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Standard Practice for Storage Life of Adhesives by Viscosity and Bond Strength¹

This standard is issued under the fixed designation D1337; 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 practice describes a laboratory method by which the storage life of an adhesive may be measured using viscosity, adhesive strength, or a combination thereof.

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

D618 Practice for Conditioning Plastics for Testing

D897 Test Method for Tensile Properties of Adhesive Bonds

D906 Test Method for Strength Properties of Adhesives in Plywood Type Construction in Shear by Tension Loading D907 Terminology of Adhesives

D1002 Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)

D1084 Test Methods for Viscosity of Adhesives

2.2 Other Standard:³

ISO 2555 Plastics—Resins in the liquid state or as emulsions or dispersions—Determination of apparent viscosity by the Brookfield Test method

3. Terminology

3.1 Definitions—Many terms in this practice are defined in Terminology D907.

https://standards.iteh.ai/catalog/standards/sist/52c096a0-5892-4426-83c5-ae57e37a2a75/astm-d1337-102016

4. Significance and Use

4.1 This practice may be used to determine the storage life of any adhesive where this information is required.

4.2 This practice is intended to determine whether the storage life conforms to the minimum specified storage life required of an adhesive by viscosity tests (Procedure A) or by bond strength tests (Procedure B), or by both. It does so by providing results before and after a set of standard conditions that simulate storage life. The determination of what the requirements for percentage of the original property retained or the minimum value for a property is found in the relevant material specification, or as agreed between manufacturer and user.

PROCEDURE A—VISCOSITY TEST

5. Apparatus

5.1 Viscometer—Use the apparatus as described in ISO 2555.

¹ This practice is under the jurisdiction of ASTM Committee D14 on Adhesives and is the direct responsibility of Subcommittee D14.10 on Working 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 Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.