flowable consistency is poured into a hopper at one end of a shallow plastic trough with a clear plastic cover plate.

4.2 A movable gate is raised, allowing the grout to flow from the hopper into the trough. The times for the grout to first contact the end plate and to establish full length contact with the top cover plate are recorded and used as indices of flowability.

4.3 After the grout hardens, the mold and top plate are removed. The top surface of the grout is wire brushed to expose any surface air bubbles or voids, and a visual estimate is made of the percentage of grout top surface area that is in contact with the plate. Visual guides are provided for comparative purposes (see Fig. 1 and Fig. 2).

### 5. Significance and Use

5.1 Chemical-resistant polymer machinery grouts are used to provide precision support for machinery or equipment.

5.2 The machinery or equipment or support bases or plates, or combination thereof, are positioned to the precise elevation and location required. The bases or plates are typically placed on prepared foundations and supported on temporary shims or support bolts (jack screws). Forms are installed to contain the flowable grout. The grout is poured around the perimeter in such a manner as to allow the grout to flow around and under the equipment base or plates. The grout subsequently hardens to provide a strong rigid support layer capable of withstanding the stresses transferred by the equipment to the foundation.

5.3 In addition to the required physical properties of the grout, the flow and bearing area achieved are important considerations for effective grout installation. The two characteristics measured by this test method are flow and bearing area.

5.4 The flow test simulates typical application conditions for a flowable polymer machinery grout. It may be used to evaluate the suitability of a particular grout for a specific application, to compare the flowability and bearing area of two or more grouts, or to evaluate the effects of formulation changes, temperature, mixing techniques, or other factors on flowability.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee C03 on Chemical-Resistant Nonmetallic Materials and is the direct responsibility of Subcommittee C03.01 on Test Methods.

Current edition approved April 10, 2002. Published June 2002. Originally published as C 1339 – 96. Last previous edition C 1339 – 96a.

<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.05.

