



Standard Practice for Testing Chemical-Resistant Broadcast and Slurry-Broadcast Resin Monolithic Floor Surfacing¹

This standard is issued under the fixed designation C 1486; 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 methods for preparing test specimens and testing procedures for broadcast or slurry-broadcast monolithic floor surfacings in areas where chemical resistance is required.

1.2 These floor surfacings are applied by various application methods including squeegees, rollers, trowels, notched trowels, and gage rakes onto suitably prepared concrete substrates. The surfacings bond to the substrate upon curing to provide a nominal thickness of 60 mils (1.5 mm) or greater.

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 413 Test Method for Absorption of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing²

C 811 Practice for Surface Preparation of Concrete for Application of Chemical-Resistant Resin Monolithic Surfacing²

C 904 Terminology Relating to Chemical-Resistant Non-metallic Materials²

C 905 Test Methods for Apparent Density of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing and Polymer Concretes²

C 1028 Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method³

D 635 Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position⁴

D 790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials⁴

D 1308 Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes⁵

D 2047 Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine⁶

D 4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser⁷

D 4541 Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers⁵

2.2 ACI Standards:

ACI 503R, Appendix A, Test Method A.1, Field Test for Surface Soundness and Adhesion⁸

3. Terminology

3.1 *Definitions*—For definitions of terms relating to this standard, refer to Terminology C 904.

4. Significance and Use

4.1 Because the sample is prepared in a manner as it would be applied in the field, the test specimens may be considered representative of the application of a specified surfacing. Such methods include application by squeegees, rollers, trowels, notched trowels, and gage rakes.

4.2 These systems vary in several ways, including the number of layers or application steps, the surface finish, and variation in composition.

4.3 The results obtained in carrying out this practice should serve as a guide in comparing similarly applied surfacings. No attempt has been made to incorporate into this practice all of the various factors that may affect the performance of such applications when subjected to actual service.

5. Types of Resins, Fillers, and Setting Agents (Hardeners)

5.1 The liquid resins may be epoxy, polyester, vinyl ester, or others capable of forming chemical-resistant surfacing material when mixed with a suitable setting agent and filler.

5.2 The fillers may be silica, carbon, or other chemical-resistant materials. The filler may also be combined as a premix with the liquid resin or the setting agent.

¹ This practice is under the jurisdiction of ASTM Committee C03 on Chemical-Resistant Nonmetallic Materials and is the direct responsibility of Subcommittee C03.02 on Mortar and Monolithics.

Current edition approved Nov. 10, 2000. Published January 2001.

² *Annual Book of ASTM Standards*, Vol 04.05.

³ *Annual Book of ASTM Standards*, Vol 15.02.

⁴ *Annual Book of ASTM Standards*, Vol 08.01.

⁵ *Annual Book of ASTM Standards*, Vol 06.02.

⁶ *Annual Book of ASTM Standards*, Vol 15.04.

⁷ *Annual Book of ASTM Standards*, Vol 06.01.

⁸ Available from ACI International, PO Box 9094, Farmington Hills, MI 48333.