



Standard Test Methods for Detergent Alkylate¹

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1. Scope

1.1 These test methods cover the various test methods that are applicable to alkylbenzene in order to evaluate those properties pertinent to the characterization of the alkylbenzene with respect to its suitability for desired uses.

NOTE 1—Detergent alkylate comprises alkylbenzenes prepared by varying processes, of varying alkyl chain configuration and length. The alkylate is sulfonated for surfactant use, the largest application being in detergent products. Careful control of detergent alkylate characteristics is desired, for along with sulfonation procedure, variations of the sulfonate can ensue that may result in either desirable or undesirable end-use properties.

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 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.* For a specific hazards statement, see Section 4.

2. Referenced Documents

2.1 ASTM Standards:²

- D88 Test Method for Saybolt Viscosity
- D92 Test Method for Flash and Fire Points by Cleveland Open Cup Tester
- D156 Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)
- D270 Methods of Sampling Petroleum and Petroleum Products (Withdrawn 1984)³

¹ These test methods are under the jurisdiction of ASTM Committee D12 on Soaps and Other Detergents and is the direct responsibility of D12.12 on Analysis and Specifications of Soaps, Synthetics, Detergents and their Components.

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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.

- D445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)
- D484 Specification for Hydrocarbon Dry Cleaning Solvents (Withdrawn 1982)³
- D611 Test Methods for Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbon Solvents
- D848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons
- D891 Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals
- D1133 Test Method for Kauri-Butanol Value of Hydrocarbon Solvents
- D1159 Test Method for Bromine Numbers of Petroleum Distillates and Commercial Aliphatic Olefins by Electro-metric Titration
- D1193 Specification for Reagent Water
- D1218 Test Method for Refractive Index and Refractive Dispersion of Hydrocarbon Liquids
- D1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)

3. Purity of Reagents

3.1 *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.⁴ 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.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ *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. Pharmacopeial Convention, Inc. (USPC), Rockville, MD.