



Standard Test Methods for Clear and Pigmented Lacquers¹

This standard is issued under the fixed designation D 333; 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 These test methods cover procedures for testing lacquers and lacquer coatings. The test methods included are listed in Table 1.

NOTE 1—In accordance with Terminology D 16, a lacquer is defined as a coating composition that is based on synthetic thermoplastic filmforming material dissolved in organic solvent(s) and that dries primarily by solvent evaporation. Typical lacquers include those based on nitrocellulose, other cellulose derivatives, vinyl resins, acrylic resins, etc.

NOTE 2—Lacquers may be applied under such diverse conditions, to so many different surfaces, and their dried films may be subjected to so many kinds of wear and exposure that it is not possible to assure desired performance from a single selection of test methods and numerical results therefrom. Those skilled in lacquer technology may find partial assurance of obtaining desired qualities in various types of lacquers through careful selection of the methods covered herein and intelligent interpretation of results therefrom.

NOTE 3—It is intended ultimately to remove all experimental procedures from Test Methods D 333 and to establish them as a guide to the selection of test methods for lacquer and perhaps to interpretation of results therefrom. Temporarily there remain in Test Methods D 333 a few tests that are too short or otherwise presently unsuitable for establishment under separate ASTM designations.

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.*

2. Referenced Documents

2.1 ASTM Standards:

- B 117 Practice for Operating Salt Spray (Fog) Testing Apparatus²
- D 16 Terminology Relating to Paint, Varnish, Lacquer, and Related Products³
- D 56 Test Method for Flash Point by Tag Closed Tester⁴
- D 88 Test Method for Saybolt Viscosity⁵
- D 93 Test Methods for Flash Point by Pensky-Martens Closed Tester⁴

¹ These test methods are under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and are the direct responsibility of Subcommittee D01.55 on Factor-Applied Coatings on Preformed Products.

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² Annual Book of ASTM Standards, Vol 03.02.

³ Annual Book of ASTM Standards, Vol 06.01.

⁴ Annual Book of ASTM Standards, Vol 05.01.

⁵ Annual Book of ASTM Standards, Vol 04.04.

- D 445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)⁴
- D 522 Test Method for Mandrel Bend Test of Attached Organic Coatings³
- D 523 Test Method for Specular Gloss³
- D 609 Practice for Preparation of Cold-Rolled Steel Panels for Testing Paint, Varnish, Conversion Coatings, and Related Coating Products³
- D 610 Test Method for Evaluating Degree of Rusting on Painted Steel Surfaces⁶
- D 658 Test Method for Abrasion Resistance of Organic Coatings by Air Blast Abrasive³
- D 659 Method of Evaluating Degree of Chalking of Exterior Paints³
- D 660 Test Method for Evaluating Degree of Checking of Exterior Paints³
- D 661 Test Method for Evaluating Degree of Cracking of Exterior Paints³
- D 662 Test Method for Evaluating Degree of Erosion of Exterior Paints³
- D 714 Test Method for Evaluating Degree of Blistering of Paints³
- D 772 Test Method for Evaluating Degree of Flaking (Scaling) of Exterior Paints³
- D 823 Practices for Producing Films of Uniform Thickness of Paint, Varnish, and Related Products on Test Panels³
- D 870 Practice for Testing Water Resistance of Coatings Using Water Immersion³
- D 968 Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive³
- D 1005 Test Methods for Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers³
- D 1014 Test Method for Conducting Exterior Exposure Tests of Paints on Steel³
- D 1186 Test Methods for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to a Ferrous Base³
- D 1200 Test Method for Viscosity by Ford Viscosity Cup³
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)⁷
- D 1210 Test Method for Fineness of Dispersion of Pigment-Vehicle Systems³

⁶ Annual Book of ASTM Standards, Vol 06.02.

⁷ Annual Book of ASTM Standards, Vol 06.04.