



Designation: ~~D344-97~~ (Reapproved 2004) Designation: D344 – 11

Standard Test Method for Relative Hiding Power of Paints by the Visual Evaluation of Brushouts¹

This standard is issued under the fixed designation D344; 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 test method provides for the qualitative and quantitative visual determination of the hiding power of a test paint relative to that of a comparison paint.

1.2 This test method describes only a brushout application procedure in specific detail, but its concepts are valid for other methods of application as well.

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

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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

2. Referenced Documents

2.1 *ASTM Standards:*²

D16 Terminology for Paint, Related Coatings, Materials, and Applications

D1475 Test Method For Density of Liquid Coatings, Inks, and Related Products

D1729 Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials

D2805 Test Method for Hiding Power of Paints by Reflectometry

D5068 Practice for Preparation of Paint Brushes for Evaluation

E1247 Practice for Detecting Fluorescence in Object-Color Specimens by Spectrophotometry

E1347 Test Method for Color and Color-Difference Measurement by Tristimulus Colorimetry

E1349 Test Method for Reflectance Factor and Color by Spectrophotometry Using Bidirectional (45:0 or 0:45) Geometry

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms used in this test method, refer to Terminology D16 and the *Paint/Coatings Dictionary*.³

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 ~~relative hiding power, qualitative~~ relative hiding power, qualitative, n —the characterization of a test paint as being better, equal, or poorer in hiding power than a comparison paint.

3.2.2 ~~relative hiding power, quantitative~~ relative hiding power, quantitative, n —the spreading rate of a paint expressed as a percent of the spreading rate of a comparison paint at equal hiding.

4. Summary of Test Method

4.1 *Qualitative*—The test and comparison paints are brushed out uniformly at the same spreading rate on black and white hiding power charts. After drying the brushouts are compared visually to see which paint has been most effective in reducing the substrate contrast.

4.2 *Quantitative*—Additional brushouts are made with the comparison paint, if and as necessary, to determine the spreading rate at which it matches the hiding of the test paint brushout.

¹ This test method is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.26 on Optical Properties.

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² 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.

³ Published by Available from Federation of Societies for Coatings Technology (FSCT), 492 Norristown Rd., Blue Bell, PA 19422-2350, <http://www.coatingstech.org>.

5. Significance and Use

5.1 This test method evaluates the hiding power of a test paint relative to a comparison paint. The results have significance only within that relationship. It may be used for production control or quality comparisons.

5.2 When a paint is applied by brush or any other practical method, the opacity of the film is affected by variations in film thickness related to the application procedure and to the application characteristics of the paint. Two paints that hide equally well by this method might therefore differ considerably when applied with a doctor blade, since the latter method gives essentially perfect leveling. Different brushes or surface application conditions can likewise give different results.

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