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Standard Guide for Testing Varnishes¹

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1. Scope

1.1 This guide covers the selection and use of procedures for testing varnishes. Some test methods are included, but most sections refer to specific ASTM test methods.

1.2 Varnishes 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. Those skilled in varnish technology may find partial assurance of obtaining desired qualities in various types of varnishes through careful selection of the methods covered and intelligent interpretation of results.

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:

- D 56 Test Method for Flash Point by Tag Closed Tester²
- D 93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester²
- D 445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)²
- D 479 Test Method for Reactivity of Paint Liquids³
- D 523 Test Method for Specular Gloss⁴
- D 658 Test Method for Abrasion Resistance of Organic Coatings by Air Blast Abrasive⁴
- D 968 Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive⁴
- D 1200 Test Method for Viscosity by Ford Viscosity Cup⁴
- D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)⁵

- D 1310 Test Method for Flash Point and Fire Point of Liquids by Tag Open-Cup Apparatus⁴
- D 1469 Test Method for Total Rosin Acids Content of Coating Vehicles⁶
- D 1475 Test Method for Density of Paint, Varnish, Lacquer, and Related Products⁴
- D 1542 Test Method for Qualitative Detection of Rosin in Varnishes⁶
- D 1544 Test Method for Color of Transparent Liquids (Gardner Color Scale)⁴
- D 1545 Test Method for Viscosity of Transparent Liquids by Bubble Time Method⁶
- D 1546 Test Method for Performance Tests of Clear Floor Sealers⁷
- D 1639 Test Method for Acid Value of Organic Coating Materials⁶
- D 1640 Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature⁴
- D 1641 Test Method for Exterior Durability of Varnishes⁷
- D 1644 Test Methods for Nonvolatile Content of Varnishes⁴
- D 1647 Test Method for Resistance of Dried Films of Varnishes to Water and Alkali⁶
- D 1729 Practice for Visual Evaluation of Color Differences of Opaque Materials⁴
- D 2090 Test Method for Clarity and Cleanliness of Paint and Ink Liquids⁶
- D 2244 Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates⁴
- D 2369 Test Method for Volatile Content of Coatings⁴
- D 2805 Test Method for Hiding Power of Paints by Reflectometry⁴
- D 3278 Test Method for Flash Point of Liquids by Small Scale Closed Cup Apparatus⁴
- D 3964 Practice for Selection of Coating Specimens for Appearance Measurements⁴
- D 4039 Test Method for Reflection Haze of High-Gloss Surfaces⁴
- D 4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser⁴

¹ This guide is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.33 on Polymers and Resins.

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² Annual Book of ASTM Standards, Vol 05.01.

³ Discontinued; see 1983 Annual Book of ASTM Standards, Vol 06.01.

⁴ Annual Book of ASTM Standards, Vol 06.01.

⁵ Annual Book of ASTM Standards, Vol 06.04.

⁶ Annual Book of ASTM Standards, Vol 06.03.

⁷ Annual Book of ASTM Standards, Vol 06.02.