Designation: D1476 – 02 (Reapproved 2012)

Standard Test Method for Heptane Miscibility of Lacquer Solvents[1]

This standard is issued under the fixed designation D1476; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 This test method covers determination of the miscibility of lacquer solvents with heptane. It may also be used to detect qualitatively the presence of moisture in esters and ketones.

NOTE 1—For the quantitative determination of water content, see Test Method D1364.

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.*

1.4 For hazard information and guidance, see the supplier's Material Safety Data Sheet.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D611 Test Methods for Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbon Solvents

D1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)

3. Significance and Use

3.1 Water in a solvent may interfere with many uses of the solvent. This test method provides a measure of the miscibility of lacquer solvents with a nonpolar medium-heptane. It also provides a qualitative indication of the presence or absence of moisture in these solvents (often esters and ketones). The results of these measurements may be used for specification acceptance.

4. Reagents

4.1 *Heptane,* containing not less than 99 % *n*-heptane.

NOTE 2—Detailed requirements for 99 % *n*-heptane are specified in Table 1 of Test Method D611.

5. Procedure

5.1 Both the specimen and the heptane shall be at a temperature of 20 ± 1°C. Transfer 5 mL of the specimen to a 100-mL glass-stoppered (graduated) cylinder and add 5-mL increments of heptane until the total specified volume (usually specified as 19 volumes or 95 mL) has been added, shaking well after each addition. A clear solution indicates miscibility and a turbid solution indicates immiscibility or the presence of water in the specimen, or both.

6. Report

6.1 If the solution remains clear after the addition of the specified amount of heptane, report the specimen as passing this test.

7. Precision and Bias

7.1 Because of the pass-fail nature of this test procedure, no precision or bias statement is presented.

8. Keywords

8.1 heptane miscibility test; lacquer solvents; qualitative ; water content

[1] This test method is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the responsibility of Subcommittee D01.35 on Solvents, Plasticizers, and Chemical Intermediates.

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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.

***A Summary of Changes section appears at the end of this standard**

SUMMARY OF CHANGES

Committee D 01.35 has identified the location of selected changes to this standard since the last issue (D1476 - 88 (2000)) that may impact the use of this standard.

(1) Added clarification “usually specified as 19 volumes or 95 mL” in 5.1.