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Standard Test Method for Qualitative Determination of Nature of Solvent Composition in Solvent-Reducible Paints¹

This standard is issued under the fixed designation D 2349; 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 covers the determination of the nature of solvent in solvent-reducible house paints containing only hydrocarbon solvents.

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

1.3 *This standard does not purport to address 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

D 215 Practice for the Chemical Analysis of White Linseed Oil Paints

D 233 Test Methods of Sampling and Testing Turpentine

D 1193 Specification for Reagent Water

3. Significance and Use

3.1 This test method provides a procedure for determining qualitatively the composition of solvent in paints containing only hydrocarbon solvents.

4. Reagents

4.1 *Purity of Reagents*—Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available.³ Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

4.2 *Purity of Water*—Unless otherwise indicated, references to water shall be understood to mean reagent water conforming to Type IV of Specification D 1193.

4.3 *Antimony Pentachloride* (SbCl_5).

4.4 *Chloroform*.

4.5 *Nitric Acid (sp gr 1.42)*—Concentrated nitric acid (HNO_3).

4.6 *Sulfuric Acid (sp gr 1.84)*—Concentrated sulfuric acid (H_2SO_4).

5. Preparation of Sample

5.1 Mix and prepare the sample in accordance with Practice D 215.

6. Nature of Solvent

6.1 Transfer approximately 150 g of the paint to a 500-mL flask fitted with a 2-hole cork stopper carrying a spray trap connected with a suitable condenser. Through the other hole in the stopper pass an influx tube for steam. (This tube should dip below the

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 D01.21 on Chemical Analysis of Paints and Paint Materials.

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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*, Vol 06.01, volume information, refer to the standard's Document Summary page on the ASTM website.

³ *Annual Book of ASTM Standards*, Vol 06.03-Reagent Chemicals, American Chemical Society Specifications, American Chemical Society, Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see *Analar Standards for Laboratory Chemicals*, BDH Ltd., Poole, Dorset, U.K., and the *United States Pharmacopeia and National Formulary*, U.S. Pharmaceutical Convention, Inc. (USPC), Rockville, MD.