~~Designation:D1583–00~~ Designation: D 1583 – 01 (Reapproved 2008)

Standard Test Method for Hydrogen Ion Concentration of Dry Adhesive Films[1]

This standard is issued under the fixed designation D 1583; 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 hydrogen ion concentration (pH), acidity, or alkalinity, of organic adhesives in the cured dry film form. This test method is not designed to apply to pressure-sensitive adhesives.

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

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:* [2]

D 907 Terminology of Adhesives

E 70 Test Method for pH of Aqueous Solutions ~~with~~With the Glass Electrode

3. Terminology

3.1 *Definitions*— Many of the terms in this test method are defined in Terminology D 907.

4. Summary of Test Method

4.1 Collect samples of the adhesive to be tested with any hardener necessary.

4.2 Dry adhesive films are prepared.

4.3 The adhesive films are ground and mixed with distilled water.

4.4 The pH is determined using a pH meter in accordance with Test Method E 70.

5. Significance and Use

5.1 The pH of an adhesive may be a factor whereby the adherends or the adhesive itself may be adversely affected in time by the acidity or alkalinity.

6. Apparatus

6.1 *pH Meter*, capable of making measurements to ±0.05 pH.

6.2 *Glass Vial*, capable of properly immersing the electrode of the pH meter when filled with the specified test solution.

6.3 *Distilled Water*, with a pH between 5.6 and 7.0 at 23 ± 1°C (73.4 ± 1.8°F).

6.4 *Glass Sheet*, free from scratches, approximately 200 by 250 mm (8 by 10 in.) in size for use in oven.

6.5 *Circulating-Air Oven*, capable of maintaining temperatures of 23 ± 1°C (73.4 ± 1.8°F) to 150 ± 1°C (302 ± 1.8°F).

7. Sampling

7.1 Except in special cases, take a composite sample when possible from three or more separate containers, chosen at random. Also take samples from containers which appear to be nonrepresentative, and test such samples separately. Place the samples immediately in airtight glass containers filled to prevent excessive air space above the adhesive and transport them to the testing laboratory in these containers. Take precautions to reduce evaporation or drying to a minimum. Thoroughly mix the adhesive in

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[1] ~~This test method is under the jurisdiction of ASTM Committee D-14 on Adhesives and is the direct responsibility of Subcommittee D14.30 on Wood Adhesives. Current edition approved May 10, 2000. Published August 2000. Originally published as D1583–58. Last previous edition D1583–96.~~

[1] This test method is under the jurisdiction of ASTM Committee D14 on Adhesives and is the direct responsibility of Subcommittee D14.30 on Wood Adhesives Current edition approved April 1, 2008. Published April 2008. Originally approved in 1958. Last previous edition approved in 2001 as D 1583 – 01.

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