This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: D5324 – 16 (Reapproved 2022)

Standard Guide for Testing Water-Borne Architectural Coatings[1]

This standard is issued under the fixed designation D5324; 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 guide covers the selection and use of procedures for testing water-borne coatings to be used on exterior, interior or both types of surfaces (Note 1). The properties that can be examined or, in some cases, the relevant test procedures are listed in Table 1 and Table 2.

NOTE 1—The term "architectural coating" as used here combines the definition in Terminology D16 with that in the *FSCT Paint/Coatings Dictionary*, [2] as follows: "Organic coatings intended for on-site application to interior or exterior surfaces of residential, commercial, institutional, or industrial buildings, in contrast to industrial coatings. They are protective and decorative finishes applied at ambient temperatures. Often called Trade Sales Coatings."

NOTE 2—Architectural coatings that are designed to give better performance than most conventional coatings because they are tougher and more stain and abrasion resistant are covered by Guide D3730.

1.2 The types of organic coatings covered by this guide are as follows:

(1) Type 1 Interior Latex Flat Wall Paints,
(2) Type 2 Exterior Latex House Paints,
(3) Type 3 Water-Borne Floor Paints, and
(4) Type 4 Interior Latex Semigloss and Gloss Paints.

1.2.1 Each is intended for application by brushing, rolling, spraying or other means to the material appropriate for its type, which may include plaster, masonry, wallboard, wood, steel, previously painted surfaces, and other architectural substrates.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.4 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[3]

D16 Terminology for Paint, Related Coatings, Materials, and Applications
D185 Test Methods for Coarse Particles in Pigments
D215 Practice for the Chemical Analysis of White Linseed Oil Paints (Withdrawn 2005)[4]
D344 Test Method for Relative Hiding Power of Paints by the Visual Evaluation of Brushouts (Withdrawn 2018)[4]
D358 Specification for Wood to Be Used as Panels in Weathering Tests of Coatings (Withdrawn 2014)[4]
D522 Test Methods for Mandrel Bend Test of Attached Organic Coatings
D523 Test Method for Specular Gloss
D562 Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer
D660 Test Method for Evaluating Degree of Checking of Exterior Paints
D661 Test Method for Evaluating Degree of Cracking of Exterior Paints
D662 Test Method for Evaluating Degree of Erosion of Exterior Paints
D772 Test Method for Evaluating Degree of Flaking (Scaling) of Exterior Paints
D869 Test Method for Evaluating Degree of Settling of Paint
D968 Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
D1006 Practice for Conducting Exterior Exposure Tests of Hand and Factory Applied Paints on Wood and Wood Composite Materials
D1014 Practice for Conducting Exterior Exposure Tests of Paints and Coatings on Metal Substrates

[1] This guide is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.42 on Architectural Coatings.

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[2] Available from Federation of Societies for Coatings Technology (FSCT), 492 Norristown Rd., Blue Bell, PA 19422-2350, http://www.coatingstech.org.

[3] 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.

[4] The last approved version of this historical standard is referenced on www.astm.org.

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